

Knowledge Translation Pathways:

A tool for competency evaluation & professional development

April 2017

Pathways Project Team

Name	Title	Organization
Pat Atherton, MPA	Director, Training and Virtual Networking Platform	BC SUPPORT Unit
Jessica Collins	Knowledge Translation Coordinator	Michael Smith Foundation for Health Research
Gen Creighton, PhD	Manager, Knowledge Translation	Michael Smith Foundation for Health Research
Noreen Frisch, RN, PhD	Professor	School of Nursing, University of Victoria
Stephanie Glegg, PhD (c)	KT Broker; Educator; Researcher (Occupational Therapy)	Sunny Hill Health Centre; Faculty of Medicine, University of British Columbia
Anastasia Mallidou, RN, PhD	Assistant Professor	School of Nursing, University of Victoria
Gayle Scarrow	Director, Knowledge Translation	Michael Smith Foundation for Health Research
Liza Chan	Research Librarian, Expert Advisor to Project Team	Alberta Innovates: Health Solutions
Additional assistance was provided by the following individuals to whom we express our sincere thanks: Thea Franke, Sherry Hamilton, and Donna Matier.		

This document is available at [University of Victoria Repository Space](#).

Knowledge Translation Pathways: A tool for competency evaluation & professional development 2017, Michael Smith Foundation for Health Research.



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

Table of Contents

Pathways Project Team.....	2
Introduction.....	4
Scoping Review	4
KT Pathways: Preamble.....	6
Purpose.....	6
Glossary	6
Pathways Development Process	6
Pathways Description.....	6
Three Target Audiences	6
Three Levels of Expertise	7
Three Primary Domains	7
Uses of the Pathways	9
Individuals.....	9
Organizations	9
Pathways Documentation.....	9
1. KT Pathways Competencies from the Literature.....	9
2. Professional Development Tools - KT Competencies.....	9
3. Additional Related KT Resources	10
Pathways Advisory Group	11
KT Pathways Glossary of Terms	12
Appendix 1: KT Pathways Additional Related KT Resources Additional Resources	16

Introduction

The Knowledge Translation (KT) Pathways (“Pathways”) project was initiated by the Michael Smith Foundation for Health Research, drawing on expertise from across Canada to develop this tool for three KT audiences: *knowledge users*, *knowledge brokers* and *knowledge producers*. The need for such a tool became evident over time as the field of KT evolves and competencies grew through the practice of KT, yet little was known about what is needed to succeed in the field, or the resources available to achieve the competencies.

This report arises from a scoping review completed by the project team and outlines a series of core KT competencies. Incorporation of these KT competencies into job performance appraisals and promotions may positively influence consistency and quality of healthcare and ultimately reduce healthcare system expenses. The Project Team is to be congratulated for the significant amount of work involved in undertaking the project.

Knowledge translation (KT) is the broad range of activities meant to improve the use of health research in practice, policy and further research leading to more evidence-informed healthcare. We recognize that internationally there are various terms used to describe these activities (e.g., research uptake, knowledge mobilization, research utilization, dissemination and implementation, research to action)^{1,2,3}. Our project team uses the term ‘knowledge translation’ and in general, the Pathways documents reflect the language gleaned from the scoping review.

The Project Team encourages others to build on the competencies and on the Pro-D tools.

Scoping Review

The scoping review summarized existing knowledge on KT competencies derived from 17 peer-reviewed publications and 63 grey literature items. Our research questions were “*What are the core KT competencies of knowledge users, knowledge brokers and knowledge producers in the health sector and what are the interventions and strategies to reinforce those competencies?*”

The main objectives were to:

- Systematically explore the extent of relevant theoretical/conceptual, empirical and grey literature (e.g., range, focus, nature of sources, volume) on KT competencies for the three stakeholder groups.

¹ What is KT? Wiki <https://whatiskt.wikispaces.com>

² McKibbon K. et al. (2010). A cross-sectional study of the number and frequency of terms used to refer to knowledge translation in a body of health literature in 2006: a Tower of Babel?, *Implement Sci.* 2010. doi: 10.1186/1748-5908-5-16

³ Straus S., Tetroe J., Graham I. (2009). Defining knowledge translation. *CMAJ.* doi: 10.1503/cmaj.081229

- Map the publications by identifying key themes of the three stakeholder groups' KT competencies; research gaps; and potential interventions and/or strategies for improving these KT competencies.
- Summarize and disseminate review findings to the three stakeholder groups in relevant fields (e.g., nursing, medicine, rehabilitation, health policy) for the purposes of designing future studies and systematic reviews, and for developing KT training pathways for each of these audiences to facilitate their incorporating KT activities in routine practice, policy and research.

A published article details the scoping review process, findings and references: Mallidou, A. A., Atherton, P., Chan, L., Frisch, N., Glegg, S., & Scarrow, G. (2018). Core knowledge translation competencies: A scoping review. *BMC Health Services Research*, 18(1), 502.

[doi:10.1186/s12913-018-3314-4](https://doi.org/10.1186/s12913-018-3314-4).

KT Pathways: Preamble

Purpose

The Knowledge Translation (KT) Pathways (“Pathways”) articulates how individuals may progress in the field of KT throughout their careers in developing knowledge, skills and attitudes (that is, competencies). KT is not discipline-specific but this project focuses on health and healthcare KT. The intent of the document is to describe individuals’ KT competencies across their career and to support research utilization at the point of care.

Glossary

A [glossary of terms](#) is appended to this tool.

Pathways Development Process

The [Project Team](#) derived the Pathways from: (a) the peer-reviewed/published literature; (b) grey literature; and, (c) the voice of KT expertise represented by stakeholders from various areas and levels of KT practice through an [Advisory Group](#). This project builds on lessons learned in the development of the 2013 project [Health Services Researcher Pathway](#), a commissioned research project by MSFHR. As much as possible, the Pathways represent a consensus of what is known from published work and from practice.

Pathways Description

The Pathways include three different *target audiences’* three *levels of expertise* across three *primary domains*.

Three Target Audiences

1. Knowledge Users
2. Knowledge Brokers
3. Health Research Producers

A note about knowledge users in this project: this audience is limited to health professionals, health providers and health policy makers; includes both regulated and unregulated providers e.g., front line staff working with patients/public. There are numerous other audiences that use health research evidence (e.g., patients, public, media), however capacity has not been available to target all of them in this project. It is anticipated that some of these excluded individuals will have the skills and knowledge to make use of the KT pathways.

Three Levels of Expertise

Level	Description
Level 1: Developmental	<i>General knowledge</i> of the concepts of the competency as attained from education or on-the-job orientation.
Level 2: Intermediate	<i>Thorough, complete understanding</i> of the concepts of the competency as attained from education, as well as successful experience in a variety of complex assignments.
Level 3: Expert	<i>Expert level</i> in the competencies and expertise as attained from the most advanced training and graduate level education, as well as significant success in performing the most demanding assignments requiring the competencies. Able to experiment and apply new developments in the competencies to problems and to lead others in developing the competencies and expertise.

Knowledge Translation Pathway 1: Knowledge Users (KU)

Level	Title	Description
KU1	Developmental Knowledge User	<i>Learning About Research Use in Care Delivery Settings</i>
KU2	Intermediate Knowledge User	<i>Using Research in Care Delivery Settings</i>
KU3	Expert Knowledge User	<i>Facilitating and Leading Research Use in Care Delivery Settings</i>

Knowledge Translation Pathway 2: Knowledge Brokers (KB)

Level	Title	Description
KB1	Developmental Knowledge Broker	<i>Learning About Knowledge Brokering in Care Delivery Settings</i>
KB2	Intermediate Knowledge Broker	<i>Mastery of Knowledge Brokering in Care Delivery Settings</i>
KB3	Expert Knowledge Broker	<i>Leading Knowledge Brokering in Care Delivery Settings</i>

Knowledge Translation Pathway 3: Health Research Producer (KP)

Level	Title	Description
KP1	Developmental* Health Research Producer	<i>Learning About Knowledge Translation</i>
KP2	Intermediate Health Research Producer	<i>Mastery of Knowledge Translation</i>
KP3	Expert Health Research Producer	<i>Leading a Program of Knowledge Translation</i>

Three Primary Domains

- 1. Evidence Competency:** understanding & creating evidence
- 2. Teamwork:** working in teams
- 3. KT Activities:** KT planning, implementation, evaluation & sustainability

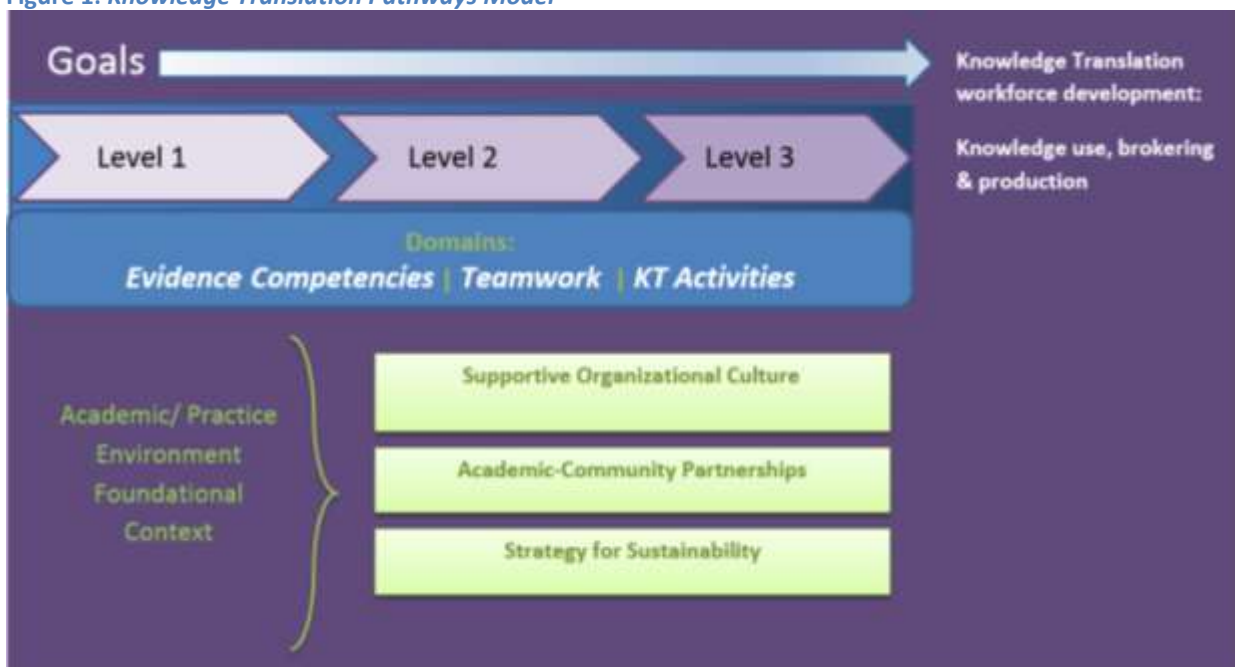
*Developmental in KT

The pathways are presented as levels of competency, not laddered steps. It is recognized that competencies are actually a continuum and that individuals acquire knowledge, skills and attitudes in differing ways – professional development is neither a linear nor an ‘all or nothing’ process. The Pathways as continuums provide a way of illustrating and documenting something in a fashion that we might experience as a whole or as a growing awareness. The use of these levels is to be able to assess one’s competency and to describe placement based on a ‘best fit’.

Figure 1 below illustrates the Pathway model, which is mirrored for each audience (i.e. knowledge users, knowledge brokers, and knowledge producers).

Note: The Professional Development Tool for knowledge brokers uses a framework identified by Glegg and Hoens: *Role Domains of Knowledge Brokering: A Model for the Health Care Setting*. J Neurol Phys Ther. 2016 Apr; 40(2): 115–123. doi: 10.1097/NPT.000000000000122. Video abstract available here: https://youtu.be/udp8JNu_tL4

Figure 1: Knowledge Translation Pathways Model



The three levels in the Pathways are fluid, meaning that an individual can move between levels or have competencies in more than one level at a time. All levels lead to achievement of the Pathways goal of *knowledge translation workforce development in knowledge use, brokering & production*. Individuals’ abilities to develop KT competencies are supported by their academic/practice environment. In order to be successful, these environments include a: (a) supportive organizational culture; (b) foundation of academic-practice partnerships; (c) robust information and communication technology platform; and, (d) strategy for sustainability,

promoting partners working together for ongoing development to support successful use of the Pathways.

Uses of the Pathways

The Pathways guide the KT competency evaluation and professional development of individuals and can be used in a number of ways:

Individuals

Can use the Pathways and Professional Development Tool to:

- assess their own learning needs related to research
- prepare a professional development plan
- identify learning resources

Organizations

- Can use the Pathways as an adjunct to:
 - the professional practice standards published by regulatory bodies
 - curriculum competencies adopted by educational institutions
- Can embed components of the Pathways in:
 - already existing competency tools
 - professional development tools
 - job descriptions
- Can use the Pathways to support:
 - employee performance planning and development
 - professional development plans

Pathways Documentation

The Pathways project includes the following document to support the development of KT competencies.

1. [KT Pathways Competencies from the Literature](#)

The [KT Pathways Competencies from the Literature](#) includes tables of competencies derived from the literature, by audience and step.

2. [Professional Development Tools - KT Competencies](#)

The *Professional Development Tools - KT Competencies* use the criteria set out in the above document. They have been designed for use, by target audience (i.e. knowledge user, knowledge broker, knowledge producer) as a self-assessment tool, as well as for others such as educators/ managers to work with an individual to identify individual learning plans. The Pro-D tools reflect what was in the literature at the time of the review and therefore should be used with judgement as time moves on. Links to unlevelled self-study resources are provided separately.

3. Additional Related KT Resources*

Additional resources identified through the project's environmental scan and literature search that may provide value to the reader have been included [as an appendix](#). These include videos, training opportunities, databases, communities of practice, etc.

***If you see links that need to be updated, or know of others that could be added, please send the information to kt@msfhr.org.** Changes will be made regularly to these documents, available on MSFHR's Web site.

Pathways Advisory Group

Name	Title
Sherry Hamilton	Chief Nursing Officer, Government Liaison and Patient-Focused Funding, Provincial Health Services Authority
Linda Li	Senior Research Scientist, Clinical Epidemiology Harold Robinson / Arthritis Society Chair in Arthritic Diseases, Arthritis Research Centre of Canada; Canada Research Chair in Patient-Oriented Knowledge Translation, Department of Physical Therapy, University of British Columbia (BC)
Sheila Kerr	Member, Arthritis Patient Advisory Board, Arthritis Research Centre of Canada
Grace Mickelson	Retired, former Corporate Director, Academic Development, Provincial Health Services Authority (PHSA); Adjunct Professor, School of Nursing, University of BC
Victoria Schuckel	Director, Research, Library Services and Knowledge Translation, BC Ministry of Health
Laura Mumme	Senior Consultant, Alberta Health Services
Kelly Mrklas	KT Implementation Scientist; Research, Innovation and Analytics, Alberta Health Services
Katrina Plamondon	Regional Practice Leader, Research & Knowledge Translation, Interior Health
Alison Hoens	Physical Therapy Knowledge Broker, Department of Physical Therapy, Faculty of Medicine, University of BC; Research, Education and Practice Coordinator for Physiotherapy at Providence Health Care
Denise Thomson	Alberta's Support Units for CIHR's Strategy for Patient-Oriented Research (SPOR)
Anne Sales	Professor, Division of Systems Leadership and Effectiveness Science, School of Nursing, University of Michigan; Editor, Implementation Science
Moriah Ellen	Investigator, Program in Policy Decision-making, McMaster University
Donna Angus	Consultant, Knowledge Translation
Bev Holmes	Interim President & CEO, Michael Smith Foundation for Health Research

KT Pathways

Glossary of Terms

Attitudes

Values and beliefs associated with and the ability to contribute to the research process (e.g., “I believe that the research process is important to improve quality of care” or “I am open to learning through a research process” or “I am willing to collaborate with others on research and quality improvement projects”); attitudes shape behaviors.

Competency

A set of defined behaviors that provide a structured guide enabling the identification, evaluation and development of behaviors in a profession. A competency includes knowledge, skills and attitudes.

Complex Intervention

Interventions (therapeutic or preventative) that consist of multiple behavioural, technological, and organizational components. Complex interventions are common and important features of healthcare practice and research. However, they pose special evaluation problems because their components may act independently or interdependently, and it is often difficult to determine the relationships between them.

Data Analysis Methods (see [Methods](#))

Data Extraction

The act or process of retrieving data (e.g., article objectives, methods, sample size, findings, etc.) from full-text article data sources for further data analysis.

End-of-Grant Knowledge Translation

A form of Knowledge Translation (KT) that focuses largely on dissemination activities at the end of a research project. In end-of-grant KT, messages are tailored for specific audiences and with various intensities from diffusion to dissemination to application via traditional routes (e.g., academic conferences and peer-reviewed journals) to more innovative strategies to promote uptake of new knowledge (e.g., engaging the media). See the definition at the Canadian Institutes of Health Research (CIHR): <http://www.cihr-irsc.gc.ca/e/39033.html#Two-Types-2>

Evidence-Based Practice (EBP)

An act that entails making decisions about how to promote health or provide care by integrating the best available evidence (i.e., current research findings) with practitioner clinical experience and expertise and with the characteristics, state, needs, values and preferences of those who will be affected (i.e., patient needs and preferences) taking into consideration the nature and norms of the setting and culture within which healthcare is being delivered.

Evidence Informed Practice (EiP)

A continuous, interactive process involving the explicit, conscientious, and judicious consideration of the incorporation of the best available research evidence, clinical expertise, client preferences, and other available resources to make decisions about patients and to provide care. Some scholars argue that EiP is not always research-based; it rather takes into account a range of information in addition to empirical evidence (Rycroft-Malone, 2008; Rycroft-Malone et al., 2012).

Grey Literature

Information which has not been published or which, although published, cannot be found through readily accessible sources. Grey literature can take many forms across multiple disciplines, including conference proceedings, theses and dissertations, research and technical reports, census information, and ongoing research.

Health services research

Research with the goal of improving the efficiency and effectiveness of health professionals and the healthcare system, through changes to practice and policy. Health services research is a multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviours affect access to healthcare, the quality and cost of healthcare, and, ultimately, Canadians' health and well-being.

Indicators

Specific knowledge, skills and attitudes for each competency mentioned in the literature.

Informed Consent

A vital part of the research process that entails educating potential study participants about the details of a study to ensure that they can reach a truly informed decision about whether or not to participate in the research. Informed consent must be given freely, without coercion, and must be based on a clear understanding of what participation involves.

Information and Communication Technologies

A more specific term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage, and audio-visual systems. In this way, information and communication technologies enable users to access, store, transmit, and manipulate information.

Integrated Knowledge Translation (iKT)

A form of Knowledge Translation (KT), in which stakeholders or potential research knowledge users are engaged in the entire research process. In integrated KT, researchers and research findings' users work together to shape the research process by collaborating to determine the research questions, deciding on the methodology, being involved in data collection and tools development, interpreting the findings, and helping disseminate the research results. This approach may also be referred to as collaborative research, action-oriented research, and co-production of knowledge. See the definition at the Canadian Institutes of Health Research (CIHR):

<http://www.cihr-irsc.gc.ca/e/39033.html#Two-Types-2>

Knowledge

Knowledge is possession of strong theoretical understanding of concepts related to the research process, with or without practice background.

Knowledge Translation (KT)

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 healthcare system. See the definition at the Canadian Institutes of Health Research (CIHR):

<http://www.cihr-irsc.gc.ca/e/39033.html>

Methods

Method is a fixed, step-by-step, rigorous, logical and systematic approach/process of achieving certain goals/objectives in an ordered sequence of activities with accuracy and efficiency. to solve a problem that is

pursued by: (1) Identifying and defining a problem/issue (goal of the study), (2) Formulating a tentative hypothesis, (3) Empirically testing the hypothesis, (4) Interpreting the results, and (5) Repeating the aforementioned steps, if necessary. Data analysis methods may be qualitative (see [Qualitative Data Analysis](#)) or quantitative (See [Quantitative Data Analysis](#)).

Methodology

A framework that guides the overall research process; a system or set of methods, principles, and rules used for regulating a particular discipline; it is the branch of philosophy concerned with and studied the underlying principles and rules of the scientific inquiry procedure; in other words, methodology is the science of methods and procedures that does not describe specific methods.

Qualitative Data Analysis

Techniques and an ongoing iterative process, in which data are continuously collected, analyzed (almost simultaneously), and examined for patterns in observations. The researcher analyzes the collected data, explains, provides a form of understanding or interpretation of participants' situations and experiences on a topic under investigation. The form of the analysis is determined by the specific qualitative approach taken (e.g., field study, ethnography content analysis, oral history, biography, unobtrusive research) and the form of the data (e.g., field notes, documents, audiotape, videotape).

Quantitative Data Analysis

Techniques and process of describing, presenting and interpreting numerical data that includes summary of the data (e.g., descriptive statistics) and inferences from a sample (generalizing) to a population (e.g., inferential statistics).

Research

A systematic investigation on a topic (using QN, or QL or Mixed-method methodologies) aimed at uncovering new information or knowledge (i.e., collecting data) and or interpreting relations among concepts, constructs or other parts (e.g., theorizing). Research is done in many ways such as searching among old court cases for legal precedents (e.g., lawyers), smashing atoms to study subatomic particles (physicists), or describing participants' experiences to better understand a phenomenon or the experiences of those lived it (nurses). Usually, research findings are generalizable or transferable to other contexts, but not in the QI research.

Research Competency

Sound specific theoretical knowledge, skills and attitudes related to evidence-based practice (including research utilization) and the research process.

Research Process

The ordered set of activities focused on the systematic collection of information using accepted methods of analysis as a basis for drawing conclusions and making recommendations.

Research Utilization (RU)

The process of synthesizing, disseminating and using research-generated knowledge to make an impact on or to change existing clinical practice. RU includes instrumental, conceptual and persuasive use of research findings. Instrumental (or direct) RU refers to the application of research findings to practice in making clinical decisions or specific interventions); Conceptual (or indirect) RU refers to changing the way of thinking in response to research findings, but not necessarily changing behaviour; and Persuasive (or symbolic) RU refers to the use of certain research findings to convince others.

Skills

The ability to carry out the research process with sufficient practical experience (e.g., I have read about it, understand it and can do it consistently to a satisfactory standard).

Statistical Literacy

The ability to understand statistics, which is necessary for individuals to understand material presented in publications (e.g., newspapers, television, the Internet, peer-reviewed journals, scientific papers). Statistically literate individuals generally have both the ability to appreciate the relevance of statistically-based approaches and critically evaluate statistical material. Numeracy is a prerequisite to being statistically literate.

Systematic Review

A literature review focused on a single question that tries to identify, appraise, select and synthesize all high quality research evidence relevant to that question. Systematic reviews of high-quality randomized controlled trials are crucial to evidence-based practice.

Appendix 1: KT Pathways Additional Related KT Resources Additional Resources

Title (click for link)	Type	Description	Host Agency/ies	Audience(s)		
				Users	Brokers	Producers
BC KT CoP	Community of Practice	Forum to develop, share, and enrich KT activities; facilitate opportunities for collaborations between members; and foster relationships to augment KT connections	Michael Smith Foundation for Health Research	X	X	X
Behavioural Change Models	Modules	Overview of some of the theories used in public health to aid in developing interventions to address problems.	Boston University School of Public Health	X		
Canadian KTE CoP	Community of Practice	Network of KTE practitioners and researchers who share KTE practices and experience, build peer relationships for information exchange and support, build KTE capacity, advance knowledge of KTE effectiveness, and share KTE events, job opportunities and other related KTE activities.	CMHA Ontario	X	X	X
Centre for Health Services and Policy Research (CHSPR)	Graduate program	Impartial resource for policy makers, media and the public; Trains students in key areas of knowledge translation and exchange; Produces and evaluates communication and knowledge translation activities and tools	University of BC			X
Certificate in Knowledge Management	Courses & Workshops	This program delivers insights into the current state of the knowledge environment and teaches cutting-edge practices for knowledge management.	University of Ottawa Centre for Continuing Education & The Institute for Knowledge Mobilization	X	X	X
Certificate in Knowledge Mobilization	Certificate Program	The Certificate in Knowledge Mobilization is designed to develop participants' knowledge, skills and values with respect to knowledge mobilization (Kmb) and build capacity to select and apply Kmb tools and techniques to move knowledge into action	University of Guelph		X	X

CES4Health.info	Online publishing	Free, online mechanism for peer-reviewing, publishing and disseminating products of health-related community-engaged scholarship that are in forms other than journal articles (e.g., manuals, videos, curricula). Provides search feature for tools and resources. Aims to reach and benefit community members, practitioners and policy makers	Community-Campus Partnerships for Health (CCPH)	X	X	X
Cochrane Database of Systematic Reviews	Database	Systematic Reviews	Cochrane Library	X	X	X
End of Grant Knowledge Translation	Courses & Workshops	The End of Grant KT course is designed to provide grant writers with the needed tools to write the KT portion of their grant applications. Course attendees will use their own grants to develop an end of grant KT plan.	KT Canada		X	X
Evidence-Informed Healthcare Renewal (EIHR) Portal	Database	A wide range of evidence is easily searchable and accessible including jurisdictional reviews, stakeholder position papers, toolkits and intergovernmental communiqués. The documents address priority areas identified by federal, provincial and territorial governments, such as primary healthcare, patient safety, health human resources and performance indicators.	McMaster University's Health Forums	X	X	X
Foundations of Knowledge Translation	Course/Workshop	The Foundations of KT course is a multiple day workshop that focuses on specific objectives and includes a mixture of didactic and interactive learning and leads to the completion of a project proposal. This course uses the Knowledge to Action Cycle as a framework.	KT Canada	X	X	X
Health Evidence	Database	Find evidence using quality-rated systematic reviews evaluating the effectiveness of public health interventions.	McMaster University	X		
Health Policy Speaker Series	Presentations	The series features experts in the health policy field whose scholarship, work and leadership have led to successful improvements in the health system and health status of populations. Archived videos are available.	Alberta Innovates Health Solutions		X	X
Institute for Knowledge Mobilization	Community of Practice	Non-profit institute supporting a growing knowledge mobilization community of practice. Work to mobilize high quality evidence into policies and programs. Provides education and professional development opportunities and helps to link initiatives across communities and continents.	Institute for Knowledge Mobilization		X	
Knowledge Brokers Forum	Online Collaborative Space	A collaborative space to promote knowledge sharing and dissemination around intermediary work in international development.	Research Matters, a joint initiative of Canadian International Development Research Centre (IDRC) and the Swiss Agency for Development and Cooperation (SDC)		X	

<u>Knowledge Translation Professional Certificate</u>	Course/Workshop	The Knowledge Translation Professional Certificate (KTPC™) is a 5 day professional development course, held in Toronto, Canada. The curriculum focuses on the core competencies of KT work in Canada.	SickKids		X	X
<u>Knowledge Translation Stories #1 - Dr. David Jaffray</u>	Video	"Realizing Innovation Through Research and Industry Partnerships", Dr. David Jaffray of Toronto's Princess Margaret Hospital explains how an industry partnership facilitated the development of a new diagnostic tool that is improving radiation therapy for cancer patients.	Learning Institute, The Hospital for Sick Children (SickKids), Alberta Centre for Child, Family and Community Research, Michael Smith Foundation for Health Research	X	X	X
<u>Knowledge Translation Stories #2 - Pamela Fuselli</u>	Video	"Spreading the Science of Safety" Pamela Fuselli, Executive Director of Safe Kids Canada, explains how research evidence is shaping the effort to keep kids safe from injuries related to consumer products.	Learning Institute, The Hospital for Sick Children (SickKids), Alberta Centre for Child, Family and Community Research, Michael Smith Foundation for Health Research	X	X	X
<u>Knowledge Translation Stories #3 - Dr. Rosemary Tannock</u>	Video	"Out of the Lab and Into the Classroom" Dr. Rosemary Tannock, senior scientist at the Hospital for Sick Children, explains how the Teach ADHD project is generating evidence-based information and resources to help students with ADHD succeed in school and reach their potential.	Learning Institute, The Hospital for Sick Children (SickKids), Alberta Centre for Child, Family and Community Research, Michael Smith Foundation for Health Research	X	X	X
<u>Knowledge Translation Stories #4 - Dr. Stanley Zlotkin</u>	Video	"Going Global" Dr. Stanley Zlotkin, Senior Scientist at the Hospital for Sick Children and President of the Sprinkles Global Health Initiative, explains how tiny packets of iron sprinkles have improved the health of millions of children with nutrient deficiencies.	Learning Institute, The Hospital for Sick Children (SickKids), Alberta Centre for Child, Family and Community Research, Michael Smith Foundation for Health Research	X	X	X

<u>Knowledge Translation Summer Institute</u>	Conference	The Summer Institute is aimed at graduate students, post-doctoral and clinical fellows, and junior faculty who study issues relevant to KT and those who want to learn more about how to advance their research skills in this area.	KT Canada		X	X
<u>Knowledge Translation+</u>	Database	Provides access to the current evidence on knowledge translation (ie, research addressing the knowledge to practice gap)	McMaster University's Health Information Research Unit	X	X	X
<u>KT Canada Seminar Series</u>	Webinar	As part of its mandate, KT Canada has developed and hosted the first expert-led seminar series dedicated to current and emerging topics in KT.	KT Canada	X	X	X
<u>KT Clearinghouse</u>	Database	Resources for individuals who want to learn about the science and practice of KT, and access tools that facilitate their own KT research and practices	St. Michael's Hospital University of Toronto, Faculty of Medicine	X	X	X
<u>Literature Search Service</u>	Service	The librarians at College of Registered Nurses of BC will do a lit search for any registered nurse in BC. You email reflib@crnbc.ca	College of Registered Nurses of BC	X	X	X
<u>Michael Smith Foundation for Health Research</u>	Resources	Links to KT resources (e.g., tools, videos, online learning modules etc.)	Michael Smith Foundation for Health Research	X	X	X
<u>National Collaborating Centre for Methods and Tools</u>	Database	Searchable, online collection of methods, tools and learning resources for knowledge translation in public health.	McMaster University	X	X	X
<u>Patient Engagement Heard and Valued: A handbook for meaningful engagement of patients</u>	Handbook	A tool to assist healthcare decision makers to plan, implement, and evaluate patient engagement processes with a focus on engaging patients whose voices have not additionally been heard in healthcare planning, such as immigrants and refugees, those of low socioeconomic status, or people dealing with mental health and substance use issues.	Fraser Health	X		
<u>Population Health Intervention Research Casebook</u>	Casebook	This casebook showcases population health intervention research in Canada.	Canadian Institute for Health Information & CIHR Institute of Population and Public Health	X	X	X
<u>Practicing Knowledge Translation</u>	Course/Workshop	The Practicing Knowledge Translation course is an intensive train-the-trainer program in knowledge translation that focuses on teaching best practices in high-quality implementation.	Knowledge Translation Program, St. Michael's Hospital		X	X

<u>Public Engagement and Knowledge Translation Environmental Scan</u>	Environmental Scan	Includes the best frameworks and best practices related to public engagement and to understand the current Alberta landscape regarding knowledge translation in public engagement.	Collaborative Health Innovation Network (CHIN)		X	X
<u>Putting Evidence into Practice</u>	Course/Workshop	Putting Evidence into Practice (PEP) is a three-day workshop offered by the Knowledge Translation Platform of the Alberta SPOR SUPPORT Unit. The workshop is intended to strengthen participants' abilities in several key aspects of KT and knowledge synthesis.	Knowledge Translation Platform, Alberta SPOR SUPPORT Unit		X	X
<u>Reducing Gaps in Health: Knowledge Synthesis, Translation and Exchange</u>	Report	Sponsored by the Canadian Population Health Initiative (CPHI) and the National Collaborating Centre for the Determinants of Health (NCC-DH). Workshop objectives: to share current research on factors associated with health gaps in Canada; to facilitate knowledge exchange and transfer; and to discuss concrete policy and program development directions that could reduce health gaps at the regional level.	Canadian Institute for Health Information		X	X
<u>Resource Hub</u>	Learning modules	Resources designed to help service providers use the best available evidence to provide care. Learning module topics fall under 5 categories: youth and family engagement; implementation (e.g., implementing evidence-informed practices); special topics (e.g., introduction to evidence-informed practice); working together (e.g., building and strengthening partnerships); and evaluation (e.g., planning evaluation).	Ontario Centre of Excellence for Child and Youth Mental Health	X		
<u>Social Care Research Impact Website</u>	Website	Website designed to support enhanced research impact	Social Care Evidence in Practice project - London School of Economics and Political Science, Personal Social Services Research Unit, NIHR School for Social Care Research			X
<u>Supporting the Promotion of Activated Research and Knowledge (SPARK) Training Workshop</u>	Course/Workshop	The SPARK Training Program helps participants apply techniques for moving evidence-informed research and knowledge in mental health, substance use, and addictions more quickly into practice.	Mental Health Commission of Canada	X	X	X

<u>Systematic Review Course</u>	Course/Workshop	The introductory course on systematic reviews and meta-analyses is an online course offered twice a year. The overall course objective is to teach about systematic reviews in general, as well as how to go about doing a systematic review.	Knowledge Translation Program, St. Michael's Hospital			x
<u>The International Knowledge Exchange Network for Mental Health</u>	Network	To increase the capacity for effective knowledge exchange in mental health by connecting people, ideas and resources on a global level.	Mental Health Commission of Canada and the International Initiative for Mental Health Leadership	x	x	x

KT Pathways: Competencies from the Literature

KNOWLEDGE USERS (KUs)

1. Evidence Competency (KUs)

	Level 1: Developmental	Level 2: Intermediate	Level 3: Expert
Knowledge	Identifies critical appraisal tools and how to use them for evaluating the quality of methodology and the reliability of specific research to identify the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered when reviewing research literature	Explains the critical appraisal process when reviewing research literature to identifying the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered	Expert knowledge to lead others in the critical appraisal process and use of tools when reviewing research literature to identifying the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered
	Describes basic descriptive and inferential statistics	Explains advanced descriptive and inferential statistics found in qualitative and quantitative research reports	Expertise to lead others in interpreting descriptive and more advanced inferential statistics found in qualitative and quantitative research reports
	Recognizes there are gaps in research/practice knowledge	Explains how to develop research questions for literature searches	Expert knowledge to lead others to understand how to develop research questions for literature searches
	Identifies evidence sources and structure of electronic library databases	Explains the creation and execution of an efficient search strategy and to use resources for online information searches (e.g. searching CINAHL, Medline, grey literature, reports)	Expertise to lead others to understand how to create and execute an efficient search strategy and how to use resources for online information searches (e.g. searching CINAHL, Medline, grey literature, reports)

Recognizes the importance of using synthesized knowledge rather than single studies	Explains the variety of methods to conduct a scoping review	Expertise in conducting knowledge syntheses including, meta-analyses, systematic reviews, mixed methods, etc.
Recognizes the need to keep up to date on systematic reviews or other syntheses of the global evidence	Explains the need to keep up to date on systematic reviews or other syntheses of the global evidence	Fully informed about up-to-date systematic reviews or other syntheses of the global evidence
Recognizes there are different types of knowledge (e.g., research; practice; theory) that contribute to decision-making	Explains the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making	Expert knowledge to lead others to know the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making
Identifies what knowledge (evidence and research) is needed to inform health policies and programs using relevant databases and best practices	Explains how to apply knowledge (evidence and research) to inform health policies and programs	Expertise of knowledge to lead others to apply evidence and research to inform health policies and programs
Recognizes how to search for knowledge including literature searches and best practices, synthesized evidence, useful experiences, and examples from outside own organization	Identify selected evidence from a search well enough to explain the gist of it	Examine and interpret selected evidence from a search
Recognizes the concept of evidence-informed decision/policy making including how it relates to the research process	Explains the components of evidence-informed decision/policy making	Expertise in identifying decision/policy makers' information needs and current policy priorities; Expertise in evidence-informed decision making methods (proper question development, creation and execution of an efficient search strategy, critical appraisal, interpretation of evidence considering local context, application of evidence for multiple audiences) and how it relates to the research process

	Describes how to find implementation resources (e.g., tools) and apply evidence for multiple audiences	Explains implementation resources available (e.g., tools) and how to apply evidence for multiple audiences	Expertise with implementation resources (e.g., tools) and applying evidence for multiple audiences
	Distinguishes between research, evaluation and quality improvement	Explains the differences/commonalities between research, evaluation and quality improvement	Expertise to lead others to know the differences/commonalities between research, evaluation and quality improvement
	Identifies basic research processes (research ethics, research question, hypothesis, qualitative and quantitative data analyses methods)	Explain basic research processes (e.g. research ethics, research question, hypothesis, qualitative and quantitative data analyses methods)	Distinguish between the different research designs and applications (i.e. qualitative, quantitative, mixed-methods)
	Describes 'what is health literacy?' (i.e., knowledge to obtain, process and understand basic health information and services needed to make appropriate health decisions)	Explains how to select, process, understand and use health information and services to make appropriate health decisions	Expertise to lead others to develop health literacy capacity
	Recognizes relevance of research to the local context	Explains how to apply research to the local context	Expertise to lead others to apply research to the local context
	Identifies the content in literature reviews to inform practice and policy-making	Explains how to analyze literature review reports to apply to practice	Expertise to lead others to conduct literature reviews on topics relevant to practice.
Skills	Demonstrates knowledge of the concept of evidence-informed decision/policy making including how it relates to the research process	Practices evidence-informed decision/policy making	Ability to identify decision/policy makers' information needs and current policy priorities; Expertise in evidence-informed decision/policy making methods (proper question development, creation and execution of an efficient search strategy, critical appraisal, interpretation of evidence considering local context, application of evidence for multiple audiences) and how it relates to the research process

Uses critical appraisal skills and tools for evaluating the quality of methodology and the reliability of specific research to identify the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered when reviewing research literature	Uses the critical appraisal process and tools for evaluating the quality of methodology and the reliability of specific research to identify the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered when reviewing research literature	Leads others to critically appraise and use tools for evaluating the quality of methodology and the reliability of specific research
Uses basic descriptive and inferential statistical analyse	Uses advanced descriptive and inferential statistics found in qualitative and quantitative research reports	Ability to lead others in interpreting basic and more advanced descriptive and inferential statistics found in qualitative and quantitative research reports
Makes use of literature reviews	Analyze literature review reports to apply to practice	Leads others to conduct literature reviews on topics relevant to practice
Identifies gaps in research/practice knowledge	Develops research questions for literature searches	Leads others to develop research questions for literature searches
Uses resources to access online information (e.g. searching CINAHL, Medline, grey literature, reports)	Creates and executes an efficient search strategy and to use resources for online information searches (e.g. searching CINAHL, Medline, grey literature, reports)	Leads others to create and execute an efficient search strategy and to use resources for online information searches (e.g. searching CINAHL, Medline, grey literature, reports)
Distinguishes between single studies and synthesized knowledge	Conducts a scoping review	Expertise in conducting knowledge syntheses including, meta-analyses, systematic reviews, mixed methods, etc.
Identifies the importance for keeping up to date on systematic reviews or other syntheses of the global evidence	Keeps up-to-date on systematic reviews or other syntheses of the global evidence	Leads others to be aware of current systematic reviews or other syntheses of the global evidence
Searches for knowledge including literature searches and best practices, synthesized evidence, useful experiences, and examples from outside own organization	Reviews selected evidence from a search well enough to understand the gist of it	Facilitate others to interpret evidence from a search?

	Distinguishes between the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making	Examines the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making	Leads others to know the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making
	Identifies knowledge (evidence and research) to inform health policies, programs or practice	Applies knowledge (evidence and research) to inform health policies, programs or practice	Leads others to apply knowledge (evidence and research) to inform health policies, programs or practice
	Determines relevance of research to the local context	Applies relevant research to the local context	Leads others to determine and apply relevant research to the local context
	Identifies implementation resources (e.g., tools)	Examines implementation resources available (e.g., tools) and applies evidence for multiple audiences	Uses implementation resources (e.g., tools) and applies evidence for multiple audiences
	Distinguishes between research, evaluation and quality improvement	Examines the differences/commonalities between research, evaluation and quality improvement	Leads others to know the differences/commonalities between research, evaluation and quality improvement
	Recognizes basic research processes (e.g., what are research ethics, a research question, a hypothesis, qualitative and quantitative data analyses methods)	Examines basic research processes (e.g., what are research ethics, a research question, a hypothesis, qualitative and quantitative data analyses methods)	Leads others in understanding research processes
	Identifies basic health information and services needed to make appropriate health decisions (health literacy)	Obtains, processes and understands basic health information and services needed to make appropriate health decisions (health literacy)	Leads others to develop health literacy capacity
Attitudes	Interested and willing to learn about research and evaluation	Appreciates how practice can inform research and vice versa	Committed to improving practice through leading others' research use
	Interested in learning about research and quality improvement at the front-line	Values active engagement of front-line staff in research and quality improvement	Values the role of research and quality improvement mentors and support
	Receptive to the use of statistics and systematic data analysis methods to inform practice and policy making	Values the process of conducting qualitative and quantitative research to inform practice and policy making	Rewards the use of data analysis in the workplace to inform practice and policy making

Receptive to self-directed lifelong learning and reflective learning

Values self-directed lifelong learning and reflective learning

Rewards self-directed lifelong learning and reflective learning

2. Teamwork (KUs)

	Level 1: Developmental	Level 2: Intermediate	Level 3: Expert
Knowledge	Recognizes the value of knowledge sharing	Identifies unit and organizational opportunities (e.g. rounds, communities of practice, journal clubs) and resources to support knowledge sharing	Expertise in leading a team to understand the value of sharing relevant research findings?
	Recognizes the value of forming partnerships and engaging stakeholders	Explains strategies to build relationships with stakeholders, build opportunities for interaction into the research process, share work in ways that are meaningful and accessible to stakeholders	Identifies when it is appropriate to engage in any of the following approaches, as determined by the individual needs: appreciative inquiry, conflict resolution, deliberative dialogue, systems thinking, adult learning principles, etc.
	Recognizes the value of knowledge networks of researchers and knowledge users	Describes how to develop a knowledge network of researchers and knowledge users	Expertise to create knowledge networks of researchers and decision makers who have common interests
	Recognizes the benefits of learning from peers through informal and formal networks	Describes how to develop opportunities to learn and share through informal and formal networks	Leads others to develop opportunities to learn and share through informal and formal networks
	Recognizes how to help others access evidence	Describes how to help others appraise evidence	Leads and provides training to others to access and appraise evidence
	Recognizes the value of engaging researchers	Describes specific strategies to build relationships with researchers, and find opportunities for interaction into the research process	Expertise in building relationships with researchers and creates a culture that values interaction through the research process
	Recognizes commitment to advancing cultural humility and cultural safety in	Describes how to apply concepts of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples	Leads others to apply concepts of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples

	working with First Nations and Aboriginal peoples		
Skills	Takes part in collaborative activities with clients/patients and other providers in knowledge sharing	Influences team to engage in full participation in knowledge sharing with clients and other providers	Expertise leading teams in successful knowledge sharing activities
	Demonstrates skills learned from peers through informal and formal networks	Develops opportunities to learn and share through informal and formal networks	Leads others to develop opportunities to learn and share through informal and formal networks
	Engages in discussion with stakeholders	Uses strategies to build relationships with stakeholders and share work in ways that are meaningful and accessible to stakeholders	Determines when it is appropriate to engage in any of the following approaches, as determined by the individual needs: appreciative inquiry, conflict resolution, deliberative dialogue, systems thinking, adult learning principles, etc.
	Identifies opportunities to work with researchers through networking meetings, partnerships, sponsorships	Works with researchers through networking meetings, partnerships, sponsorships	Creates knowledge networks of researchers and decision makers who have common interests
	Helps others access evidence	Helps others appraise evidence	Leads, provides training to others to access and appraise evidence
	Identifies opportunities for collaboration with researchers	Collaborates with researchers to build relationships & find opportunities for interaction into the research process (e.g., co-development of evidence; identifying data and research findings relevant to practice or the policy process)	Establishes ongoing relationships with researchers to support practice-based research and research-based practice

	Demonstrates commitment to cultural humility and cultural safety in working with First Nations and Aboriginal peoples	Applies concepts of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples	Leads others to demonstrate cultural humility and cultural safety in working with First Nations and Aboriginal peoples
Attitudes	Demonstrates a spirit of teamwork, cooperation and relationship building	Commitment to creating an environment of teamwork, cooperation and relationship building	Commitment to leading others in teamwork, cooperation and relationship building
	Demonstrates equity, inclusivity, respect and cultural competence	Commitment to fostering principles of equity, inclusivity, respect and cultural competence	Leadership in adopting principles of equity, inclusivity, respect and cultural competence
	Values listening, open-mindedness and a supportive attitude in fostering relationships	Commitment to expressing a responsive, open minded and supportive attitude in team leadership	Uses charisma and persuasiveness in working with others; committed to influencing rather than wielding power
	Appreciates the value of developing self-awareness of own abilities or limitations in collaborative situations	Self-awareness of own abilities or limitations in collaborative situations	Fosters self-awareness in other team members of own abilities or limitations in collaborative situations

3. KT Activities (KUs)

	Level 1: Developmental	Level 2: Intermediate	Level 3: Expert
Knowledge	Recognizes the importance of sharing relevant research findings with the team	Describes the value of sharing relevant research findings with the team	Demonstrates the importance of leading a team to understand the value of sharing relevant research findings
	Describes the barriers and facilitators to knowledge use	Explains the barriers and facilitators to knowledge use and strategies to address them	Demonstrates the importance of leading a team to understand the barriers and facilitators to knowledge use and strategies to address them
	Recognizes the differences between integrated and end-of-grant KT approaches	Explains integrated and end-of-grant KT approaches	Demonstrates knowledge of the available frameworks of KT approaches for use by others (e.g. Graham et al)

	Describes the role of knowledge brokers	Recognizes the value of knowledge brokers in the practice/policy team	Identifies opportunities to, and interact with, knowledge brokers to assist in developing and/or finding and implementing evidence
	Recognizes the need for practice improvement to promote safe, effective and reliable care	Describes the identified practice gaps and opportunities through the use of relevant evidence in practice	Expertise in implementing practice improvement to promote safe, effective and reliable care
	Recognizes that inconsistencies may exist between research findings and expertise or patients' preferences in their practice environment	Describes inconsistencies that may exist between research findings and expertise or patients' experience in their practice environment	Leads others to identify inconsistencies between research findings and expertise or patients' preferences in their practice environment
	Recognizes how the patient's values affect the balance between potential advantages and disadvantages of the available options, and to appropriately involve the patient in decision-making	Describes how the patient's values affect the balance between potential advantages and disadvantages of the available options, and to appropriately involve the patient in decision-making	Expertise in understanding how the patient's values affect the balance between potential advantages and disadvantages of the available options and to appropriately involve the patient in decision-making
Skills	Identifies relevant research findings to share with the team	Shares relevant research findings with the team	Leads others to share relevant research findings with the team
	Describes synthesis of data for practice improvement	Explains synthesis of research and evaluation data for practice improvement	Synthesizes evidence in planning and delivering healthcare services
	Identifies processes for implementing evidence to promote safe, effective and reliable care	Addresses identified practice gaps and opportunities through the use of relevant evidence in practice	Promotes the use of research and outcome data to formulate, evaluate and/or revise policies, procedures, protocols, client-specific programs and client standards of care to improve practice
	Identifies evidence appropriate for the local context	Integrates new evidence into the practice setting and with specific client populations	Promotes the adaptation of the evidence for the local context

	Identifies the role of knowledge brokers (KB)	Identifies opportunities to, and interact with, knowledge brokers to assist in developing and/or finding and implementing evidence	Leads a program with knowledge brokering embedded into it
	Identifies barriers and facilitators to knowledge use	Assesses barriers and facilitators to knowledge use	Leads others to tailor, select and implement interventions to target goals, barriers and to enable facilitators of change
	Identifies inconsistencies between research findings and expertise or patients' preferences in practice environment	Assesses inconsistencies between research findings and expertise or patients' preferences in their practice environment	Leads others to develop plans to address inconsistencies between research findings and expertise or patients' preferences
Attitudes	Appreciates the importance of KT	Willingness to take on leadership in KT activities	Leadership in building KT programs
	Expresses interest in learning about uses of evidence to improve practice	Values the ongoing translation of new knowledge into practice	Leadership in seeking out opportunities to engage others in the research-practice interface as an essential part of their own professional work
	Curious about a culture of change and innovation, including promoting evidence-based care and continuous quality improvement	Promotes a culture of change and innovation, including promoting evidence-based care and continuous quality improvement	Rewards a shared vision of culture of change and innovation, including promoting evidence-based care and continuous quality improvement
	Exhibits a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical decision making	Values a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical decision making	Rewards a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical decision making
	Intends to use research findings to advocate for practice improvements	Values research findings to advocate for practice improvements	Committed to use research findings to advocate for practice improvements

KNOWLEDGE BROKERS (KBs)

1. Evidence Competency (KBs)

	Level 1: Developmental	Level 2: Intermediate	Level 3: Expert
Knowledge	Understands how to search for evidence (research-based and other) including through literature searches, understands the scientific content, understands how to assess applicability	Understands how to critically appraise quality, to systematically synthesize and to interpret the evidence	Conceptualizes in others how to adapt the synthesized evidence to the local context
	Understands what critical appraisal tools are and how to use them to identify the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered when reviewing research literature	Discerns among critical appraisal tools for reviewing research literature to identify the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered	Conceptualizes for others how to apply appropriate critical appraisal tools to review research literature to identify the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered
	Understands the concept of evidence-informed decision making including how it relates to the research process	Describes the practice of evidence-informed decision making (proper question development, creation and execution of an efficient search strategy, critical appraisal, interpretation of evidence considering local context, application of evidence for multiple audiences) and how it relates to the research process	Conceptualizes for others evidence-informed decision making methods (proper question development, creation and execution of an efficient search strategy, critical appraisal, interpretation of evidence considering local context, application of evidence for multiple audiences) and how they relate to the research process
	Understands the context that surrounds the producers and users of knowledge	Explains the benefits of analyzing the context that surrounds the producers and users of knowledge	Conceptualizes for others the context that surrounds the producers and users of knowledge

Understands need to determine relevance and applicability of research for the local context	Discerns the relevance and applicability of research for the local context	Conceptualizes for others the relevance and applicability of research for the local context
Understands how to define the problem, and to analyze the team/individual/organizational contexts	Discerns ways to use knowledge given the team/individual/organizational contexts	Conceptualize for others how to adapt implementation interventions within the team/individual/organizational contexts
Understands the ethical principles applied to human health research	Discerns among processes that can support the ethical conduct of activities in a manner appropriate to the cultural context (e.g., indigenous peoples and health research)	Conceptualizes for others how to conduct all activities in an ethical manner appropriate to the cultural context (e.g., indigenous peoples and health research)
Understands how to find health research resources (e.g., tools)	Discerns between the health research resource (e.g. tools) options available	Has practical experience using the most appropriate health research resources (e.g. tools) for the context
Understands how to determine linkages among a range of ideas and bits of information	Interprets the data from a range of ideas and bits of information	Conceptualizes for others the results and implications of analysed data
Understands how to maintain data and document management systems and repositories	Discerns among data and document management systems and repositories for specific uses	Conceptualizes for others strategies for selecting, maintaining and developing data and document management systems and repositories
Understands how to use social media as part of a research project (e.g., patient recruitment)	Discerns among social media strategies for research purposes	Conceptualizes for others how to use social media in the research process
Understands how to organize workshops, focus groups and interviews as part of the research project	Discerns among strategies for engaging stakeholders in the research project, such as through workshops, focus groups and interviews	Conceptualizes for others how to foster and to coordinate meaningful stakeholder involvement in the research process
Understands how to identify knowledge gaps by accessing literature reviews, rapid reviews, synthesis reports	Understands how to prepare literature reviews, rapid reviews, synthesis reports	Conceptualizes for others strategies for preparing literature reviews, rapid reviews, synthesis reports
Understands priorities, issues, trends and concerns based on scans, or by leveraging information collected by others	Discerns among strategies for identifying priorities, issues, trends and concerns	Defines priorities, issues, trends and concerns in a program of research

Understands information management techniques that can be used to describe, to categorize and to organize knowledge from different sources in order to support easy retrieval	Can discern among the most appropriate information management techniques (including definition and application of metadata and vocabulary standards, such as cataloguing, indexing, classification, tagging, use of taxonomies and folksonomies, defining themes and concepts specific to user needs, defining relationships between concepts, and extracting these concepts from the material retrieved through knowledge search and capture stages)	Conceptualizes for others how to identify and to deploy appropriate information management techniques to describe, categorize and organize knowledge from different sources in order to support easy retrieval.
Understands the process of health research	Discerns commonalities among the processes of health research, evaluation and quality improvement	Conceptualizes for others the process and practice of health research including a variety of scientific methodologies (e.g., meta-analysis, systematic review, randomized controlled trials, cohort studies, etc.) and the commonalities of health research, evaluation and quality improvement
Understands basic descriptive and inferential statistics	Interprets advanced descriptive and inferential statistics found in qualitative and quantitative research reports	Conceptualizes for others the interpretations of descriptive and inferential statistics found in qualitative and quantitative research reports
Describes the health research funding environment in Canada	Discerns among funding opportunities in health research and understands the requirements for successful applications	Conceptualizes for others the development of successfully funded health research grants
Understands there are different types of knowledge (e.g., research; practice; theory) that contribute to decision-making	Discerns among the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making e.g. how each is generated and validated, the differences between knowledge and evidence	Conceptualizes for others the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated and validated, the differences between knowledge and evidence

Understands the characteristics and benefits of different types of data (e.g. fully coded, partially coded and unstructured) data	Discerns among types of data for the purpose of supporting service improvement and redesign in practice, policy making and research	Conceptualizes for others the advantages and disadvantages of fully coded, part coded and unstructured data in enabling retrieval of knowledge and access to knowledge in practice, policy making and research
Understands the differing purposes of single studies versus synthesized knowledge	Discerns among the variety of methods to conduct a knowledge synthesis	Conceptualizes for others the best approaches for conducting knowledge syntheses including, meta-analyses, systematic reviews, mixed methods, etc. for a given purpose
Understands the concept of health literacy i.e., having the knowledge to obtain, process and understand basic health information and services in order to be able to make appropriate health decisions	Understands how information about health and health services is used to make appropriate health decisions	Conceptualizes health literacy for others
Understands how to define research questions for literature searches	Discerns among possible research questions for a literature search	Conceptualizes for others how to develop research questions for literature searches
Understands the connection between evidence-informed policy making and research	Discerns how policy makers' information needs may differ from the research being conducted	Describes policy makers' information needs and current policy priorities and their implications for research
Discerns among different stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public)	Understands why differences exist among stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public)	Conceptualizes for others how to incorporate various stakeholders' perspectives (e.g., service provider, researcher, policy maker, patient/public) into the research and implementation cycle
Understands the health sector and its key players	Describes the implications of the characteristics of the health sector, its key players and controversies.	Conceptualizes for others the complexities of the health sector, the broader healthcare environment, its key players and controversies

Understands how to develop and to disseminate a range of evidence and knowledge through personal relationships and networks	Discerns among strategies to develop and to disseminate all relevant research using diverse products, and describes how to evaluate dissemination plans/products	Conceptualizes for others how to leverage personal relationships and networks to optimize communication of research findings and evidence-based policy recommendations and to evaluate dissemination efforts
Understands the various models and frameworks for practicing/studying KT	Discerns among the various models and frameworks for practicing/studying KT	Conceptualizes for others the application of various models and frameworks for practicing/studying KT
Understands how to find implementation resources (e.g., tools) and to apply evidence for multiple audiences	Discerns among implementation resources (e.g., tools) available, and among effective ways to apply evidence for multiple audiences	Conceptualizes for others the use of implementation resources (e.g., tools) and the effective use of methods of applying evidence for multiple audiences
Understands how to prepare draft scientific manuscripts or policy-focused reports for health, health policy and health system research stakeholders	Discerns how to refine and to contribute to scientific manuscripts and policy-focused reports for health, health policy and health system research stakeholders	Conceptualizes for others the preparation of publishable scientific manuscripts and policy-focused reports as lead author
Understands how to identify and to deploy techniques to capture experiential and emotional knowledge (e.g. use of narrative/ storytelling, guided reflection, case studies, social networking) as part of the data collection process	Discerns among methods to identify and to deploy appropriate techniques to capture experiential and emotional knowledge (e.g. use of narrative/ storytelling, guided reflection, case studies, social networking) as part of the data collection process	Conceptualizes for others strategic techniques to capture experiential and emotional knowledge (e.g. use of narrative /storytelling, guided reflection, case studies, social networking) as part of the data collection process
Understands search techniques used to retrieve knowledge from sources at a level of sensitivity and specificity appropriate to different knowledge needs	Discerns among search techniques to effectively retrieve knowledge from these sources at a level of sensitivity and specificity appropriate to different knowledge needs	Conceptualizes for others how to develop and to apply appropriate search techniques to retrieve knowledge from sources at a level of sensitivity and specificity appropriate to different knowledge needs
Understands evidence sources and the structure of electronic library databases	Discerns among evidence sources and understands how to apply electronic	Conceptualizes for others how to discern among evidence sources and to optimize

		database features to create and execute an efficient search strategy	efficient search strategies using database features
	Understands methods of keeping up to date on systematic reviews or other syntheses of the global evidence	Discerns among ways to keep up to date on systematic reviews or other syntheses of the global evidence	Conceptualizes for others the development of effective sector-specific strategies to keep up to date with systematic reviews or other syntheses of the global evidence
Skills	Identifies resources to access online information (e.g. searching CINAHL, Medline, grey literature, reports)	Selects an efficient search strategy and uses it to access resources for online information searches (e.g. searching CINAHL, Medline, grey literature, reports)	Leads others to create and to execute an efficient search strategy and to effectively use resources for online information searches (e.g. searching CINAHL, Medline, grey literature, reports)
	Searches for and accesses relevant evidence (research-based and other), understands the scientific content, assesses applicability	Critically appraises and synthesizes the best available evidence	Adapts and applies the synthesized evidence to the local context
	Searches for systematic reviews or other syntheses of the global evidence	Sets up processes for receiving up to date systematic reviews or other syntheses on the global evidence	Efficiently stays up to date on relevant systematic reviews or other syntheses of the global evidence
	Defines research questions for literature searches	Develops research questions that produce effective and efficient literature searches	Leads others to develop research questions for effective and efficient literature searches
	Obtains health information and services needed to make appropriate health decisions (health literacy)	Selects and evaluates health information and services needed to make appropriate health decisions (health literacy)	Leads others in health literacy
	Distinguishes between different types of synthesized knowledge and their purposes	Conducts a scoping review or other syntheses	Leads others in conducting knowledge syntheses including, meta-analyses, systematic reviews, mixed methods, etc.
	Selects appropriate tools for the critical appraisal of research	Evaluates the quality of methodology and the reliability of specific research using appropriate critical appraisal tools	Leads others to critically appraise research and to select and use tools for evaluating the quality of methodology and the reliability of specific research

Conducts basic descriptive and inferential statistical analyses	Applies advanced descriptive and inferential statistical methods commonly used in qualitative and quantitative research reports	Leads others in conducting and interpreting descriptive and inferential statistics found in qualitative and quantitative research reports
Identifies evidence-informed decision/policy makers' information needs and current priorities	Carries out evidence-informed decision making in personal practice	Leads others to identify decision/policy makers' information needs and current policy priorities and to carry out evidence-informed decision/policy making
Connects evidence-informed policy making and research	Compares/contrasts policy makers' information needs with the research being conducted	Leads communication with policy makers to understand their information needs and current policy priorities
Identifies differences between stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public)	Compares/contrasts stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public) and determine their implications for research and implementation	Integrates differing stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public) into the research and implementation cycle
Evaluates the health sector and its key players	Evaluates the health sector, the broad healthcare environment and its key players and controversies and identifies strategies to help navigate it to achieve goals	Leads others to navigate the health sector, the broad healthcare environment and its key players and controversies to achieve goals
Conducts all activities in an ethical manner	Develops and integrates processes to support the ethical conduct of activities in a manner appropriate to the cultural context (e.g., indigenous peoples and health research)	Leads others in conducting all activities in an ethical manner appropriate to the cultural context (e.g., indigenous peoples and health research)
Identifies and selects from the various models and frameworks for practicing/studying KT	Applies the various models and frameworks for practicing/studying KT	Leads others to use the various models and frameworks for practicing/studying KT
Prepares draft scientific manuscripts or policy-focused reports	Refines and contributes to scientific manuscripts and policy-focused reports	Participates as lead author in preparing scientific manuscripts and policy-focused reports
Evaluates the relevance of research to the local context	Identifies and implements ways to adapt research to enhance its relevance to the local context	Leads others to determine the relevance of research to the local context and to adapt it

Defines the problem, and analyzes the team/individual/organizational contexts	Evaluates the ways that knowledge could be used given the team/individual/organizational contexts and creates interventions to support its use	Facilitates the implementation of knowledge use interventions within the team/individual/organizational contexts
Evaluates the data from a range of ideas and bits of information	Identifies linkages among a range of ideas and bits of information	Leads other to interpret the results of and linkages among analysed data
Maintains data and document management systems and repositories	Creates custom data and document management systems and repositories for specific uses	Leads others to maintain and to create data and document management systems and repositories
Uses social media as part of a research project (e.g., patient recruitment)	Creates social media strategies for research projects	Leads others to use social media in the research process
Organizes workshops, focus groups and interviews as part of the research project	Applies strategies for and facilitates engaging stakeholders in the research project (e.g. through workshops, focus groups and interviews)	Leads others to develop and to organize meaningful stakeholder involvement in the research process
Communicates research findings and evidence-based policy recommendations through a variety of means	Creates a dissemination plan for synthesized knowledge that includes evaluation mechanisms; integrates strategies for communicating research findings and evidence-based policy recommendations through a variety of means	Leverages personal relationships and networks to optimize communication of research findings and evidence-based policy recommendations
Identifies knowledge gaps by accessing an analyzing literature reviews; rapid reviews, synthesis reports	Prepares literature reviews, rapid reviews, synthesis reports to address knowledge gaps	Leads others to develop literature reviews, rapid reviews, synthesis reports to address knowledge gaps
Identifies implementation resources (e.g., tools) and applies evidence for multiple audiences	Evaluates available implementation resources (e.g., tools) for relevance and utility, and determines how to use them to apply evidence for multiple audiences	Uses most appropriate implementation resources (e.g., tools) to effectively apply evidence for multiple audiences
Identifies health research resources (e.g., tools)	Evaluates available health research resources (e.g., tools)	Applies most appropriate health research resources (e.g., tools)

	Identifies information about priorities, issues, trends and concerns by conducting a scan, or by leveraging information collected by others	Develops strategies for identifying priorities, issues, trends and concerns	Leads a program of research that identifies priorities, issues, trends and concerns
	Selects appropriate techniques to capture experiential and emotional knowledge (e.g. use of narrative/ storytelling, guided reflection, case studies, social networking) as part of the data collection process	Deploys appropriate techniques to capture experiential and emotional knowledge (e.g. use of narrative/ storytelling, guided reflection, case studies, social networking) as part of the data collection process	Leads other in applying strategic techniques to capture experiential and emotional knowledge (e.g. use of narrative / storytelling, guided reflection, case studies, social networking) as part of the data collection process
	Selects appropriate information management techniques to describe, categorize and organize knowledge from different sources in order to support easy retrieval	Effectively deploys information management techniques (including definition and application of metadata and vocabulary standards, such as cataloguing, indexing, classification, tagging, use of taxonomies and folksonomies, defining themes and concepts specific to user needs, defining relationships between concepts, and extracting these concepts from the material retrieved through knowledge search and capture stages) to describe, categorize and organize knowledge from different sources in order to support easy retrieval	Leads others to identify and to deploy appropriate information management techniques to describe, categorize and organize knowledge from different sources in order to support easy retrieval
	Applies search techniques to retrieve knowledge from sources at a level of sensitivity and specificity appropriate to different knowledge needs	Selects or develops appropriate search techniques to efficiently retrieve knowledge from these sources at a level of sensitivity and specificity appropriate to different knowledge needs	Leads others to develop and apply appropriate search techniques to efficiently retrieve knowledge from sources at a level of sensitivity and specificity appropriate to different knowledge needs
Attitudes	Values scientific credibility, which involves honesty in gathering, analysing and presenting information	Demonstrates scientific credibility	Committed to scientific credibility for self and others
	Values curiosity and inquisitiveness	Demonstrates curiosity and inquisitiveness	Commits to fostering a culture of curiosity and inquisitiveness

Values eliminating jargon and technical language so that research can be understood by non-technical audiences	Models eliminating jargon and technical language so that research can be understood by non-technical audiences	Commits to plain language strategies
Models problem solving	Embraces problem solving in others	Commits to continuous improvement

2. Teamwork (KBs)

	Level 1: Developmental	Level 2: Intermediate	Level 3: Expert
Knowledge	Understands how to connect people who rarely interact with each other to share and exchange knowledge	Discerns the contexts of the KT audiences / stakeholders specific to the research area; understands people potentially have conflicting interests to develop common goals	Understands how to navigate the specific contexts of the individual stakeholders working with the KB
	Understands the importance of good communication and can identify communication strategies	Discerns appropriate communication skills and strategies and when to use them	Conceptualizes communication skills and contextual strategies for others
	Understands the importance of having ongoing relationships with policy-makers	Discerns various strategies to go about developing relationships with policy-makers	Is knowledgeable in best practices for developing relationships with public policy makers, or a network of policy makers, for the purpose of mobilizing research evidence
	Understands the importance of problem solving for participatory research processes	Discerns strategies for identifying and solving problems in participatory research processes	Conceptualizes problem identification/problem solving in participatory research processes for others
	Understands theories of change and change management	Describes the application of change and change management in the introduction of changes to frontline practices	Discerns how to encourage conversations about the introduction of changes in frontline practices
	Understands the value of forming partnerships and of engaging stakeholders	Discerns strategies to build relationships with stakeholders, to create opportunities for interaction during the research process, and to share work in ways that are meaningful and accessible to stakeholders	Conceptualizes when it is appropriate to engage in any of the following approaches, as determined by the individual needs: appreciative inquiry, conflict resolution,

			deliberative dialogue, systems thinking, adult learning principles, etc.
	Understands theories of conflict management/resolution	Describes best practices in conflict management/resolution when engaging stakeholders	Discerns among conflict management/resolution strategies to use with stakeholders with differing interests
	Understands theories of implementation science and mobilizing evidence to policy/practice	Interprets concepts of implementation science as they relate to practical scenarios	Conceptualizes for others theories of implementation science and mobilizing evidence to practice
	Understands concepts of evidence access, appraisal and knowledge synthesis	Discerns strategies for accessing and appraising evidence and doing knowledge synthesis	Conceptualizes for others strategies for evidence access, appraisal and knowledge synthesis
	Understands how to develop a KT plan	Discerns among strategies for working with stakeholders to develop a KT plan	Conceptualizes for others strategies for working with teams to develop a KT plan
	Understands principles for advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples	Describes how to apply principles for advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples	Conceptualizes for others how to discern among strategies for advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples
Skills	Uses appropriate written and oral communication with attention to detail when working with other team members	Applies strategies of diplomacy and tact; excellent verbal and written communication skills in team environments	Leads others in developing exemplary communication skills in team environments
	Defines problems/problem solves	Works with groups to problem solve and facilitates participatory decision-making processes	Leads others to define problems/problem solve, work with groups to problem solve, facilitate participatory decision-making processes
	Demonstrates excellent interpersonal skills, maintains confidentiality and deals with stressful, sensitive or difficult situations with tact and diplomacy, including exercising judgment and discretion in team environments	Develops effective working relationships with others to achieve shared goals and builds interpersonal relationships to facilitate the movement of evidence into policy	Leads others to develop productive working relationships with multiple constituencies through networking, leadership, relationship building, interpersonal and listening skills to facilitate the development of partnerships

Identifies engagement strategies suitable for multiple stakeholders	Designs and implements effective engagement strategies for use with multiple stakeholders	Leads others in developing and implementing effective engagement strategies across all stakeholder groups
Demonstrates cultural humility and cultural safety when working with First Nations and Aboriginal peoples	Integrates cultural humility and cultural safety practices for working with First Nations and Aboriginal peoples	Leads others to practice cultural humility and cultural safety when working with First Nations and Aboriginal peoples
Identifies conflicting opinions; Remains neutral regarding stakeholder groups' divergent needs/political issues	Applies conflict resolution strategies to resolve misunderstandings and conflict; Manages conflicts of interest, creating networks of users, researchers and decision makers	Leads others in managing conflicts of interest, and in creating and fostering networks
Bring researchers and decision makers together to exchange information and to work together	Facilitates information exchange and collaboration among researchers and decision makers	Leads others in fostering collaboration and exchange between researchers and policy makers
Establishes trusting relationships that encourage conversations about the introduction of changes in frontline practices	Fosters trusting relationships between others that encourage conversations about the introduction of changes in frontline practices	Leads others in building relationships that encourage conversations about the introduction of changes in frontline practices
Interacts within existing networks	Applies strategies to expand existing networks	Leverages personal network memberships to grow new networks and network initiatives related to KT
Identifies evidence to publicize and promote to teams	Integrates relevant knowledge exchange strategies (e.g., networks, communities of practice, university-Ministry partnerships)	Leads others in knowledge exchange, helping others to identify and use effective strategies
Leverages existing partnerships to generate, disseminate or collate knowledge and to embed knowledge management practices within existing procedures	Forms new collaborative partnerships to augment the generation, dissemination or collation of knowledge and the embedding of knowledge management practices within existing procedures	Facilitates relationships between networks of researchers and decision makers who have common interests to improve care

	Engages end users in developing KT plans	Creates linkages between decision makers, researchers, and care providers to advance a KT plan by better enabling them to understand each other's goals and professional cultures	Leads others in linking decision makers, researchers, and care providers to advance a KT plan
	Accesses and appraises evidence for the purpose of helping end users to meet their knowledge needs	Develops and implements training to help teams access and appraise evidence	Facilitates educational programs (e.g. adult education, skill development, teaching and mentoring, experiential learning, facilitation) to support knowledge user groups' competencies in evidence searching and appraisal
	Identifies opportunities to innovate	Acts as innovation broker, enabling innovation; negotiates, builds, collaborates and manages relationships and processes	Supports others in creating innovative solutions across knowledge users, producers and brokers
	Uses actively listening skills in order to appreciate the successes and challenges of current approaches	Applies active listening skills to find evidence to inform the improvement of current approaches	Leads others to develop active listening skills
	Negotiates and influences to support the consideration of evidence in decision making	Applies influence and negotiates to engage clinical, senior management and practitioner engagement in the implementation of evidence	Leads others to create a climate for the effective implementation of evidence
	Identifies strategies for building consensus within a group	Applies effective strategies for building consensus within a group	Leads others in building consensus within a group.
	Facilitates evidence informed decision making skill development	Conducts initial and ongoing assessment of decision makers' skills and capacity for EIDM and applies the knowledge in developing a plan to facilitate EIDM	Leads others in facilitating evidence informed decision making skill development
Att	Values a spirit of teamwork, cooperation and relationship building	Supports an environment of teamwork, cooperation and relationship building	Commits to leading others in teamwork, cooperation and relationship building

Values equity, inclusivity, respect and cultural competence	Models principles of equity, inclusivity, respect and cultural competence	Commits to leading others to adopt principles of equity, inclusivity, respect and cultural competence
Holds interest in developing comfort and effectiveness in dealing with people at all levels in various organizations	Models dealing with people at all levels in various organizations with comfort and effectiveness	Commits to lead others in developing comfort and effectiveness in dealing with people at all levels in various organizations
Values the bridging of cultures and interests of academic and industrial researchers, healthcare professionals and decision makers	Models bridging the cultures and interests of academic and industrial researchers, healthcare professionals and decision makers, creating a high level of engagement and commitment between parties to an exchange	Commits to helping others develop an attitude of valuing the bridging the cultures and interests of academic and industrial researchers, healthcare professionals and decision makers, creating a high level of engagement and commitment between parties to an exchange
Embraces an open minded and a supportive attitude	Models an open minded, supportive attitude, demonstrating self-confidence to lead teams through influence rather than by wielding power	Rewards charisma and persuasiveness in working with others
Values building relationships with stakeholders/a commitment to networking	Appreciates empathy, trust and interpersonal communication as forms of professional interaction and as basic components of all helpful relationships	Commits to leading others to develop relationship building and networking attitudes
Values being seen as credible expert	Models the role of credible expert who is accountable and trustworthy among front-line workers and leaders	Commits to helping others be seen as credible experts
Values the development of self-awareness of own abilities or limitations in collaborative situations	Demonstrates self-awareness of own abilities or limitations in collaborative situations	Commits to helping others gain self awareness of own abilities or limitations in collaborative situations

3. KT Activities (KBs)

	Level 1: Developmental	Level 2: Intermediate	Level 3: Expert
Knowledge	Understands the concepts of KT theory and practice including conceptual models, frameworks and strategies from the knowledge broker's perspective	Discerns KT theory and practice including conceptual models, frameworks and strategies from the knowledge broker's perspective	Conceptualizes for others KT theory and practice including conceptual models, frameworks and strategies from the knowledge broker's perspective
	Understands context where KT is to be used	Analyzes context where KT is to be used	Conceptualizes how to embed KT within different contexts
	Understands the concepts of facilitators and barriers to research use	Discerns strategies to address facilitators and barriers to research use	Conceptualizes for others how to manage the facilitators and barriers to research use
	Understands the principles of co-creation and co-production as they relate to KT	Interprets the principles of co-creation and co-production as they relate to KT	Conceptualizes for others the principles of co-creation and co-production as they relate to KT
	Understands knowledge implementation concepts	Describes implementation science, knowledge mobilization	Differentiates different pedagogical approaches to develop workforce capabilities in translating knowledge into action
	Understands the components of a KT plan	Interprets key factors and considerations (KT goals, collaboration, research stage, participants, methods, and resources and implementation) when developing a KT plan	Conceptualizes for others various strategies to develop KT plans
	Understands KT plans should be linked to research project goals	Discerns the way that KT plans should be linked to the goals of a specific research project	Conceptualizes for others how to link KT plans to research project goals
	Understands the rationale for and approaches to methods of evaluating KT	Describes how to plan and evaluate KT initiatives	Conceptualizes for others how to evaluate a KT initiative
	Understands that different forms of knowledge exist including explicit and tacit knowledge	Discerns different forms of knowledge, including explicit and tacit knowledge	Conceptualizes for other the different forms of knowledge

Understands that different forms of learning exist	Discerns disparate mechanisms of supporting learning including web-based learning, virtual classrooms, social networking, face to face training, digital collaboration, individual and group reflection, etc.	Conceptualizes for others different forms of learning
Understands the healthcare system, research and policy organizations, market dynamics and priorities both regionally and provincially in systems of innovation	Analyzes the healthcare system, research and policy organizations, market dynamics and priorities both regionally and provincially in systems of innovation	Synthesizes information regarding the healthcare system, research and policy organizations, market dynamics and priorities both regionally and provincially in systems of innovation
Understands the principles of management, administration, and budgeting processes related to KT	Describes implications of management, administration, and budgeting processes as they relate to KT	Conceptualizes for others the management, administration, and budgeting processes related to KT
Understands communications strategies	Discerns differences/commonalities between KT and communications' push, pull and exchange approaches	Defines how to lead others in KT and communications' push, pull and exchange approaches
Understands the importance of promoting mutual understanding across researchers', decision makers', and caregivers' environments and cultures to help spread awareness/ adoption of innovations	Discerns how to promote mutual understanding across researchers', decision makers', and caregivers' environments and cultures to help spread awareness/ adoption of innovations	Conceptualizes for others how to promote mutual understanding across researchers', decision makers', and caregivers' environments and cultures to help spread awareness/ adoption of innovations
Understands the range of methods that support person to person exchange and dissemination of knowledge	Discerns between the range of methods that support person to person exchange and dissemination of knowledge	Conceptualizes for others how to plan for knowledge dissemination using a variety of methods
Understands the mapped flow of knowledge within and across networks e.g. using social network analysis	Interprets the implications of the mapped flow of knowledge within and across networks, e.g. using social network analysis	Maps the flow of knowledge within and across networks from social network analyses
Describes methods to support the sustainability of interventions	Discerns among methods to support the sustainability of interventions	Conceptualizes for others how to create an environment of sustainability of interventions

	Understands marketing plans	Discerns the value of marketing plans in the KB process	Conceptualizes for others how to engage in marketing plans as a knowledge broker
	Understands how the patient's values affect the balance between potential advantages and disadvantages of the available options	Describes how the patient's values affect the balance between potential advantages and disadvantages of the available options	Conceptualizes for others how the patient's values affect the balance between potential advantages and disadvantages of the available options
Skills	Assesses the potential benefits of promoting evidence to improve healthcare delivery	Champions and promotes at all levels in the organisation the application of knowledge in order to improve the quality of health and care	Creates and sustains a culture that is supportive of evidence use, and the provision of infrastructure support and resources to promote the use of evidence in planning and delivering healthcare services
	Identifies knowledge-to-action gaps	Identifies, reviews and selects relevant knowledge to address knowledge-to-action gaps	Leads others in identifying and addressing knowledge-to-action gaps
	Identifies principles of co-creation of knowledge as they relate to KT	Applies the principles of co-creation of knowledge as they relate to KT	Leads others in the process of co-creation of knowledge as it relates to KT
	Uses active listening skills to gain insight into the interests of healthcare practitioners	Applies active listening skills in order to identify opportunities to address the interests, issues and innovations of their network members and to help practitioners identify the actionable knowledge solutions best suited to specific knowledge needs and understand and signpost them to other specific tools	Facilitates the development of others' active listening skills
	Identifies different forms of knowledge including tacit and explicit	Identifies the utility of different forms of knowledge, including tacit and explicit	Leads others to identify different forms of knowledge, including tacit and explicit, and its utility
	Recognizes different forms of learning	Integrates strategies to support different forms of learning	Assesses needs and tailors mechanism of learning appropriate to the group
	Identifies evidence appropriate for the local context	Integrates new evidence into the practice setting and with specific client populations	Adapts the evidence for the local context

Identifies barriers and facilitators to knowledge use	Assesses barriers and facilitators to knowledge use; prioritises which barriers to target	Leads the tailoring, selection, and implementation of interventions to target goals, barriers and to enable facilitators of change; reflects iteratively throughout the process
Identifies knowledge implementation concepts and theories	Integrates knowledge implementation concepts and theories	Leads others in knowledge implementation activities based on these concepts and theories
Identifies decision makers' needs and how to support them	Addresses decision makers' needs through guidance in accessing, appraising and applying research, commissioning synthesized research, sustaining information exchange between stakeholders and transforming clinical or management issues into research questions	Collaborates to set research priorities with decision makers and researchers to address their needs
Assesses the need for practice improvement to promote safe, effective and reliable care	Addresses identified practice gaps and opportunities through the use of relevant evidence in practice	Applies research and outcome data to formulate, evaluate and/or revise policies, procedures, protocols, client-specific programs and client standards of care
Identifies the most effective KT approach to optimize the use of research	Implements the most effective KT approach to optimize use of the research	Leads others in selecting and implementing the most effective KT approach to optimize the use of research including strategic management of people and their work to support more effective application of knowledge
Defines the problem, the team/individual/organizational contexts, finds, appraises, packages and disseminates a range of evidence and knowledge; facilitates the translation of evidence into policy and practice	Facilitates the identification of real knowledge needs and anticipate barriers to the application of new knowledge; applies enquiry techniques to define real - as opposed to perceived - knowledge needs in policy and practice	Leads others in distinguishing real knowledge needs

Develops KT plans to address identified barriers to change	Develops KT plans that identify partners, expertise, users, messages, goals, strategies, potential barriers and targeted interventions, process evaluation methods, resources, budget considerations, implementation activities, and impact measurement methods	Leads others in in strategic KT planning
Supports the development of knowledge exchange events	Designs, organizes, facilitates and evaluates knowledge exchange events	Leads other to design, organize, facilitate and evaluate knowledge exchange events
Identifies knowledge about the sector, the broader healthcare environment, its key players and controversies of relevance to determining the applicability and adaptability of new evidence to user contexts	Applies knowledge of the sector, the broader healthcare environment, its key players and controversies to gauge the applicability and adaptability of new evidence to user contexts.	Leads others to apply the knowledge of the sector, the broader healthcare environment, its key players and controversies to gauge the applicability and adaptability of new evidence to user contexts.
Synthesizes data for use in practice improvement initiatives	Integrates research and evaluation data for practice improvement	Facilitates the use of evidence in planning and delivering healthcare services
Accesses information management systems for information retrieval at point of care and links to clinical systems	Applies information management techniques to structure, package, describe and index actionable knowledge (e.g. clinical guidelines, decision support tools, evidence based clinical pathways) to facilitate easy retrieval by others at point of care and links to clinical systems	Leads a program of information management for KT
Scans the environment for resources, conducting assessments to identify needs and readiness for change	Applies change management tools for KT purposes	Leads organizational change by creating a KT vision and taking appropriate action to ensure acceptance and support
Identifies decision and policy makers' perspectives	Integrates evidence for the purpose of informing a decision maker's perspective	Helps decision makers establish their priorities
Develops and delivers effective presentations and workshops to multiple stakeholder groups; facilitates groups for adult education	Evaluates and selects best mechanism for supporting learning and knowledge sharing,	Facilitates a program of education related to KT

	including web-based learning, social networking, face to face training, etc.	
Maps knowledge using a systematic process	Interprets knowledge maps in order to evaluate knowledge value chains, focusing on the processes of knowledge acquisition, creation, sharing/dissemination, utilisation/application, and performance assessments within the context of the strategic goals of the health system	Leads others through knowledge maps of knowledge value chains, focusing on the processes of knowledge acquisition, creation, sharing/dissemination, utilisation/application, and performance assessments within the context of the strategic goals of the health system
Communicates strategically	Creates, implements and evaluates persuasive communication strategies	Leads other in strategic communications
Analyzes and interprets data	Determines implications, and provides recommendations related to KT	Applies complex legislation, policies, regulations, and technical information related to KT
Conducts performance measurement/quality improvement evaluation using various types of data (e.g. administrative, survey, etc.)	Interprets performance measurement/quality improvement evaluation results from various types of data (e.g administrative, survey, etc.)	Leads a program of performance measurement/quality improvement using various types of data (e.g. administrative, survey, etc.)
Identifies relevant KB functional tasks that relate to researchers' and policy makers' needs	Establishes a set of aims and objectives and clear guidelines about the KB function/role that will work for key stakeholder groups (e.g. policy makers, researchers)	Leads others in strategically aligning the KB function with stakeholders' goals to help achieve those goals
Applies strategies (advocacy, policy briefs, lobbying) to influence policy change	Appropriately selects from a variety of strategies (advocacy, policy briefs, lobbying) to influence policy change	Leads others to influence policy change
Uses technology to support knowledge dissemination activities	Strategically integrates best-fit technologies to support knowledge dissemination activities	Leads others in strategically embedding technologies into knowledge dissemination planning and activities
Selects effective measures to evaluate the success of knowledge brokering strategies	Evaluates the success of knowledge brokering activities	Facilitates course corrections and strategic approaches to issues identified during knowledge brokering evaluation activities

	Identifies opportunities for aligning evidence with the policy cycle and research agendas/priorities	Integrates the evidence into the policy cycle, facilitates opportunities Ministerial interest, policy administrator engagement and emerging research agendas to converge	Leads strategic planning to capitalize on opportunities for the evidence to contribute to the policy cycle, and to facilitate the convergence of Ministerial interest, policy administrator engagement and emerging research agendas where possible
	Practices collaborative, distributed leadership in a knowledge broker environment	Integrates models for collaborative, distributed leadership	Leads others to develop collaborative, distributed leadership competencies
	Identifies project management methods that can support the coordination of KT-related activities	Applies project management expertise to coordinate the work	Leads others to develop project management skills related to KT activities
	Develops marketing plans	Adapts marketing plans for the KB process	Implements and evaluates marketing plans as a knowledge broker
Attitudes	Values an enthusiastic, flexible, entrepreneurial, creative, open-minded, proactive work style	Exhibits an enthusiastic, flexible, entrepreneurial, creative, open-minded, proactive work style	Commits to and rewards enthusiastic, flexible, entrepreneurial, creative, open-minded, proactive work styles
	Values inspirational and collaborative leadership qualities	Exhibits inspirational and collaborative leadership qualities	Commits to and rewards inspirational and collaborative leadership qualities
	Values continuous self-directed learning about KT	Exhibits continuous self-directed learning in KT	Commits to and rewards continuous learning in KT
	Holds interest in the latest developments in communications, integrating social media, and online media strategies to foster engagement	Appreciates the importance of the latest developments in communications, integrating social media, and online media strategies to foster engagement	Commits to leveraging the latest developments in communications, integrating social media, and online media strategies to foster engagement
	Values the use of data and research for policymaking	Models the use of data and research for policymaking	Commits to and rewards the use of data and research for policymaking
	Values intellectual property through the acknowledgement of authors, originators, and contributors	Promotes the valuing of intellectual property through the acknowledgement of authors, originators, and contributors	Commits to protecting intellectual property by supporting others in acknowledging authors, originators, and contributors

Values the educational value of social exchange of knowledge, and of the application of knowledge	Models the social exchange of knowledge, and the application of knowledge to frontline practice to help others learn	Commits to facilitating and rewarding the social exchange of knowledge, and the application of knowledge to frontline practice as an education strategy
Recognizes organizational and occupational culture as barriers to or enablers for change	Seeks to better understand the way that organizational and occupational culture present as barriers to or enablers for change	Commits to promoting an understanding organizational and occupational culture as barriers to or enablers for change
Holds interest in managing uncertainty and in engaging in reflective learning	Demonstrates a willingness to manage uncertainty and to engage in reflective learning	Commits to managing uncertainty and to reflective learning
Values openness to change	Models openness to change	Rewards openness to change
Values a culture of change and innovation that includes promoting evidence-based care	Promotes a culture of change and innovation that includes promoting evidence-based care	Commits to a shared vision of culture of change and innovation, including promoting evidence-based care
Expresses a positive attitude to and beliefs about the benefits of evidence based practice	Models evidence based practice	Commits to and rewards evidence based practice
Embraces and exhibits a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical decision making	Promotes a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical decision making	Commits to and rewards a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical decision making
Values using research findings to advocate for practice improvements	Models using research findings to advocate for practice improvements	Committed to use research findings to advocate for practice improvements
Values continuous quality improvement	Promotes flexibility, change and quality improvement	Commits to and rewards flexibility, change and continuous quality improvement
Values the importance of KT for practice innovation	Is inclined to take on leadership in KT activities	Commits to and demonstrates leadership in building KT programs

KNOWLEDGE PRODUCERS (KPs)

1. Evidence Competency (KPs)

	Level 1: Developmental	Level 2: Intermediate	Level 3: Expert
Knowledge	Understands there are different types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated, validated and used, and the differences between knowledge and evidence.	Analyzes the different contexts for types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated, validated and used, and the differences between knowledge and evidence.	Differentiates various types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated, validated and used, and the differences between knowledge and evidence.
	Understands there are differences between stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public).	Classifies/compares stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public).	Synthesizes differing stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public) into the research and implementation cycle.
	Identifies implementation resources (e.g., tools) and apply evidence for multiple audiences.	Analyzes the use of implementation resources available (e.g., tools) and how to apply evidence for multiple audiences.	Critiques implementation resources (e.g., tools) when applying evidence for multiple audiences.
	Understands there are various models and frameworks for practicing and/or studying KT.	Interprets the various models and frameworks for practicing and/or studying KT.	Differentiates various models and frameworks for practicing and/or studying KT.
	Understands research methodologies and statistical analyses to examine the	Interprets research methodologies and advanced statistical analyses to examine the	Differentiates research methodologies and statistical analyses including qualitative methods to examine the determinants of

	determinants of knowledge use across different settings and stakeholder groups.	determinants of knowledge use across different settings and stakeholder groups.	knowledge use across different settings and stakeholder groups.
	Understands how to design the impact, effectiveness, and sustainability of KT strategies in different settings.	Interprets design and its impact, effectiveness, and sustainability of KT strategies in different settings.	Differentiates designs to evaluate the impact, effectiveness, and sustainability of KT strategies in different settings.
	Describes the quality of evidence from a variety of sources and disciplines for stakeholders.	Interprets synthesis reports and summaries of evidence in response to questions raised by stakeholders.	Synthesizes information for reports and summaries of evidence in response to questions raised by stakeholders.
	Understands the need for a variety of dissemination tools for communicating with different audiences and stakeholders.	Interprets/Discerns the use a variety of dissemination tools for communicating with different audiences and stakeholders.	Differentiates among communication products for different audiences and stakeholders.
Skills	Assembles different types of knowledge (e.g., research, practice, theory) that contribute to decision-making by describing the process of generating and validating each of these types and differences between knowledge and evidence	Summarizes the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated and validated, the differences between knowledge and evidence	Applies the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated and validated, the differences between knowledge and evidence
	Identifies differences between stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public).	Incorporates stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public).	Selects among stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public) into the research and implementation cycle.
	Identifies implementation resources (e.g., tools) and apply evidence for multiple audiences.	Summarizes the available implementation resources (e.g., tools) and explains how to apply evidence for multiple audiences.	Selects among implementation resources (e.g., tools) and applies evidence for multiple audiences.

	Identifies the various models and frameworks for practicing/studying KT.	Incorporates the various models and frameworks for practicing/studying KT.	Selects among the various models and frameworks for practicing/studying KT.
	Identifies research methodologies and statistical analyses to examine the determinants of knowledge use across different settings and stakeholder groups.	Summarizes research methodologies and advanced statistical analyses including qualitative methods to examine the determinants of knowledge use across different settings and stakeholder groups.	Applies research methodologies and statistical analyses including qualitative methods to examine the determinants of knowledge use across different settings and stakeholder groups.
	Identifies at a basic level, the impact, effectiveness, and sustainability of KT strategies in different settings.	Evaluates different designs and evaluation methods for the impact, effectiveness, and sustainability of KT strategies in different settings.	Selects among designs and evaluate the impact, effectiveness, and sustainability of KT strategies in different settings.
	Identifies policy needs and research options (priority setting processes).	Evaluates policy needs and research options.	Prioritizes outcomes of roundtable discussions as an expert in policy needs and research options (priority setting processes).
	Identifies how to transform clinical or management questions into research questions.	Evaluates the transformation of clinical or management questions into research questions.	Leads others to transform clinical or management questions into research questions.
Attitudes	Values how practice can inform research and vice versa.	Appreciates collaborations with research users to inform evidence-informed practice/policy and practice/policy-informed research.	Commits to developing others to collaborate to inform evidence-informed practice/policy and practice/policy-informed research.
	Values continued learning about new technologies to support evidence-informed practice and policy.	Appreciates technology use to support evidence-informed practice, policy and research.	Commits to using information technology and communications (ICT) strategies to support own research program including

			with research user partners throughout the research process.
	Shows interest in continuing learning about active engagement with stakeholders to support practice, policy and/or further research.	Appreciates active engagement of stakeholders in evidence-informed practice, policy and/or research.	Internalizes the role of research mentors and support for stakeholders.
	Values why diverse sources of data are important to inform practice, policy and research.	Appreciates diverse sources of data to better inform practice, policy and research.	Commits to sharing data for public good.

2. Teamwork (KPs)

	Level 1: Developmental	Level 2: Intermediate	Level 3: Expert
Knowledge	Understands the importance of building relationships with stakeholders, building opportunities for interaction into the research process, sharing work in ways that are meaningful and accessible to stakeholders.	Interprets varying approaches to build relationships with stakeholders, build opportunities for interaction into the research process, share work in ways that are meaningful and accessible to stakeholders.	Critiques varying approaches for use to build relationships with stakeholders, and to build opportunities for interaction into the research process, while sharing work in ways that are meaningful and accessible to stakeholders
	Describes the importance of good communication and can identify communication strategies.	Interprets communication skills and strategies and when to use.	Discerns appropriate communication skills within individual and situational contexts.
	Describes how to develop a KT plan.	Analyzes/Interprets strategies for working with stakeholders to develop a KT plan.	Prioritizes appropriate KT activities when working with teams to develop a KT plan.

	Describes community mobilization and social entrepreneurship.	Interprets community mobilization and social entrepreneurship.	Critiques appropriate strategies to use when participating in community mobilization and social entrepreneurship.
	Describes theories of conflict management/resolution.	Interprets best practices in conflict management/resolution when engaging stakeholders.	Critiques appropriate strategies for in conflict management/resolution between stakeholders with differing interests.
	Describes the role of a knowledge broker.	Interprets the competencies of a knowledge broker and how the role fits into knowledge translation.	Critiques the impact of knowledge brokering to connect evidence to practice/policy.
	Describes commitment to advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples.	Interprets concepts of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples.	Cultivates/Justifies concepts of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples.
Skills	Connects problems and possible solutions, and works with groups to problem solve, facilitate participatory decision-making processes.	Facilitates problem solutions, works with groups to problem solve, facilitates participatory decision-making processes.	Leads others to define problems/problem solve, work with groups to problem solve, facilitate participatory decision-making processes.
	Engages end users in developing KT plan.	Facilitates KT planning among end users.	Partners with government, industry, academia and funders.
	Builds relationships with stakeholders, builds opportunities for interaction into the research process, shares work in ways that are meaningful and accessible to stakeholders.	Facilitates opportunities for interaction into the research process, shares work in ways that are meaningful and accessible to stakeholders.	Leads with commitment from stakeholders, builds opportunities for interaction into the research process, shares work in ways that are meaningful and accessible to stakeholders.

Uses existing tools to link researchers with policy/decision makers.	Connects researchers with policy/decision makers.	Fosters collaborative networks of researchers, policy/decision-makers.
Advocates for appropriate change/actions.	Facilitates use of the advocacy role in others.	Leads others in successful advocacy.
Remains neutral and considers the stakeholder groups' divergent needs/political issues.	Manages conflicts of interest, creating networks of users, researchers and decision makers.	Leads others to manage conflicts of interest, and to create and foster networks.
Calibrates conflicting issues or practices in teams or between teams.	Facilitates conflict resolution.	Leads others in addressing conflicting issues.
Forms collaborative relationships to generate, disseminate or collate knowledge and to embed knowledge management practices within existing procedures.	Leverages developed relationships to generate, disseminate or collate knowledge and to embed knowledge management practices within existing procedures.	Applies own knowledge networks of researchers and decision makers who have common interests to improve care.
Recognizes the need for a shared level of consensus.	Builds a shared level of consensus.	Leads others in building a shared level of consensus.
Engages with stakeholders throughout implementation process.	Incorporates stakeholder views and needs throughout implementation process.	Leads others in collaborating with and involving stakeholders throughout implementation process.
Establishes trusting relationships that encourage conversations about the introduction of changes into frontline practices.	Fosters and enriches trusting relationships that encourage conversations about the introduction of changes into frontline practices.	Leads others in growing relationships that encourage conversations about the introduction of changes into frontline practices.

	Identifies the knowledge broker's ability to organize the interactive process between researchers and users.	Facilitates the knowledge broker to organize the interactive process between researchers and users.	Supports and actively encourages connections between researchers and knowledge brokers to organize the interactive process between researchers and users.
	Develops cultural humility and cultural safety in working with First Nations and Aboriginal peoples.	Demonstrates cultural humility and cultural safety in working with First Nations and Aboriginal peoples.	Leads others to demonstrate cultural humility and cultural safety in working with First Nations and Aboriginal peoples.
Attitudes	Values a spirit of teamwork, cooperation and relationship building.	Appreciates an environment of teamwork, cooperation and relationship building.	Commits to leading others in teamwork, cooperation and relationship building.
	Values a research culture in practice environments.	Appreciates research-practice interface as an essential part of own professional work.	Feels compelled to produce and disseminate knowledge for the public good.
	Values equity, inclusivity, respect and cultural competence.	Appreciates the importance of commitment to principles of equity, inclusivity, respect and cultural competence.	Commits to leading others to adopt principles of equity, inclusivity, respect and cultural competence.
	Embraces the notion of sharing research with and engaging users.	Appreciates the importance of building relationships with public-policy makers.	Commits to maintaining relationships with public policy-makers.
	Values the contributions of community partners.	Appreciates the contributions of community partners.	Respects the contributions of community partners.
	Holds interest in the political and value issues related to decision-making and control.	Appreciates the importance of attention to the political and value issues related to decision-making and control.	Respects the influences of political and value issues related to decision-making and control.

	Holds an open minded, supportive attitude.	Appreciates difference between influencing by facilitation and wielding power.	Respects the power of charisma and persuasiveness in working with others.
	Exhibits self-awareness of own abilities or limitations in collaborative situations.	Appreciates the impact of self-awareness of own abilities or limitations in collaborative situations.	Respects the influence that awareness of own abilities or limitations have in collaborative situations.

3. KT Activities (KPs)

	Level 1: Developmental	Level 2: Intermediate	Level 3: Expert
Knowledge	Knows definitions, purpose, rationale for KT.	Interprets concepts and models of KT.	Synthesizes meaning from various KT models and approaches.
	Understands context where KT is to be used.	Interprets meaning of various contexts where KT is to be used.	Differentiates among KT models for use in various contexts.
	Understands knowledge-to-action gaps.	Identifies the knowledge-to-action gaps in context.	Prioritizes approaches in closing knowledge-to-action gaps individual contexts.
	Understands the concept of open access.	Interprets the concept of open access	Conceptualizes the rationale for maintaining open access.
	Understands communications strategies.	Interprets differences/commonalities between KT and communications' push, pull and exchange approaches.	Differentiates among approaches in KT and communications' push, pull and exchange approaches.
	Understands how planned KT activities contribute to the relevance, feasibility, and	Analyzes how planned KT activities contribute to the relevance, feasibility, and anticipated application of the research	Prioritizes KT planning activities planning as contributing to the relevance, feasibility, and anticipated application of the research

anticipated application of the research results to policy, practice, and health outcomes.	results to policy, practice, and health outcomes.	results to policy, practice, and health outcomes.
Understands the purpose of a dissemination plan.	Analyzes the use of a dissemination plan (in context).	Prioritizes the steps of dissemination planning.
Understands concepts of health service management and organizational learning.	Interprets the use of health service management and organizational learning.	Prioritizes health service management and organizational learning activities.
Understands principles of KT planning, including key factors and considerations; different models and templates.	Analyzes the principles of KT planning, including key factors and considerations; different models and templates.	Synthesizes the knowledge gained from models for KT planning.
Understands the barriers and facilitators to knowledge uptake.	Interprets barriers and facilitators to knowledge uptake.	Differentiates the barriers and facilitators to knowledge uptake.
Understands how social media can be used for KT.	Interprets how social media can be used for KT.	Synthesizes knowledge of social media for KT.
Understands the ways in which KT plans should be linked to the goals of a specific research project.	Explains the ways in which KT plans should be linked to the goals of a specific research project.	Conceptualizes the means of connecting project goals in KT plans.
Understands the differences and commonalities between research & evaluation.	Interprets the differences/commonalities between research & evaluation in contexts.	Critiques the differences and commonalities between research & evaluation in contexts.
Understands the principles of co-creation and co-production as they relate to KT.	Interprets the principles of co-creation and co-production as they relate to KT.	Conceptualizes the principles of co-creation and co-production as they relate to KT.

	Understands diffusion of innovation in clinical practice.	Interprets diffusion of innovation in clinical practice.	Synthesizes concepts and ideas from diffusion of innovation for use in clinical practice.
	Understands planned action theories and their benefits to focus implementation efforts and provide all stakeholders with a common script or understanding of the action plan.	Interprets planned action theories and their benefits to focus implementation efforts and provide all stakeholders with a common script or understanding of the action plan.	Synthesizes concepts and ideas from planned action theories for use in clinical practice.
	Understands knowledge brokering.	Interprets knowledge brokering.	Critiques the value of the role of knowledge brokering in KT activities.
	Understands how the patient's values affect the balance between potential advantages and disadvantages of the available options.	Interprets how the patient's values affect the balance between potential advantages and disadvantages of the available options.	Synthesizes the ways in which patient's values affect the balance between potential advantages and disadvantages of the available options.
Skills	Aligns with the trend to link research to action.	Facilitates/Applies research to action strategies.	Leads others to engage in research to action strategies.
	Assembles knowledge-to-action gaps.	Facilitates knowledge-to-action gaps.	Leads others to identify and evaluate knowledge-to-action gaps.
	Activates the processes involved in planning, implementing, and evaluating KT strategies.	Applies the processes involved in planning, implementing, and evaluating KT strategies.	Evaluates the processes involved in planning, implementing, and evaluating KT.
	Adjusts the individual, organizational and system-level barriers and enablers to using and sharing evidence in different contexts and among different target audiences.	Manages the individual, organizational and system-level barriers and enablers to using and sharing evidence in different contexts and among different target audiences.	Leads others to decrease barriers and support enablers to using and sharing evidence in different contexts and among different target audiences.

Calibrates methods of conducting stakeholder analyses to understand needs of target audiences, interest in and capacity to engage with the evidence.	Conducts stakeholder analyses to understand needs of target audiences, interest in and capacity to engage with the evidence.	Leads others in conducting stakeholder analyses to understand needs of target audiences, interest in and capacity to engage with the evidence.
Constructs the importance of co-creation of knowledge as they relate to KT.	Works with knowledge users to co-create knowledge.	Leads others to work with knowledge users to co-create knowledge.
Breaks down various dissemination and implementation models and skills required for each	Integrates the dissemination & implementation model that best fits research question or practice problem.	Leads others in developing dissemination & implementation skills.
Assembles tailored messages and their use.	Assists decision makers develop tailored messages.	Leads others in developing tailored messages with decision makers.
Applies strategies to collect, collate and package evidence in a way that makes it accessible and relevant to users.	Creates strategies to collect, collate and package evidence in a way that makes it accessible and relevant to users.	Leads others to create strategies to collect, collate and package evidence in a way that makes it accessible and relevant to users.
Learns how to use, evaluate effectiveness of social media for KT.	Uses, evaluates effectiveness of social media for KT.	Leads others through leveraging social media connections for KT.
Learns how to develop a dissemination plan as a key component of initial research designs.	Develops dissemination plans as a key component of initial research designs.	Leads others in the development of dissemination plans as a key component of initial research designs.
Learns the differences/commonalities between KT and evaluation.	Identifies the difference between KT and evaluation.	Leads others to identify the difference between KT and evaluation.
Learns how to select appropriate monitoring and evaluation tools and techniques to assess the impact of KT processes and engagement	Selects appropriate monitoring and evaluation tools and techniques to assess the impact of KT processes and engagement	Leads others to select appropriate monitoring and evaluation tools and techniques to assess the impact of KT

efforts including issues of attribution and sustainability.	efforts including issues of attribution and sustainability.	processes and engagement efforts including issues of attribution and sustainability.
Learns how to review various convening models (such as workshops and communities of practice) and facilitation techniques to support engagement with and dialogue around evidence.	Demonstrates various convening models (such as workshops and communities of practice) and facilitation techniques to support engagement with and dialogue around evidence.	Sharpens expertise in convening models (such as workshops and communities of practice) and facilitation techniques to support engagement with and dialogue around evidence.
Learns how to use a template in planning KT activities, ensuring partners, expertise, users, messages, goals, strategies, process, evaluation, resources, budget, implementation and sustainability are identified.	Develops KT planning using a template, ensuring partners, expertise, users, messages, goals, strategies, process, evaluation, resources, budget, implementation and sustainability are identified.	Leads others in KT planning using a template, ensuring partners, expertise, users, messages, goals, strategies, process, evaluation, resources, budget, implementation and sustainability are identified.
Learns how to create a KT engagement plan.	Creates KT engagement plans.	Leads others to create a KT engagement plans.
Learns how to determine the various roles of KT partners and practitioners in enhancing user engagement.	Determines the various roles of KT partners and practitioners in enhancing user engagement.	Leads others to determine the various roles of KT partners and practitioners in enhancing user engagement.
Learns how to support the generation and implementation of complex KT strategies, including program-level and organization-level KT	Supports the generation and implementation of complex KT strategies, including program-level and organization-level KT.	Leads others to support the generation and implementation of complex KT strategies, including program-level and organization-level KT.

	Learns how to access, synthesize, package and communicate evidence for policy and practice and for policy-relevant research agenda.	Accesses, synthesizes, packages and communicates evidence for policy and practice and for policy-relevant research agenda.	Leads others to access, synthesize, package and communicate evidence for policy and practice and for policy-relevant research agenda.
	Learns how to use tools to support complex models of knowledge production, including ethics approval, collaboration agreements, and shared decision-making structures.	Uses tools to support complex models of knowledge production, including ethics approval, collaboration agreements, and shared decision-making structures.	Leads others to use tools to support complex models of knowledge production, including ethics approval, collaboration agreements, and shared decision-making structures.
Attitudes	Values the ongoing translation of new knowledge into practice.	Appreciates research-practice interface as an essential part of own professional work.	Feels compelled to produce and disseminate knowledge for the public good.
	Values the importance of KT for practice innovation.	Is inclined to take on leadership in KT activities.	Commits to improving practice and policy through KT leadership.
	Appreciates continuous self-directed learning about KT.	Embraces continuous self-directed learning in KT.	Respects the outcomes and benefits of s continuous learning in KT.
	Appreciates being sensitive to organizational and occupational culture as barriers to or enablers for change.	Assumes responsibility to organizational and occupational culture as barriers to or enablers for change.	Respects the influence of organizational and occupational culture as barriers to or enablers for change.
	Appreciates managing uncertainty and reflective learning.	Embraces managing uncertainty and reflective learning.	Respects the value of and need for dealing with uncertainty and engaging in reflective learning.
	Values the use of data and research for policymaking.	Appreciates how data and research can be used for policymaking.	Commits to using of data and research for policymaking.

Professional Development Tool

KT Pathways Competencies:

Knowledge Users

How to use this Tool

Following is a tool for self-assessment or for use in conjunction with a manager or educator. Each Level as described in the Pathway has its own assessment component. To assess yourself, reflect on each criterion and check your assessment of where you are at: Ask yourself “*Can I do this? Do I do this? How well can I do this?*”. A set of suggested learning resources are included in the Tool to assist you in advancing along the Pathway’s levels; other resources can be identified through your own exploration. This assessment tool can be adapted or shortened, focused on *Skills*, as appropriate for the work environment.

✓ **1** *Need learning and practice*

- This column reflects whether you know the concepts and skills required for effective performance of a particular action or attribute.
- If you have acquired this knowledge/skill through prior education or on-the-job learning, leave this blank.
- If you need further learning and practice, mark a ✓ in this column

✓ **2** *Knowledgeable, but need practice*

- This column reflects your ability to apply your knowledge/skill in changing practice situations.
- If you have the background knowledge, and have had several opportunities to successfully apply your knowledge or demonstrate this attribute in your role, leave this one blank.
- If you have the knowledge, but need more practice and would like to receive feedback to feel confident and competent, mark a ✓ in this column.

✓ **3** *Competent*

- This column applies to you if you have the required knowledge/skill and have had several opportunities to successfully apply it in your role or practice. You consistently demonstrate or perform this attribute.
- If you can demonstrate a particular action independently and effectively in a variety of situations, mark a ✓ in this column.

✓ **4** *Expert: can teach others*

- This column is used when you are able to act as a teacher for others and facilitate learning of this skill/attribute/knowledge.
- If you have thorough knowledge and are competent, confident and effective in performing a particular action in complex situations, mark a ✓ in this column.

Level KU1

KT Pathways Development Tool

KT Competencies

Competency stage			
1 Need learning & practice	2 Knowledgeable, but need practice	3 Competent	4 Expert: can teach others



Level KU1 *Developmental Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p><i>Evidence Competencies: Knowledge Criteria</i></p> <p>► Can you describe...</p> <p>Appropriate critical appraisal tools and how to use them?</p> <p>Basic descriptive and inferential statistics?</p> <p>Basic research knowledge (e.g. what are research ethics, a research question, a hypothesis, qualitative and quantitative data analyses methods)?</p> <p>Gaps in research/practice knowledge?</p> <p>Evidence sources and the structure of electronic library databases?</p> <p>The benefits of synthesized knowledge over single studies or primary research?</p> <p>The need to keep up to date on systematic reviews or other syntheses of the global evidence</p> <p>The different types of knowledge which may be relevant in any given context or contribute to decision-making (e.g., research, practice, theory, grey lit, peer review lit, case studies)?</p> <p>What knowledge (evidence and research) is needed to inform health policies and programs?</p> <p>How to search for knowledge (literature; best practices)?</p> <p>The practice of evidence-informed decision making and how it relates to the research/practice/policy process?</p> <p>How to find and use implementation resources (e.g., tools) for applying evidence for multiple audiences?</p> <p>The difference between research, evaluation and quality improvement?</p> <p>Basic research processes (research ethics, research question, hypothesis, qualitative and quantitative data analyses methods)?</p>					<p><i>Evidence Competencies Resources</i></p> <p>Australian Journal of Advanced Nursing: <i>A nurses' guide to the critical reading of research</i> http://www.ajan.com.au/Vol26/26-1v2_Ingham-Broomfield.pdf</p> <p>CASP UK: <i>Critical Appraisal Skills Programme: Making sense of evidence about clinical effectiveness</i> http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Qualitative_Appraisal_Checklist_14oct10.pdf</p> <p>CIHR: <i>Critical Appraisal of Intervention Studies, online course</i> http://www.cihr-irsc.gc.ca/e/45235.html</p> <p>Lippincott Williams & Wilkins & Ovid: <i>Demystifying Research - Simplifying Critical Appraisal</i> http://jonathanhearseydotnet1.files.wordpress.com/2012/05/simplifying-critical-appraisal.pdf</p> <p>Institute for Work and Health: <i>Research 101</i> http://www.iwh.on.ca/research-101/part-1</p> <p>National Institutes of Health: <i>Introduction to Health Services Research : A Self-Study Course</i> http://www.nlm.nih.gov/nichsr/ihcm/toc.html</p> <p>Ontario Public Health Libraries Association: <i>Critical Appraisal of Research Evidence 101</i> http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/caore.pdf</p>		

Level KU1 *Developmental Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>What is health literacy? The relevance of research to the local context? The content in literature reviews to inform practice and policy-making?</p>					<p>Webcast: AcademyHealth: Research Resources for HSR http://www.academyhealth.org/Training/ResourceDetail.cfm?ItemNumber=3320</p> <p>Institute for Work and Health: What Researchers Mean By... http://www.iwh.on.ca/what-researchers-mean-by</p>		
<p>Evidence Competencies: Skills Criteria ► Do you usually/regularly... Connect evidence-informed practice and policy making and research? Use critical appraisal skills and tools for evaluating the quality of methodology and reliability of specific research? Use basic descriptive and inferential statistical analyses? Make use of literature reviews? Identify gaps in research/practice knowledge? Use resources to access online information (e.g. searching CINAHL, Medline, grey literature, reports)? Distinguish between single studies and synthesized knowledge? Identify the importance of keeping up to date on systematic reviews or other syntheses of the global evidence? Search for knowledge including literature searches and best practices, synthesized evidence, useful experiences, etc.? Distinguish between the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making? Identify knowledge (evidence and research) to inform health policies, programs or practice using relevant literature databases and best practices? Identify evidence appropriate for the local context? Identify implementation resources (e.g., tools) to apply evidence for multiple audiences? Distinguish between research, evaluation and quality improvement? Recognize basic research knowledge (e.g., what are research ethics, a research question, a hypothesis, qualitative and quantitative data analyses methods)? Identify basic health information and services needed to make appropriate health decisions (health literacy)?</p>					<p>University of Washington: Finding Qualitative Research Articles http://www.nlm.nih.gov/nichsr/usestats/index.htm</p> <p>National Collaborating Centre for Methods and Tools: Learning Centre http://www.nccmt.ca/learningcentre/EN/index.php Registry of Methods and Tools: http://www.nccmt.ca/resources/search</p> <p>Knowledge for Health Project (K4Health.org): Guidance & Tools for Programs and Policy-Makers https://www.k4health.org/toolkits/research-utilization/guidance-tools-programs-and-policy-makers</p>		
<p>Evidence Competencies: Attitude Criteria ► Do you usually/regularly... Feel interested in and willing to learn about research and evaluation?</p>							

Level KU1 *Developmental Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Feel interested in learning about research and quality improvement?</p> <p>Feel interested in and willing to learn about statistics and systematic data analysis methods to inform practice and policy making?</p> <p>Value self-directed lifelong learning and reflective learning?</p> <p>Embrace and want to learn more about research initiatives in your own practice area?</p> <p>Value active participation of front-line staff in research and quality improvement?</p>							
<p>Teamwork: Knowledge Criteria</p> <p>► Can you describe...</p> <p>The value of knowledge sharing?</p> <p>The benefits of forming partnerships and engaging stakeholders including researchers?</p> <p>The value of knowledge networks of researchers and knowledge users?</p> <p>The benefits of learning from peers through informal and formal networks?</p> <p>How to help others access evidence?</p> <p>The value of engaging researchers?</p> <p>How to advance cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Teamwork Resources</p> <p>Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/</p> <p>Canadian Foundation for Healthcare Improvement: An Interactive Integrative Approach to Translating Knowledge and Building a “Learning Organization” in Health Services Management http://www.cfhi-fcass.ca/SearchResultsNews/07-05-01/81af1546-ce1f-4376-8d0f-d34144607456.aspx</p> <p>Institute for Knowledge Mobilization: Canadian Knowledge Mobilization Forum http://www.knowledgemobilization.net/forum/</p>		
<p>Teamwork: Skills Criteria</p> <p>► Do you usually/regularly...</p> <p>Participate with collaborative teams of clients/patients, providers in knowledge sharing and use?</p> <p>Demonstrate skills learned from peers through informal and formal networks?</p> <p>Engage in discussion with your stakeholders in your practice or policy work?</p> <p>Identify collaboration opportunities with researchers?</p> <p>Help others access evidence?</p> <p>Participate with researchers through networking meetings, partnerships, sponsorships?</p> <p>Demonstrate commitment to cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Ontario Centre of Excellence for Child and Youth Mental Health: Teamwork and collaboration Learning Module http://www.excellenceforchildand youth.ca/resource-hub/learning-modules/implementation-teamwork-and-collaboration</p> <p>Canadian Institutes of Health Research: Guide to Researcher and Knowledge-User Collaboration in Health Research http://www.cihr-irsc.gc.ca/e/44954.html</p> <p>Government of Canada, Tri-Council Policy Statement (TCPS): Ethical Conduct for Research Involving Humans TCPS 2 – Chapter 9: Research Involving the First Nations, Inuit and Metis Peoples of Canada http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/chapter9-chapitre9/</p>		
<p>Teamwork: Attitude Criteria</p> <p>► Do you usually/regularly...</p>							

Level KU1 *Developmental Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Demonstrate a spirit of teamwork, cooperation and relationship building?</p> <p>Demonstrate equity, inclusivity, respect and cultural competence?</p> <p>Value listening, open-mindedness and a supportive attitude in fostering relationships?</p> <p>Appreciate self-awareness of your own abilities or limitations in collaborative situations?</p>					<p>Canadian Institutes of Health Research (CIHR): <i>CIHR Guidelines for Health Research Involving Aboriginal People (2007-2010)</i> http://www.cihr-irsc.gc.ca/e/29134.html</p> <p>British Columbia, Canada -- Provincial Health Services Authority: <i>Indigenous Cultural Safety (ICS) Online Training Program</i> http://www.sanyas.ca/</p>		
<p><i>KT Activities: Knowledge Criteria</i></p> <p>► Can you describe...</p> <p>The importance of sharing relevant research findings with the team?</p> <p>The barriers and facilitators to knowledge use?</p> <p>The differences between integrated and end-of-grant KT approaches?</p> <p>The role of knowledge brokers?</p> <p>The need for practice improvement to promote safe, effective and reliable care?</p> <p>Inconsistencies that may exist between research findings and your expertise or patients' preferences in your practice environment?</p> <p>How the patient's values affect the balance between potential advantages and disadvantages of the available options, and appropriately involve the patient?</p>					<p><i>Knowledge Translation Resources</i></p> <p>BC KT Community of Practice: http://bcktcop.ca/</p> <p>Institute for Work and Health: <i>What Researchers Mean By...</i> http://www.iwh.on.ca/what-researchers-mean-by</p> <p>University of Washington: <i>Finding Qualitative Research Articles</i> http://www.nlm.nih.gov/nichsr/usestats/index.htm</p>		
<p><i>KT Activities: Skills Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Identify relevant research findings to share with the team?</p> <p>Describe synthesis of data for practice improvement?</p> <p>Identify processes for implementing evidence?</p> <p>Identify evidence appropriate to the local context?</p> <p>Identify the role of knowledge brokers?</p> <p>Identify barriers and facilitators to knowledge use?</p> <p>Identify inconsistencies between research findings and expertise or patients' preferences in practice environments?</p>							
<p><i>KT Activities: Attitude Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Appreciate the importance of KT?</p> <p>Express interest in learning about uses of evidence to improve practice?</p> <p>Feel interested in a culture of change and innovation?</p>							

Level KU1 *Developmental Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Exhibit a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical decision making? Intend to use research findings to advocate for practice improvements?</p>							

Examples that demonstrate competence

Areas to learn and develop/improve

Level KU2 KT Pathways Development Tool KT Competencies

Competency stage			
1 Need learning & practice	2 Knowledgeable, but need practice	3 Competent	4 Expert: can teach others



Level KU2 *Intermediate Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p><i>Evidence Competencies: Knowledge Criteria</i></p> <p>► Can you describe...</p> <p>The critical appraisal process when reviewing research literature? Advanced descriptive and inferential statistics found in qualitative and quantitative research reports? How to develop research questions for literature searches? The creation and execution of an efficient search strategy and to use resources for online information searches? The variety of methods to conduct a scoping review? How to keep up to date on systematic reviews or other syntheses of the global evidence? The different types of knowledge (e.g., research; practice; theory) that contribute to decision-making? How to apply knowledge (evidence and research) to inform health policies and programs? Selected evidence from a search well enough to explain the gist of it? The components of evidence-informed decision/policy making? What implementation resources are available (e.g., tools) and how to apply evidence for multiple audiences? The differences and commonalities between research, evaluation and quality improvement? Basic research processes (e.g. research ethics, research question, hypothesis, qualitative and quantitative data analyses methods)? How to select, process and understand basic health information and services needed to make appropriate health decisions (health literacy)? How to apply relevant research to the local context? How to analyze literature review reports to apply to practice?</p>					<p><i>Evidence Competencies Resources</i></p> <p>Australian Journal of Advanced Nursing: <i>A nurses' guide to the critical reading of research</i> http://www.ajan.com.au/Vol26/26-1v2_Ingham-Broomfield.pdf</p> <p>CASP UK: <i>Critical Appraisal Skills Programme: Making sense of evidence about clinical effectiveness</i> http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Qualitative_Appraisal_Checklist_14oct10.pdf</p> <p>CIHR: <i>Critical Appraisal of Intervention Studies, online course</i> http://www.cihr-irsc.gc.ca/e/45235.html</p> <p>Lippincott Williams & Wilkins & Ovid: <i>Demystifying Research - Simplifying Critical Appraisal</i> http://jonathanharseydotnet1.files.wordpress.com/2012/05/simplifying-critical-appraisal.pdf</p> <p>Institute for Work and Health: <i>Research 101</i> http://www.iwh.on.ca/research-101/part-1</p> <p>National Institutes of Health: <i>Introduction to Health Services Research : A Self-Study Course</i> http://www.nlm.nih.gov/nichsr/ihcm/toc.html</p> <p>Ontario Public Health Libraries Association: <i>Critical Appraisal of Research Evidence 101</i> http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/caore.pdf</p> <p>Webcast: AcademyHealth: <i>Research Resources for HSR</i> http://www.academyhealth.org/Training/ResourceDetail.cfm?ItemNumber=3320</p>		

Level KU2 *Intermediate Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p><i>Evidence Competencies: Skills Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Practice evidence-informed decision/policy making?</p> <p>Apply advanced descriptive and inferential statistics found in qualitative and quantitative research reports?</p> <p>Apply critical appraisal skills and tools for evaluating the quality of methodology and the reliability of specific research?</p> <p>Analyze literature review reports to apply to practice?</p> <p>Develop research questions for literature searches?</p> <p>Create and execute an efficient search strategy and to use resources for online information searches (e.g. searching CINAHL, Medline, grey literature, reports)?</p> <p>Conduct scoping reviews?</p> <p>Find up-to-date systematic reviews or other syntheses of the global evidence?</p> <p>Review selected evidence from a search well enough to understand the gist of it?</p> <p>Examine the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making?</p> <p>Apply knowledge (evidence and research) to inform health policies, programs or practice?</p> <p>Apply relevant research to the local context?</p> <p>Examine implementation resources available (e.g., tools) to apply evidence for multiple audiences?</p> <p>Examine the differences/commonalities between research, evaluation and quality improvement?</p> <p>Apply basic research processes (e.g., what are research ethics, a research question, a hypothesis, qualitative and quantitative data analyses methods)?</p> <p>Obtain, process and understand basic health information and services needed to make appropriate health decisions (health literacy)?</p>					<p>Institute for Work and Health: <i>What Researchers Mean By...</i> http://www.iwh.on.ca/what-researchers-mean-by</p> <p>University of Washington: <i>Finding Qualitative Research Articles</i> http://www.nlm.nih.gov/nichsr/usestats/index.htm</p> <p>National Collaborating Centre for Methods and Tools: Learning Centre http://www.nccmt.ca/learningcentre/EN/index.php Registry of Methods and Tools: http://www.nccmt.ca/resources/search</p> <p>Knowledge for Health Project (K4Health.org): Guidance & Tools for Programs and Policy-Makers https://www.k4health.org/toolkits/research-utilization/guidance-tools-programs-and-policy-makers</p>		
<p><i>Evidence Competencies: Attitude Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Appreciate how practice can inform research and vice versa?</p> <p>Value active engagement of front-line staff in research and quality improvement?</p> <p>Value the process of conducting qualitative and quantitative research to inform practice and policy?</p> <p>Appreciate self-directed lifelong learning and reflection?</p>							

Level KU2 *Intermediate Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Teamwork: Knowledge Criteria ► Can you describe... Unit and organizational opportunities (e.g., rounds, communities of practice) and resources to support knowledge sharing? Strategies to build relationships with stakeholders, opportunities for interaction into the research process, share work in ways that are meaningful and accessible to stakeholders? How to develop a knowledge network of researchers and knowledge users? How to develop opportunities to learn and share through informal and formal networks? How to help others find and appraise evidence? Specific strategies to build relationships with researchers and find opportunities for interaction in the research process? How to apply concepts of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Teamwork Resources</p> <p>Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/</p> <p>Canadian Foundation for Healthcare Improvement: An Interactive Integrative Approach to Translating Knowledge and Building a “Learning Organization” in Health Services Management http://www.cfhi-fcass.ca/SearchResultsNews/07-05-01/81af1546-ce1f-4376-8d0f-d34144607456.aspx</p> <p>Institute for Knowledge Mobilization: Canadian Knowledge Mobilization Forum http://www.knowledgemobilization.net/forum/</p> <p>Ontario Centre of Excellence for Child and Youth Mental Health: Teamwork and collaboration Learning Module http://www.excellenceforchildandtheyouth.ca/resource-hub/learning-modules/implementation-teamwork-and-collaboration</p>		
<p>Teamwork: Skills Criteria ► Do you usually/regularly... Influence team to engage in full participation in knowledge sharing with clients and other providers? Create opportunities to learn and share through informal and formal networks? Strategize to build relationships with stakeholders, build opportunities for interaction into the research process, share work in ways that are meaningful and accessible to stakeholders? Work with researchers through networking meetings, partnerships, sponsorships etc.? Help others appraise evidence? Collaborate with researchers to build relationships & find opportunities for interaction into the research process (e.g., co-development of evidence; identifying data and research findings relevant to practice or the policy process? Apply concepts of cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Canadian Institutes of Health Research: Guide to Researcher and Knowledge-User Collaboration in Health Research http://www.cihr-irsc.gc.ca/e/44954.html</p> <p>Government of Canada, Tri-Council Policy Statement (TCPS): Ethical Conduct for Research Involving Humans TCPS 2 – Chapter 9: Research Involving the First Nations, Inuit and Metis Peoples of Canada http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/chapter9-chapitre9/</p> <p>Canadian Institutes of Health Research (CIHR): CIHR Guidelines for Health Research Involving Aboriginal People (2007-2010) http://www.cihr-irsc.gc.ca/e/29134.html</p>		
<p>Teamwork: Attitude Criteria ► Do you usually/regularly... Commit to creating an environment of teamwork, cooperation and relationship building? Commit to fostering principles of equity, inclusivity, respect and cultural competence?</p>					<p>British Columbia, Canada -- Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/</p>		

Level KU2 *Intermediate Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Commit to expressing a responsive, open-minded and supportive attitude in team leadership?</p> <p>Exhibit self-awareness of own abilities or limitations in collaborative situations?</p>							
<p><i>KT Activities: Knowledge Criteria</i></p> <p>► Can you...</p> <p>Explain the value of sharing relevant research findings with your team?</p> <p>Identify the barriers and facilitators to knowledge use in your work environment and strategies to address them?</p> <p>Describe what integrated and end-of-grant KT approaches are?</p> <p>Explain the value of knowledge brokers in the practice/policy team?</p> <p>Address identified practice gaps and opportunities through the use of relevant evidence in practice?</p> <p>Identify inconsistencies that may exist between research findings and expertise or patients' experience in their practice environment?</p> <p>Describe how the patient's values affect the balance between potential advantages and disadvantages of the available options and to appropriately involve the patient in decision-making?</p>					<p><i>Knowledge Translation Resources</i></p> <p>BC KT Community of Practice: http://bcktcop.ca/</p> <p>Institute for Work and Health: What Researchers Mean By... http://www.iwh.on.ca/what-researchers-mean-by</p> <p>University of Washington: Finding Qualitative Research Articles http://www.nlm.nih.gov/nichsr/usestats/index.htm</p>		
<p><i>KT Activities: Skills Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Share relevant research (objective) findings and personal knowledge with the team?</p> <p>Explain synthesis of research and evaluation data for practice improvement?</p> <p>Address identified practice gaps and opportunities through the use of relevant evidence in practice?</p> <p>Integrate new evidence into the practice setting and with specific client populations?</p> <p>Identify opportunities to, and interact with, knowledge brokers to assist in developing and/or finding and implementing evidence?</p> <p>Assess barriers and facilitators to knowledge use in your own practice?</p> <p>Assess inconsistencies between research findings and expertise or patients' preferences in your practice environment?</p>							
<p><i>KT Activities: Attitude Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Seek out opportunities to take on leadership in KT activities?</p>							

Level KU2 *Intermediate Knowledge User: Learning About Research Use in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Appreciate the ongoing translation of new knowledge into practice?</p> <p>Promote a culture of change and innovation, including evidence-based care and continuous quality improvement?</p> <p>Ask questions about and seek out the best evidence to guide clinical decision making?</p> <p>Appreciate the use of research findings to advocate for practice improvements?</p>							

Examples that demonstrate competence	
Areas to learn and develop/improve	

Level KU3 KT Pathways Development Tool KT Competencies

Competency stage			
1 Need learning & practice	2 Knowledgeable, but need practice	3 Competent	4 Expert: can teach others



Level KU3 *Expert Knowledge User: Facilitating Research User in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p><i>Evidence Competencies: Knowledge Criteria</i></p> <p>► Can you...</p> <p>Lead others in the critical appraisal process when reviewing research literature to identifying the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered?</p> <p>Lead others in the interpretation of descriptive and more advanced inferential statistics found in qualitative and quantitative research reports?</p> <p>Lead others to develop research questions for literature searches?</p> <p>Lead others to create and execute an efficient search strategy and how to use resources for online information searches (e.g. searching CINAHL, Medline, grey literature, reports?)</p> <p>Demonstrate expertise in conducting knowledge syntheses including, meta-analyses, systematic reviews, mixed methods, etc. of the global evidence?</p> <p>Lead others to know the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making?</p> <p>Lead others to apply evidence and research to inform health policies and programs?</p> <p>Examine and interpret selected evidence from a search?</p> <p>Identify decision/policy makers' information needs and current policy priorities?</p> <p>Explain evidence-informed decision making methods (proper question development, creation and execution of an efficient search strategy, critical appraisal, interpretation of evidence considering local context, application of evidence for multiple audiences) and how it relates to the research process?</p>					<p><i>Evidence Competencies Resources</i></p> <p>Australian Journal of Advanced Nursing: <i>A nurses' guide to the critical reading of research</i> http://www.ajan.com.au/Vol26/26-1v2_Ingham-Broomfield.pdf</p> <p>CASP UK: <i>Critical Appraisal Skills Programme: Making sense of evidence about clinical effectiveness</i> http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Qualitative_Appraisal_Checklist_14oct10.pdf</p> <p>CIHR: <i>Critical Appraisal of Intervention Studies, online course</i> http://www.cihr-irsc.gc.ca/e/45235.html</p> <p>Lippincott Williams & Wilkins & Ovid: <i>Demystifying Research - Simplifying Critical Appraisal</i> http://jonathanharseydotnet1.files.wordpress.com/2012/05/simplifying-critical-appraisal.pdf</p> <p>Institute for Work and Health: <i>Research 101</i> http://www.iwh.on.ca/research-101/part-1</p> <p>National Institutes of Health: <i>Introduction to Health Services Research : A Self-Study Course</i> http://www.nlm.nih.gov/nichsr/ihcm/toc.html</p> <p>Ontario Public Health Libraries Association: <i>Critical Appraisal of Research Evidence 101</i> http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/caore.pdf</p>		

Level KU3 *Expert Knowledge User: Facilitating Research User in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Develop and use implementation resources (e.g., tools) and applying evidence for multiple audiences?</p> <p>Lead others to know the differences/commonalities between research, evaluation and quality improvement?</p> <p>Distinguish between the different research designs and applications (i.e. qualitative, quantitative, mixed-methods) in order to develop local evidence to inform your practice or policy work?</p> <p>Lead others to develop health literacy capacity?</p> <p>Lead others to apply research to the local context?</p> <p>Lead others to conduct literature reviews on topic relevant to practice?</p>					<p>Webcast: AcademyHealth: Research Resources for HSR http://www.academyhealth.org/Training/ResourceDetail.cfm?ItemNumber=3320</p> <p>Institute for Work and Health: What Researchers Mean By... http://www.iwh.on.ca/what-researchers-mean-by</p> <p>University of Washington: Finding Qualitative Research Articles http://www.nlm.nih.gov/nichsr/usestats/index.htm</p> <p>National Collaborating Centre for Methods and Tools: Learning Centre http://www.nccmt.ca/learningcentre/EN/index.php Registry of Methods and Tools: http://www.nccmt.ca/resources/search</p>		
<p>Evidence Competencies: Skills Criteria</p> <p>▶ Do you usually/regularly...</p> <p>Facilitate determination of decision/policy makers' information needs and current policy priorities?</p> <p>Facilitate others to apply evidence-informed decision making methods (proper question development, creation and execution of an efficient search strategy, critical appraisal, interpretation of evidence considering local context, application of evidence for multiple audiences)?</p> <p>Facilitate others to critically appraise and use tools for evaluating the quality of methodology and the reliability of specific research?</p> <p>Facilitate others in interpreting basic and more advanced descriptive and inferential statistics found in qualitative and quantitative research reports?</p> <p>Lead others to conduct literature reviews on topics relevant to practice?</p> <p>Lead others to develop research questions for literature searches?</p> <p>Lead others to create and execute an efficient search strategy and use resources for online information searches?</p> <p>Lead others to conduct knowledge syntheses including, meta-analyses, systematic reviews, mixed methods, etc.?</p> <p>Lead others to be aware of current systematic reviews or other syntheses of the global evidence?</p> <p>Facilitate others to know the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making?</p> <p>Lead others to apply knowledge (evidence and research) to inform health policies, programs or practice?</p>					<p>Knowledge for Health Project (K4Health.org): Guidance & Tools for Programs and Policy-Makers https://www.k4health.org/toolkits/research-utilization/guidance-tools-programs-and-policy-makers</p>		

Level KU3 *Expert Knowledge User: Facilitating Research User in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Lead others to determine and apply relevant research to the local context?</p> <p>Use implementation resources (e.g., tools) and apply evidence for multiple audiences?</p> <p>Facilitate others to know the differences/ commonalities between research, evaluation and quality improvement?</p> <p>Facilitate others in understanding research processes?</p> <p>Facilitate others to develop health literacy capacity?</p>							
<p><i>Evidence Competencies: Attitude Criteria</i></p> <p>▶ Do you usually/regularly...</p> <p>Commit to improving practice through leading others' research use?</p> <p>Commit to mentoring others in research and quality improvement?</p> <p>Commit to rewarding others when using data analysis in the workplace to inform practice and policy making?</p> <p>Commit to rewarding others when they take on self-directed lifelong learning and reflective learning?</p>							
<p><i>Teamwork: Knowledge Criteria</i></p> <p>▶ Can you...</p> <p>Explain importance of leading a team to understand the value of sharing relevant research findings?</p> <p>Identify when it is appropriate to engage in appreciative inquiry, conflict resolution, deliberative dialogue, systems thinking, adult learning principles, etc.?</p> <p>Demonstrate expertise in creating knowledge networks of researchers and decision makers who have common interests?</p> <p>Identify how to lead others to develop opportunities to learn and share through formal and informal networks?</p> <p>Identify how to lead and provide training to others to access and appraise evidence?</p> <p>Describe how to build relationships with researchers and create a culture that values interaction through the research process?</p> <p>Describe how to lead others to apply concepts of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p><i>Teamwork Resources</i></p> <p>Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/</p> <p>Canadian Foundation for Healthcare Improvement: An Interactive Integrative Approach to Translating Knowledge and Building a "Learning Organization" in Health Services Management http://www.cfhi-fcass.ca/SearchResultsNews/07-05-01/81af1546-ce1f-4376-8d0f-d34144607456.aspx</p> <p>Institute for Knowledge Mobilization: Canadian Knowledge Mobilization Forum http://www.knowledgemobilization.net/forum/</p> <p>Ontario Centre of Excellence for Child and Youth Mental Health: Teamwork and collaboration Learning Module http://www.excellenceforchildandyouth.ca/resource-hub/learning-modules/implementation-teamwork-and-collaboration</p>		
<p><i>Teamwork: Skills Criteria</i></p> <p>▶ Do you usually/regularly...</p> <p>Lead others to share relevant research findings and personal knowledge with the team?</p>							

Level KU3 *Expert Knowledge User: Facilitating Research User in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Lead others to develop opportunities to learn and share through informal and formal networks?</p> <p>Determine when it is appropriate to engage in appreciative inquiry, conflict resolution, deliberative dialogue, systems thinking, adult learning principles, etc.?</p> <p>Create knowledge networks of researchers and decision makers who have common interests?</p> <p>Lead, provide training to others to access and appraise evidence?</p> <p>Establish ongoing relationships with researchers to support practice-based research and research-based practice?</p> <p>Lead others to demonstrate cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Canadian Institutes of Health Research: Guide to Researcher and Knowledge-User Collaboration in Health Research http://www.cihr-irsc.gc.ca/e/44954.html</p> <p>Government of Canada, Tri-Council Policy Statement (TCPS): Ethical Conduct for Research Involving Humans TCPS 2 – Chapter 9: Research Involving the First Nations, Inuit and Metis Peoples of Canada http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/chapter9-chapitre9/</p> <p>Canadian Institutes of Health Research (CIHR): CIHR Guidelines for Health Research Involving Aboriginal People (2007-2010) http://www.cihr-irsc.gc.ca/e/29134.html</p>		
<p>Teamwork: Attitude Criteria</p> <p>▶ Do you usually/regularly...</p> <p>Commit to leading others in teamwork, cooperation and relationship building?</p> <p>Demonstrate leadership in adopting principles of equity, inclusivity, respect and cultural competence?</p> <p>Use charisma and persuasiveness in working with others; commit to influencing rather than wielding power?</p> <p>Foster self-awareness in other team members of own abilities or limitations in collaborative situations?</p>					<p>British Columbia, Canada -- Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/</p>		
<p>KT Activities: Knowledge Criteria</p> <p>▶ Can you...</p> <p>Demonstrate the importance of how to build and lead a team that understands the value of sharing relevant research findings?</p> <p>Demonstrate the importance of leading a team to understanding barriers and facilitators to knowledge use and strategies to address them?</p> <p>Demonstrate knowledge of the available frameworks of KT approaches for use by others (e.g. Graham et al)?</p> <p>Identify opportunities to, and interact with, knowledge brokers, to assist in developing and/or finding and implementing evidence?</p> <p>Promote safe, effective and reliable care by implementing practice improvement?</p> <p>Lead others to identify inconsistencies between research findings and expertise or patients' preferences in their practice environment?</p> <p>Demonstrate expertise in understanding how the patient's values affect the balance between potential advantages and</p>					<p>Knowledge Translation Resources</p> <p>BC KT Community of Practice: http://bcktcop.ca/</p> <p>Institute for Work and Health: What Researchers Mean By... http://www.iwh.on.ca/what-researchers-mean-by</p> <p>University of Washington: Finding Qualitative Research Articles http://www.nlm.nih.gov/nichsr/usestats/index.htm</p>		

Level KU3 *Expert Knowledge User: Facilitating Research User in Care Delivery & Policy Settings*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
disadvantages of the available options and to appropriately involve the patient in decision making?							
<p><i>KT Activities: Skills Criteria</i></p> <p>▶ Do you usually/regularly...</p> <p>Lead teams in successful knowledge sharing activities?</p> <p>Synthesize evidence in planning and delivering healthcare services?</p> <p>Promote the use of research and outcome data to formulate, evaluate and/or revise policies, procedures, protocols, client-specific programs and client standards of care to improve practice?</p> <p>Promote the adaptation of the evidence for the local context?</p> <p>Lead a program with knowledge brokering embedded into it?</p> <p>Lead others to tailor, select and implement interventions to target goals, barriers and to enable facilitators of change?</p> <p>Lead others to develop plans to address inconsistencies between research findings and your expertise or your patients' preferences?</p>							
<p><i>KT Activities: Attitude Criteria</i></p> <p>▶ Do you usually/regularly...</p> <p>Demonstrate leadership in building KT programs?</p> <p>Lead others to seek out opportunities in the research-practice interface as an essential part of their own professional work?</p> <p>Commit to rewarding a shared vision of culture of change and innovation, including promoting evidence-based care and continuous quality improvement?</p> <p>Commit to rewarding a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical decision making?</p> <p>Commit to rewarding the use of research findings to drive practice improvements?</p>							

Examples that demonstrate competence	
Areas to learn and develop/ improve	

Professional Development Tool

KT Pathways Competencies:

Knowledge Brokers

How to use this Tool

Following is a tool for self-assessment or for use in conjunction with a manager or educator. Each Level as described in the Pathway has its own assessment component. To assess yourself, reflect on each criterion and check your assessment of where you are at: Ask yourself “*Can I do this? Do I do this? How well can I do this?*”. A set of suggested learning resources are included in the Tool to assist you in advancing along the Pathway’s levels; other resources can be identified through your own exploration. This assessment tool can be adapted or shortened, focused on *Skills*, as appropriate for the work environment.

✓ **1** *Need learning and practice*

- This column reflects whether you know the concepts and skills required for effective performance of a particular action or attribute.
- If you have acquired this knowledge/skill through prior education or on-the-job learning, leave this blank.
- If you need further learning and practice, mark a ✓ in this column

✓ **2** *Knowledgeable, but need practice*

- This column reflects your ability to apply your knowledge/skill in changing practice situations.
- If you have the background knowledge, and have had several opportunities to successfully apply your knowledge or demonstrate this attribute in your role, leave this one blank.
- If you have the knowledge, but need more practice and would like to receive feedback to feel confident and competent, mark a ✓ in this column.

✓ **3** *Competent*

- This column applies to you if you have the required knowledge/skill and have had several opportunities to successfully apply it in your role or practice. You consistently demonstrate or perform this attribute.
- If you can demonstrate a particular action independently and effectively in a variety of situations, mark a ✓ in this column.

✓ **4** *Expert: can teach others*

- This column is used when you are able to act as a teacher for others and facilitate learning of this skill/attribute/knowledge.
- If you have thorough knowledge and are competent, confident and effective in performing a particular action in complex situations, mark a ✓ in this column.

Note: The Professional Development Tool for knowledge brokers uses a framework identified by Glegg and Hoens: *Role Domains of Knowledge Brokering: A Model for the Health Care Setting*. J Neurol Phys Ther. 2016 Apr; 40(2): 115–123. doi: 10.1097/NPT.000000000000122. Video abstract available here: https://youtu.be/udp8JNu_tL4

Level KB1 KT Pathways Development Tool KT Competencies

Professional Standards Met?

Competency stage

1 Need learning & practice 2 Knowledgeable, but need practice 3 Competent 4 Expert: can teach others

Primary Role Domain(s)		Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care and Policy settings</i>										KNOWLEDGE CREATION					
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	<i>KNOWLEDGE CREATION: Knowledge Criteria</i> ▶ Can you describe...				1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date	
X						Knowledge inquiry								Knowledge Creation Competency Development Resources Australian Journal of Advanced Nursing: A nurses' guide to the critical reading of research http://www.ajan.com.au/Vol26/26-1v2_Ingham-Broomfield.pdf CASP UK: Critical Appraisal Skills Programme: Making sense of evidence about clinical effectiveness http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Qualitative_Appraisal_Checklist_14_oct10.pdf CIHR: Critical Appraisal of Intervention Studies, online course http://www.cihr-irsc.gc.ca/e/45235.html Lippincott Williams & Wilkins & Ovid: Demystifying Research - Simplifying Critical Appraisal http://jonathanharseydotnet1.files.wordpress.com/2012/05/simplifying-critical-appraisal.pdf Institute for Work and Health: Research 101 http://www.iwh.on.ca/research-101/part-1			
X						KK1.1. The principles of co-creation and co-production as they relate to KT?											
X						KK1.2. Different forms of knowledge, including explicit and tacit knowledge, and how they are used?											
X						KK1.3. The health research process?											
	X					KK1.4. The health sector and its key players?											
			X			KK1.5. The differences between stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public, etc.)?											
	X					KK1.6. The practice of evidence-informed decision making and how it relates to the research/practice/policy processes?											
X						KK1.7. The ethical principles applied to human health research?											
X						KK1.8. Basic descriptive and inferential statistics?											
X						KK1.9. The health research funding environment in Canada?											
			X			KK1.10. How to use social media to support a project (e.g., patient recruitment, sharing resources, seeking feedback, etc.)?											
	X					KK1.11. How to organize workshops, focus groups and interviews?											
X						Knowledge synthesis, tools and products											
						KK1.12. How to contribute to knowledge products (e.g. scientific manuscripts, systematic reviews, policy reports, summaries) for health, health policy and health system research stakeholders?											

Primary Role Domain(s)						Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care and Policy settings</i>					KNOWLEDGE CREATION								
											<p>National Institutes of Health: Introduction to Health Services Research : A Self-Study Course http://www.nlm.nih.gov/nichsr/ihcm/toc.html</p> <p>Ontario Public Health Libraries Association: Critical Appraisal of Research Evidence 101 http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/caore.pdf</p> <p>Webcast: AcademyHealth: Research Resources for HSR http://www.academyhealth.org/Training/ResourceDetail.cfm?itemNumber=3320</p>								
	Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check						<p>KNOWLEDGE CREATION: Skills Criteria</p> <p>► Are you able to...</p>	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
	X										<p>Knowledge inquiry</p> <p>KS1.1. Organize and facilitate workshops, focus groups, interviews and meetings?</p>								
X											KS1.2. Perform basic descriptive and inferential statistical analyses?								
X											KS1.3. Identify principles of co-creation of knowledge as they relate to KT?								
X											<p>Knowledge synthesis, tools and products</p> <p>KS1.4. Draft knowledge products (e.g. scientific manuscripts, policy reports, summaries) for health, health policy and health system research stakeholders?</p>								
X											KS1.5. Communicate research evidence and evidence-informed policy and practice recommendations in a manner conducive to influencing decision-making?								
	X										KS1.6. Use evidence to advocate for practice/policy improvements?								
	Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check						<p>KNOWLEDGE CREATION: Attitude Criteria</p> <p>► Do you usually/regularly...</p>	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
X											KA1.1. Practice scientific integrity which involves honesty in gathering, analyzing and presenting information?								
	X										KA1.2. Work to eliminate jargon and technical language so that research can be understood by non-technical audiences?								
	X										KA1.3. Look for ways to solve problems in practice/policy?								
	X										KA1.4. Express a positive attitude towards and beliefs about the benefits of evidence informed practice/policy?								

Primary Role Domain(s)		Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care and Policy settings</i>						KNOWLEDGE CREATION	
X									
		KA1.5. Exhibit a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical/policy decision making?							

Primary Role Domain(s)		Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care and Policy Settings</i>						ACTION CYCLE					
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	ACTION CYCLE COMPETENCIES: Knowledge Criteria ▶ Can you describe...				Recommended Learning Activities & Resources		Have I done this?	Learning Goals Met Date
						1	2	3	4				
				X						Action Cycle Competency Development Resources Institute for Work and Health: <i>What Researchers Mean By...</i> http://www.iwh.on.ca/what-researchers-mean-by University of Washington: <i>Finding Qualitative Research Articles</i> http://www.nlm.nih.gov/nichsr/usestats/index.htm			
				X	Identify the problem								
					AK1.1. How to define the problem?								
				X	AK1.2. How to identify knowledge gaps?								
X					Identify, review, select knowledge								
					<i>Gathering evidence</i>								
					AK1.3. Basic information management techniques to organize knowledge from different sources for easy retrieval?								
X					AK1.4. Different types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated and validated?								
X					AK1.5. Best evidence sources for your context (e.g. electronic library databases, local data & contextual knowledge, etc.)?								
X					AK1.6. Differentiate between single studies and synthesized knowledge?								
X					AK1.7. The components of a structured research question for the purpose of guiding literature searches (e.g. PICO, PICOT, etc.)?								
X					AK1.8. The appropriate search techniques to retrieve knowledge from a variety of sources, including electronic library databases, at a level of sensitivity and specificity appropriate to different knowledge needs?								
X					AK1.9. Appropriate techniques to capture experiential and emotional knowledge (e.g. use of narrative/ storytelling, guided reflection, case studies, social networking) as part of the data collection process?								
				X	AK1.10. The process of assessing the team/individual/organizational contexts?								
X					AK1.11. The context that surrounds the producers and users of knowledge?								
X			X		AK1.12. How to conduct scans, or to leverage information collected by others, about the priorities, issues, trends and concerns related to an issue/problem?								
X					<i>Appraising evidence</i>								

Primary Role Domain(s)					Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care and Policy Settings</i>	ACTION CYCLE		
					AK1.13. The scientific content described in research?			
			X		AK1.14. Appropriate critical appraisal tools for your context, and how to use them to identify the most reliable, useful, relevant, applicable, value-added knowledge to the context being considered when reviewing research literature?			
			X		AK1.15. How the patient's values affect the balance between potential advantages and disadvantages of the available options?			
X					AK1.16. The benefits of syntheses over single studies/primary research?			
	X				Adapt knowledge to local context AK1.17. The context where KT is to be used?			
		X			AK1.18. The perspectives of stakeholders e.g. policy makers, health professionals, researchers, etc.?			
	X				AK1.19. The healthcare system, research and policy organizations, market dynamics and priorities both regionally and provincially in systems of innovation?			
	X				Assess barriers to knowledge use AK1.20. The concepts of facilitators and barriers to research use?			
	X				Select, tailor, implement interventions AK1.21. The components of a KT plan?			
X					AK1.22. The evidence supporting specific KT strategies?			
	X				AK1.23. The concepts of KT theory and practice including conceptual models, frameworks and strategies for implementation science and knowledge mobilization for policy/practice?			
	X				AK1.24. How to link KT plans to project goals?			
	X				AK1.25. The range of methods that support person-to-person exchange and dissemination of knowledge?			
X					AK1.26. The use social media to support a project (e.g., patient recruitment, sharing information, etc.)?			
		X			AK1.27. Different forms of learning (e.g. web-based learning, virtual classrooms, social networking, face to face training, digital collaboration, individual and group reflection, etc.?) and their impact on KT processes?			
		X			AK1.28. The implications of different forms of learning for KT?			
X					AK1.34. Communications strategies?			
X					AK1.29. Marketing plans?			
	X				AK1.30. The principles of management, administration, and budgeting processes related to KT?			
	X				AK1.31. Inspirational and collaborative leadership qualities?			
	X				AK1.32. How to apply evidence for multiple audiences?			
			X		Monitor knowledge use, evaluate outcomes, sustain knowledge use			

Primary Role Domain(s)					Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care and Policy Settings</i>					ACTION CYCLE		
					AK1.33. The rationale for and approaches to evaluating KT?							
			X		AK1.34. The importance of sustainability of interventions?							
	X				AK1.35. The benefits of promoting evidence to improve healthcare delivery?							
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	ACTION CYCLE COMPETENCIES: Skills Criteria ► Are you able to...	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
				Check								
			X		Identify the problem							
					AS1.1. Define the problem?							
X					AS1.2. Learn about knowledge-to-action gaps and identify/review/select relevant knowledge to address them?							
	X				AS1.3. Identify when practice/quality improvement is needed to promote safe, effective and reliable care?							
X					Identify, review, select knowledge							
					Gathering evidence							
					AS1.4. Search for evidence using relevant literature databases, grey literature and local data sources?							
X					AS1.5. Use a structured search question to guide a literature search?							
X					AS1.6. Find health research and other resources/tools?							
			X	X	AS1.7. Engage in scans, or leverage information collected by others, about priorities, issues, trends and concerns?							
X					AS1.8. Identify and deploy appropriate techniques to capture experiential and emotional knowledge (e.g. use of narrative/ storytelling, guided reflection, case studies, social networking) as part of the data collection process?							
X					AS1.9. Apply appropriate search techniques to retrieve knowledge from sources at a level of sensitivity and specificity appropriate to different knowledge needs?							
X					AS1.10. Identify knowledge gaps through literature reviews; rapid reviews, synthesis reports?							
			X		AS1.11. Use active listening skills to gain insight into the interests of healthcare practitioners/policy makers/leaders?							
X	X				AS1.12. Find implementation resources (e.g., tools) and apply evidence for multiple audiences?							
X					AS1.13. Access information management retrieval at point of care and link it to clinical systems?							
X					AS1.14. Ability to find a range of evidence and knowledge?							
X					AS1.15. Engage in knowledge mapping?							
X					AS1.16. Maintain data and document management systems and repositories?							

Primary Role Domain(s)		Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care and Policy Settings</i>							ACTION CYCLE		
X											
X			X								
			X								
X											
X											
			X								
X											
X											
X			X								
			X								
			X								
	X										
	X										
		X	X								
	X										
	X										
X											
X											
			X								
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	ACTION CYCLE COMPETENCIES: Attitude Criteria				Have I done this?	Learning Goals Met Date
						▶ Do you usually/regularly...	1	2	3		

Primary Role Domain(s)					Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care and Policy Settings</i>	ACTION CYCLE				
X					AA1.1. Exhibit an enthusiastic, flexible, entrepreneurial, creative, open-minded, proactive work style?					
	X				AA1.2. Continuously seek out professional development/learning opportunities related to KT?					
		X			AA1.3. Seek out the latest developments in communications, integrating social media, and online media strategies to foster engagement?					
X					AA1.4. Stay current on data and research for policymaking/practice?					
X					AA1.5. Take appropriate measures to protect intellectual property through the acknowledgement of authors, originators, and contributors?					
	X				AA1.6. Appreciate the educational value of the social exchange of knowledge?					
		X			AA1.7. Seek to learn about organizational and occupational culture as barriers to or enablers for change?					
X					AA1.8. Manage uncertainty?					
X					AA1.9. Express a willingness to being open to change?					
X					AA1.10. Seek to learn about a culture of change and innovation, including promoting evidence-informed care/policy?					
X					AA1.11. Seek out continuous quality improvement?					
	X				AA1.12. Actively believe in the life-long learning process?					
		X			AA1.13. Recognize the importance of promoting mutual understanding across researchers', decision makers', and caregivers' environments and cultures to help spread awareness/ adoption of innovations?					

Primary Role Domain(s)					Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>	RELATIONAL						
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
			X		RELATIONAL COMPETENCIES: Knowledge Criteria ▶ Can you describe...					<i>Relational Competency Development Resources</i>		
			X		Relationships RK1.1. The importance of ongoing relationships/partnerships and engagement with stakeholders (e.g. policy makers, researchers, health professionals, patients, etc.)?							

Primary Role Domain(s)					Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>					RELATIONAL		
			X		RK1.2. How to connect people who rarely interact with each other to share and exchange knowledge?					Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/ Institute for Knowledge Mobilization: Canadian Knowledge Mobilization Forum 2013 http://www.knowledgemobilization.net/wp-content/uploads/2013/08/2013-Report_Canadian-Knowledge-Mobilization-Forum.pdf Ontario Centre of Excellence for Child and Youth Mental Health: Teamwork and collaboration Learning Module http://www.excellenceforchildand youth.ca/resource-hub/learning-modules/implementation-teamwork-and-collaboration Webcast: National Cancer Institute: How engaged are we? Measuring community engagement and partnership https://youtu.be/9CUmDSCTVgl Canadian Institutes of Health Research: Guide to Researcher and Knowledge-User Collaboration in Health Research http://www.cihr-irsc.gc.ca/e/44954.html		
			X		RK1.3. The importance of good communication and effective communication strategies?							
	X				Communication RK1.4. The importance of problem solving and approaches for identifying and solving problems during the participatory research process?							
	X				RK1.5. Interpersonal dynamics & problem-solving							
	X				RK1.6. Theories of change and change management?							
	X				RK1.7. Theories of conflict management/resolution?							
			X		RK1.8. How to advance cultural humility and cultural safety in working with First Nations and Aboriginal peoples and other groups?							
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	RELATIONAL COMPETENCIES: Skills Criteria ► Are you able to...	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
			X		Relationships							
			X		RS1.1. Participate in engagement initiatives with multiple stakeholders?							
			X		RS1.2. Network and build relationships with stakeholders?							
			X		RS1.3. Communicate (written and oral) with attention to detail when working with other team members?							
	X				RS1.4. Apply strategic communications principles?							
	X				Interpersonal dynamics & problem-solving							
	X				RS1.5. Facilitate the group process?							
	X				RS1.6. Define problems/problem-solve independently?							
	X				RS1.7. Work with groups to problem solve, and facilitate participatory decision-making processes?							
X					RS1.8. Follow appropriate procedures to maintain confidentiality?							
	X				RS1.9. Deal with stressful, sensitive or difficult situations with tact and diplomacy, including exercising judgment and discretion within team environments?							

Primary Role Domain(s)					Level KB1 <i>Developmental Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>					RELATIONAL			
			X		RS1.10. Develop cultural humility and cultural safety in working with First Nations and Aboriginal peoples and other ethnic groups?								
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	RELATIONAL COMPETENCIES: Attitude Criteria ► Do you usually/regularly...	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date	
	X					RA1.1. Keep an open minded, supportive attitude?							
		X				RA1.2. Value equity, inclusivity, respect and cultural competence?							
		X				RA1.3. Enjoy teamwork, cooperation and relationship building?							
		X				RA1.4. Recognize the value of bridging							
		X				RA1.5. g the cultures and interests of researchers, healthcare professionals and decision maker and patients/the public?							
			X			RA1.6. Consider your own abilities or limitations in collaborative situations?							

Examples that demonstrate competence	
Areas to learn and develop/ improve	

Level KB2 KT Pathways Development Tool KT Competencies

Professional Standards Met?	Competency stage			
	1 Need learning & practice	2 Knowledgeable, but need practice	3 Competent	4 Expert: can teach others

Primary Role Domain(s)		Level KB2 <i>Intermediate Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>								KNOWLEDGE CREATION			
										Have I done this?	Learning Goals Met Date		
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	Can you describe...	1	2	3	4	Recommended Learning Activities & Resources		
				X		KNOWLEDGE CREATION: Knowledge Criteria ► Can you describe...					Knowledge Creation Competency Development Resources Australian Journal of Advanced Nursing: <i>A nurses' guide to the critical reading of research</i> http://www.ajan.com.au/Vol26/26-1v2_Ingham-Broomfield.pdf CASP UK: <i>Critical Appraisal Skills Programme: Making sense of evidence about clinical effectiveness</i> http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Qualitative_Appraisal_Checklist_14oct10.pdf CIHR: <i>Critical Appraisal of Intervention Studies, online course</i> http://www.cihr-irsc.gc.ca/e/45235.html Lippincott Williams & Wilkins & Ovid: <i>Demystifying Research - Simplifying Critical Appraisal</i> http://jonathanharseydotnet1.files.wordpress.com/2012/05/simplifying-critical-appraisal.pdf Institute for Work and Health: <i>Research 101</i> http://www.iwh.on.ca/research-101/part-1		
						Knowledge inquiry KK2.1. How to evaluate dissemination plans/products?							
X						KK2.2. Research funding opportunities and their requirements?							
X						KK2.3. The differences and commonalities between health research, evaluation and quality improvement?							
X						KK2.4. The different types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated and validated, the differences between knowledge and evidence?							
	X					KK2.5. How coded data can support service improvement and redesign and in practice, policy making and research?							
	X					KK2.6. How policy makers' information needs may differ from research being conducted?							
	X		X			KK2.7. How to develop strategies for and to facilitate the engagement of stakeholders in a project (e.g. workshops, focus groups and interviews)?							
X						KK2.8. Relevant health research or implementation resources or tools?							
X						Knowledge synthesis KK2.9. How to systematically synthesize and interpret the evidence to create a variety of formats/knowledge products (e.g. literature reviews, rapid reviews, synthesis reports, etc.)?							
X						KK2.10. Strategies for accessing and appraising evidence and doing knowledge synthesis?							
X						Knowledge tools/products							

Primary Role Domain(s)					Level KB2 <i>Intermediate Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>					KNOWLEDGE CREATION	
				X	KA2.1. Seek out opportunities for practice improvement through research/quality improvement/evaluation?						

Primary Role Domain(s)					Level KB2 <i>Intermediate Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>					ACTION CYCLE			
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	<i>ACTION CYCLE COMPETENCIES: Knowledge Criteria</i> ► Can you describe...	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
	X					Identify the problem AK2.1. How to develop strategies for identifying priorities, issues, trends and concerns?					<i>Action Cycle Competency Development Resources</i> Institute for Work and Health: <i>What Researchers Mean By...</i> http://www.iwh.on.ca/what-researchers-mean-by University of Washington: <i>Finding Qualitative Research Articles</i> http://www.nlm.nih.gov/nichsr/usestats/index.htm		
X						Identify, review, select knowledge <i>Gathering evidence</i> AK2.2. The creation and execution of an efficient search strategy?							
X						AK2.3. How to keep up to date on systematic reviews or other syntheses of the global evidence?							
X	X					AK2.4. The implementation and health research resources available (e.g., tools) and how to apply evidence for multiple audiences?							
			X			AK2.5. How to identify stakeholder perspectives (e.g., service provider, researcher, and policy maker, patient/public)?							
X	X					AK2.6. The subject area of relevance (e.g. clinical practice area, population/diagnosis, policy issue, etc.) on a practice and theoretical level?							
			X			AK2.7. Key players and controversies within the health sector and broader healthcare environment?							
	X					<i>Appraising evidence</i> AK2.8. The value of analyzing the context that surrounds the producers and users of knowledge?							
X						AK2.9. Advanced descriptive and inferential statistics found in qualitative and quantitative research reports?							
				X		AK2.10. Adapt knowledge to local context AK2.11. How to analyze the context where KT is to be used?							

X					Identify, review, select knowledge <i>Gathering evidence</i> RK2.3. Create and execute an efficient search strategy, including relevant academic databases, grey literature, local data?						
X					RK2.4. Set up automated/scheduled processes for staying current in your field?						
			X		RK2.5. Identify stakeholder perspectives (e.g., service provider, researcher and policy maker, patient/public)?						
X					RK2.6. Develop appropriate search techniques to retrieve knowledge from these sources at a level of sensitivity and specificity appropriate to different knowledge needs?						
X					RK2.7. Find or commission synthesized research?						
X					RK2.8. Identify and deploy information management techniques involving defining and applying metadata and vocabulary standards?						
X					RK2.9. Develop data and document management systems and repositories for specific uses?						
X					Appraising evidence RK2.10. Analyze and integrate data from a range of sources?						
			X		RK2.11. Distinguish between policy makers' information needs and the research being conducted?						
X				X	RK2.12. Conduct advanced descriptive and inferential statistical analyses as found in qualitative and quantitative research reports?						
X				X	Adapt knowledge to local context RK2.13. Synthesize research and evaluation data for practice improvement?						
X					RK2.14. Perform knowledge mapping of knowledge value chains focusing on the processes of knowledge acquisition, creation, sharing/ dissemination, utilization/application, and performance assessments within the context of the strategic goals of the health system?						
	X		X		RK2.15. Identify opportunities for the evidence to contribute to the policy cycle, and the potential convergence of Ministerial interest, policy administrator engagement and emerging research agendas?						
X			X		RK2.16. Translate, coordinate and align evidence to a decision maker's perspective?						
				X	RK2.17. Use knowledge of the sector, the broader healthcare environment, its key players and controversies to gauge the applicability and adaptability of new evidence to user contexts?						
	X				Assess barriers to knowledge use RK2.18. Facilitate the identification of stakeholders' knowledge needs and anticipate barriers to the application of new knowledge; apply enquiry techniques to define actual versus perceived knowledge needs in policy and practice?						
	X				RK2.19. Prioritize barriers and facilitators to knowledge use?						
	X				Select, tailor, implement interventions RK2.20. Suggest interventions and ways that knowledge could be used given the team/individual/organizational contexts?						

Info. Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	ACTION CYCLE COMPETENCIES: Attitude Criteria ▶ Do you usually/regularly...	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
X						AA2.1. Model evidence-informed decision-making in your own work?							
X						AA2.2. Champion and promote at all levels in the organization the application of knowledge to improve quality of health and care?							
X						AA2.3. Seek to learn about a culture of change and innovation, including promoting evidence-informed care?							
X						AA2.4. Express a positive attitude to and beliefs about the benefits of evidence informed practice?							
X						AA2.5. Exhibit a spirit of inquiry or ongoing curiosity about the best evidence to guide decision-making?							
X						AA2.6. Feel compelled to use research findings to advocate for practice improvements?							
X						AA2.7. Exhibit a willingness to take on leadership in KT activities?							

Primary Role Domain(s)					Level KB2 Intermediate Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings							RELATIONAL	
Info. Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	RELATIONAL COMPETENCIES: Knowledge Criteria ▶ Can you describe...	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
X				X		Gathering evidence RK2.1. The contexts of the KT audiences/stakeholders specific to the research area; understand people potentially have conflicting interests to develop common goals?					Relational Competency Development Resources Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/ Institute for Knowledge Mobilization: Canadian Knowledge Mobilization Forum 2013 http://www.knowledgemobilization.net/wp-content/uploads/2013/08/2013-Report_Canadian-Knowledge-Mobilization-Forum.pdf		
	X					Communication RK2.2. Effective communication skills and strategies and when to use them?							
			X			Relationships RK2.3. Effective strategies to develop strong relationships with stakeholders?							
			X			RK2.4. Strategies to build opportunities for interaction into the research/KT process, and to share work in ways that are meaningful and accessible to stakeholders?							
			X			Problem-solving & interpersonal dynamics							

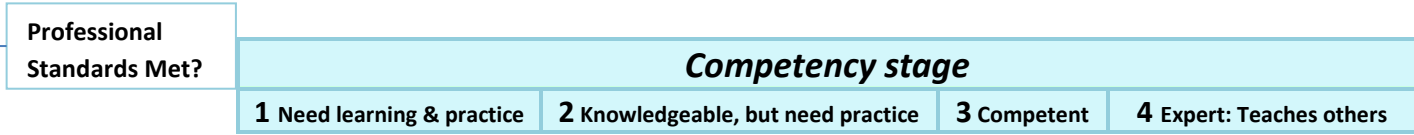
Primary Role Domain(s)					Level KB2 <i>Intermediate Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>					RELATIONAL		
					RK2.5. Strategies for identifying and solving problems in the process of participatory research?					Ontario Centre of Excellence for Child and Youth Mental Health: Teamwork and collaboration Learning Module http://www.excellenceforchildand youth.ca/resource-hub/learning-modules/implementation-teamwork-and-collaboration Webcast: National Cancer Institute: How engaged are we? Measuring community engagement and partnership https://youtu.be/9CUmDSCtVgI Canadian Institutes of Health Research: Guide to Researcher and Knowledge-User Collaboration in Health Research http://www.cihr-irsc.gc.ca/e/44954.html		
		X			RK2.6. Strategies for working with stakeholders to develop a KT plan?							
X					RK2.7. The application of change management in the introduction of changes in frontline practices?							
	X		X		RK2.8. Best practices in conflict management/resolution when engaging stakeholders?							
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	RELATIONAL COMPETENCIES: Skills Criteria ► Are you able to...	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
	X					Communication RS2.1. Communicate using diplomacy and tact? RS2.2. Use active listening skills to find evidence to improve current approaches? RS2.3. Develop, implement and evaluate persuasive communication strategies? RS2.4. Leverage active listening skills to identify opportunities to address the interests, issues and innovations of stakeholders?						
X					RS2.1. Communicate using diplomacy and tact?							
X					RS2.2. Use active listening skills to find evidence to improve current approaches?							
			X		RS2.3. Develop, implement and evaluate persuasive communication strategies?							
			X		RS2.4. Leverage active listening skills to identify opportunities to address the interests, issues and innovations of stakeholders?							
	X		X		Relationships RS2.5. Develop effective working relationships with others to achieve shared goals; build interpersonal relationships to facilitate knowledge exchange, the movement of evidence into practice/policy and collaboration?							
			X		RS2.6. Create networks of knowledge users, researchers and decision makers that are able to better understand each other's goals, professional cultures and advance a KT plan?							
			X		RS2.7. Foster and enrich trusting relationships that encourage conversations about the introduction of changes into frontline/policy practices?							
			X		RS2.8. Design and implement engagement strategies with multiple stakeholders?							
	X		X		RS2.9. Leverage developed partnerships to generate, disseminate or collate knowledge and to embed knowledge management practices within existing procedures?							
	X		X		Problem-solving & interpersonal dynamics RS2.10. Manage conflicts of interest?							
	X		X		RS2.11. Act as innovation broker, enabling innovation and engaged in negotiating, building, collaborating and managing relationships and processes?							

Primary Role Domain(s)		Level KB2 <i>Intermediate Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>							RELATIONAL			
	X	X			RS2.12. Exert influence and negotiate to engage clinical, senior management and practitioner engagement in implementation of evidence?							
		X			RS2.13. Develop knowledge exchange strategies (e.g., networks, communities of practice, university-ministry partnerships)?							
	X				RS2.14. Build a shared level of consensus?							
	X	X			RS2.15. Reconcile misunderstandings and resolve conflict?							
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	RELATIONAL COMPETENCIES: Attitude Criteria ▶ Do you usually/regularly...				Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
	X			X		1	2	3	4			
	X				RA3.1. Recognize your own abilities or limitations in collaborative situations and act accordingly?							
	X				RA3.2. Feel comfortable and effective in dealing with people at all levels in various organizations?							
	X				RA3.3. Position yourself as a credible expert?							



Examples that demonstrate competence	
Areas to learn and develop/ improve	

Level KB3 KT Pathways Development Tool KT Competencies



Primary Role Domain(s) Level KB3 <i>Expert Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>										KNOWLEDGE CREATION			
Info_Manager	Facilitator	Capacity_Builder	Linking_Agent	Evaluator	Check	<i>KNOWLEDGE CREATION: Knowledge Criteria</i> ▶ Can you describe...	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
X						Knowledge inquiry KK3.1. How to lead a program of research that identifies priorities, issues, trends and concerns?					Knowledge Creation Competency Development Resources Australian Journal of Advanced Nursing: <i>A nurses' guide to the critical reading of research</i> http://www.ajan.com.au/Vol26/26-1v2_Ingham-Broomfield.pdf CASP UK: <i>Critical Appraisal Skills Programme: Making sense of evidence about clinical effectiveness</i> http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Qualitative_Appraisal_Checklist_14oct10.pdf CIHR: <i>Critical Appraisal of Intervention Studies, online course</i> http://www.cihr-irsc.gc.ca/e/45235.html Lippincott Williams & Wilkins & Ovid: <i>Demystifying Research - Simplifying Critical Appraisal</i> http://jonathanharseydotnet1.files.wordpress.com/2012/05/simplifying-critical-appraisal.pdf Institute for Work and Health: <i>Research 101</i> http://www.iwh.on.ca/research-101/part-1		
X						KK3.2. How to use health research resources (e.g., tools)?							
		X				KK3.3. How to provide leadership to others in social media use in the research/KT process?							
X						KK3.4. The process and practice of health research including a variety of scientific methodologies (e.g., meta-analysis, systematic review, randomized controlled trials, cohort studies, etc.)?							
X						KK3.5. How to develop successfully funded health research grants?							
X		X				Knowledge synthesis KK3.6. How to lead others to develop strategies for literature reviews, rapid reviews, synthesis reports?							
X						Knowledge tools/products KK3.7. How to participate as lead author in preparing scientific manuscripts and policy-focused reports?							
		X				Other topics KK3.8. How to lead others in conducting all activities in an ethical manner appropriate to the cultural context (e.g., indigenous peoples and health research)?							
X						KK3.9. How to adapt synthesized evidence to the local context?							

Primary Role Domain(s)		Level KB3 <i>Expert Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>							KNOWLEDGE CREATION							
	X									National Institutes of Health: <i>Introduction to Health Services Research : A Self-Study Course</i> http://www.nlm.nih.gov/nichsr/iHCM/toc.html						
X	X									Ontario Public Health Libraries Association: <i>Critical Appraisal of Research Evidence 101</i> http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/caore.pdf						
X										Webcast: AcademyHealth: <i>Research Resources for HSR</i> http://www.academyhealth.org/Training/ResourceDetail.cfm?ItemNumber=3320						
X		X														
X	X		X													
X																
	X															
Info. Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	KNOWLEDGE CREATION: Skills Criteria				Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date				
						► Are you able to...							1	2	3	4
X						Knowledge inquiry										
						KS3.1. Lead a program of research that identifies priorities, issues, trends and concerns?										
X						KS3.2. Use health research resources/tools?										
X						KS3.3. Oversee a program of information management for KT?										
X		X				KS3.4. Lead others in the co-creation of knowledge?										
X		X				KS3.5. Help others to identify different forms of knowledge, including tacit and explicit?										
	X		X			KS3.6. Integrate differing stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public) into the implementation cycle?										
X						Knowledge synthesis										
						KS3.7. Conduct knowledge syntheses including, meta-analyses, systematic reviews, mixed methods, etc.?										
X						Knowledge tools/products										
						KS3.8. Participate as lead author in preparing scientific manuscripts and policy-focused reports?										
X		X				Other topics										
	X					KS3.9. Lead others in health literacy?										
	X					KS3.10. Lead others in conducting all activities in an ethical manner appropriate to the cultural context (e.g. Indigenous peoples and health research)?										

Primary Role Domain(s)		Level KB3 <i>Expert Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>					ACTION CYCLE	
X		X				AS3.3. Assist in setting research priorities with decision makers and researchers?		
X	X					Identify, review, select knowledge <i>Gathering evidence</i> AS3.4. Create strategies for others to develop and apply appropriate search techniques to retrieve knowledge from sources at a level of sensitivity and specificity appropriate to different knowledge needs?		
X						AS3.5. Search for systematic reviews or other syntheses of the global evidence?		
			X			AS3.6. Identify decision/policy makers' information needs and current policy priorities; expertise in doing evidence-informed decision/policy making?		
		X				AS3.7. Lead others to understand the health sector, the broad healthcare environment and its key players and controversies?		
X		X				AS3.8. Lead others to identify and deploy appropriate information management techniques to describe, categorize and organize knowledge from different sources in order to support easy retrieval?		
X		X				AS3.9. Lead others to maintain and develop data and document management systems and repositories?		
X			X			AS3.10. Integrate differing stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public) into the knowledge creation cycle?		
X	X					Appraising evidence AS3.11. Adapt the synthesized evidence to the local context?		
X		X				AS3.12. Lead others to critically appraise and use tools for evaluating the quality of methodology and the reliability of specific research?		
X		X				AS3.13. Lead others in interpreting descriptive and inferential statistics found in qualitative and quantitative research reports?		
X						AS3.14. Interpret the results of analyzed data?		
X						Adapt knowledge to local context AS3.15. Adapt the evidence for the local context?		
X		X				AS3.16. Provide leadership in using knowledge of the sector, the broader healthcare environment, its key players and controversies to gauge the applicability and adaptability of new evidence to user contexts?		
		X		X		Assess barriers to knowledge use AS3.17. Assess needs and tailor mechanism of learning appropriate to the group?		
			X	X		AS3.18. Conduct social network analysis?		
	X					Select, tailor, implement interventions AS3.19. Tailor, select, and implement interventions to target goals, barriers and to enable facilitators of change and reflect iteratively throughout the process?		
X	X					AS3.20. Lead others in knowledge implementation activities?		

Primary Role Domain(s)				Level KB3 <i>Expert Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>	ACTION CYCLE	
X				AS3.21. Use research and outcome data to formulate, evaluate and/or revise policies, procedures, protocols, client-specific programs and client standards of care?		
X	X			AS3.22. Lead others in the most effective KT approach to optimize the use of research including strategic management of people and their work to support more effective application of knowledge?		
X				AS3.23. Participate in strategic KT planning?		
	X	X	X	AS3.24. Oversee others' effective designing, organizing, facilitating and evaluating knowledge exchange events?		
X				AS3.25. Promote the use of evidence in planning and delivering healthcare services?		
X	X			AS3.26. Provide leadership in influencing policy change?		
X	X			AS3.27. Lead others in strategically embedding technologies into knowledge dissemination planning and activities?		
X		X		AS3.28. Lead strategic planning to capitalize on opportunities for evidence to contribute to the policy cycle, identify the potential convergence of Ministerial interest, policy administrator engagement and emerging research agendas?		
	X		X	Monitor knowledge use, evaluate outcomes, sustain knowledge use AS3.29. Lead others in KT initiative evaluation?		
X			X	AS3.30. Identify course corrections and strategic approaches to issues identified in knowledge brokering evaluation activities?		
X			X	AS3.31. Implement and evaluate marketing plans?		
	X			Other topics AS3.32. Lead others in developing KT competencies in policy and practice?		
	X			AS3.33. Deliver a program of education (e.g. adult education, teaching/mentoring, experiential learning, facilitation) related to KT (e.g. evidence appraisal)?		
	X			AS3.34. Lead others to develop collaborative, distributed leadership competencies?		
	X			AS3.35. Develop others' project management skills for KT activities?		
	X		X	AS3.36. Facilitate evidence informed decision making skill development in others, including initial and ongoing assessment of decision makers' skills and capacity for evidence informed decision making?		
	X			AS3.37. Lead others to use the various models and frameworks for practicing/studying KT?		
	X			AS3.38. Create and sustain a culture that is supportive of evidence use, and the provision of infrastructure support and resources to promote the use of evidence in planning and delivering healthcare services?		
	X			AS3.39. Provide leadership to others in social media use in the research/KT process?		
X				AS3.40. Lead organizational change by creating a KT vision and taking appropriate action to ensure acceptance and support?		
			X	AS3.41. Evaluate, through knowledge maps, knowledge value chains focusing on the processes of knowledge acquisition, creation, sharing/ dissemination, utilization/		

Primary Role Domain(s)						Level KB3 <i>Expert Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>				ACTION CYCLE			
						application, and performance assessments within the context of the strategic goals of the health system?							
X						AS3.42. Participate in strategic communications?							
	X					AS3.43. Interpret and apply complex legislation, policies, regulations, and technical information related to KT?							
				X		AS3.44. Lead a program of performance measurement/quality improvement using various types of data (e.g. administrative, survey, etc.)?							
	X		X			AS3.45. Lead others in strategically aligning the KB function with stakeholders' goals to help achieve those goals?							
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	ACTION CYCLE COMPETENCIES: Attitude Criteria ▶ Do you usually/regularly...	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
	X					AA3.1. Value and reward enthusiastic, flexible, entrepreneurial, creative, open-minded, proactive work styles?							
	X					AA3.2. Value and reward inspirational and collaborative leadership qualities?							
	X	X				AA3.3. Value and reward continuous learning in KT?							
	X		X			AA3.4. Encourage leveraging the latest developments in communications, integrating social media, and online media strategies to foster engagement?							
	X					AA3.5. Model the use of evidence (e.g. data, research, etc.) for policymaking/practice?							
X						AA3.6. Value intellectual property through the acknowledgement of authors, originators, and contributors?							
	X		X			AA3.7. Impart the educational value of social exchange of knowledge, and of application of knowledge to frontline practice?							
	X					AA3.8. Demonstrate sensitivity to organizational and occupational culture as barriers to or enablers for change?							
	X			X		AA3.9. Manage uncertainty and practice reflective learning?							
	X					AA3.10. Reward openness to change?							
	X					AA3.11. Reward a shared vision of culture of change and innovation, including promoting evidence-based care?							
	X					AA3.12. Reward evidence informed practice?							
	X					AA3.13. Reward a spirit of inquiry or ongoing curiosity about the best evidence to guide clinical/policy decision making?							
	X					AA3.14. Demonstrate the use of evidence to advocate for practice/policy improvements?							
	X			X		AA3.15. Value and reward flexibility, change and continuous quality improvement?							
	X	X				AA3.16. Demonstrate leadership in building KT programs?							

Primary Role Domain(s)		Level KB3 <i>Expert Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>							RELATIONAL				
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	RELATIONAL COMPETENCIES: Knowledge Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
	X					► Can you describe...					Relational Competency Development Resources Provincial Health Services Authority: <i>Indigenous Cultural Safety (ICS) Online Training Program</i> http://www.sanyas.ca/ Institute for Knowledge Mobilization: <i>Canadian Knowledge Mobilization Forum 2013</i> http://www.knowledgemobilization.net/wp-content/uploads/2013/08/2013-Report_Canadian-Knowledge-Mobilization-Forum.pdf Ontario Centre of Excellence for Child and Youth Mental Health: <i>Teamwork and collaboration Learning Module</i> http://www.excellenceforchildandadolescence.ca/resource-hub/learning-modules/implementation-teamwork-and-collaboration Webcast: National Cancer Institute: <i>How engaged are we? Measuring community engagement and partnership</i> https://youtu.be/9CUmDSCTVgI Canadian Institutes of Health Research: <i>Guide to Researcher and Knowledge-User Collaboration in Health Research</i> http://www.cihr-irsc.gc.ca/e/44954.html		
	X	X				Communication RK3.1. How to encourage conversations about the introduction of changes into frontline practices?							
	X	X				RK3.2. How to facilitate others' understanding of implementation science and mobilizing evidence to practice?							
	X	X				RK3.3. How to facilitate others' understanding of strategies evidence access, appraisal and knowledge synthesis?							
		X	X			Relationships RK3.4. How to lead others to develop and organize meaningful stakeholder involvement in the research process?							
			X			RK3.5. Best practices in developing relationships with different stakeholder groups, or a network of stakeholders, for the purpose of mobilizing research evidence?							
		X	X			Problem-solving & interpersonal dynamics RK3.6. How to lead others in applying concepts of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples?							
	X					RK3.7. How to be sensitive to the specific contexts of the individual stakeholders working with the KB?							
	X	X	X			RK3.8. When it is appropriate to engage in any of the following approaches, as determined by the individual needs: appreciative inquiry, conflict resolution, deliberative dialogue, systems thinking, adult learning principles, etc.?							
Info Manager	Facilitator	Capacity Builder	Linking Agent	Evaluator	Check	RELATIONAL COMPETENCIES: Skills Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
						► Are you able to...							
						Communication							
			X			Relationships RS3.1. Develop productive working relationships with multiple constituencies to facilitate the development of partnerships?							

Primary Role Domain(s)		Level KB3 <i>Expert Knowledge Broker: Learning About Knowledge Brokering in Care Delivery Settings</i>						RELATIONAL	
	X	X							
X			X						
		X	X						
X		X							



Examples that demonstrate competence	
Areas to learn and develop/ improve	

Professional Development Tool

KT Pathways Competencies:

Knowledge Producers

How to use this Tool

Following is a tool for self-assessment or for use in conjunction with a manager or educator. Each Level as described in the Pathway has its own assessment component. To assess yourself, reflect on each criterion and check your assessment of where you are at: Ask yourself “**Can I do this? Do I do this? How well can I do this?**”. A set of suggested learning resources are included in the Tool to assist you in advancing along the Pathway’s levels; other resources can be identified through your own exploration. This assessment tool can be adapted or shortened, focused on *Skills*, as appropriate for the work environment.

✓ **1** *Need learning and practice*

- This column reflects whether you know the concepts and skills required for effective performance of a particular action or attribute.
- If you have acquired this knowledge/skill through prior education or on-the-job learning, leave this blank.
- If you need further learning and practice, mark a ✓ in this column

✓ **2** *Knowledgeable, but need practice*

- This column reflects your ability to apply your knowledge/skill in changing practice situations.
- If you have the background knowledge, and have had several opportunities to successfully apply your knowledge or demonstrate this attribute in your role, leave this one blank.
- If you have the knowledge, but need more practice and would like to receive feedback to feel confident and competent, mark a ✓ in this column.

✓ **3** *Competent*

- This column applies to you if you have the required knowledge/skill and have had several opportunities to successfully apply it in your role or practice. You consistently demonstrate or perform this attribute.
- If you can demonstrate a particular action independently and effectively in a variety of situations, mark a ✓ in this column.

✓ **4** *Expert: can teach others*

- This column is used when you are able to act as a teacher for others and facilitate learning of this skill/attribute/knowledge.
- If you have thorough knowledge and are competent, confident and effective in performing a particular action in complex situations, mark a ✓ in this column.

Level KP1

KT Pathways Development Tool

KT Competencies

Competency stage			
1 Need learning & practice	2 Knowledgeable, but need practice	3 Competent	4 Expert: can teach others



Level KP1 *Developmental Health Research Producer: Learning About Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Evidence Competencies: Knowledge Criteria</p> <p>► Can you describe...</p> <p>Different types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated, validated and used, and the differences between knowledge and evidence?</p> <p>The differences between stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public)?</p> <p>How to find implementation resources (e.g., tools) and apply evidence for multiple audiences</p> <p>Various models and frameworks for practicing and/or studying KT?</p> <p>Research methodologies and statistical analyses to examine the determinants of knowledge use across different settings and stakeholder groups?</p> <p>How to design and evaluate the impact, effectiveness, and sustainability of KT strategies in different settings?</p> <p>How to assess the quality of evidence from a variety of sources and disciplines for stakeholders?</p> <p>The need for a variety of dissemination tools for communicating with different audiences and stakeholders?</p>					<p>Evidence Competencies Resources</p> <p>SickKids Foundation: Knowledge Translation in Action Video https://www.youtube.com/watch?v=Ee2NwgWELZ8</p> <p>World Health Organization: Bridging the “Know–Do” Gap: Meeting on Knowledge Translation in Global Health http://www.who.int/kms/WHO_EIP_KMS_2006_2.pdf</p> <p>United Nations University: Expanding our understanding of K* (KT, KE, KTT, KMb, KB, KM, etc) http://inweh.unu.edu/wp-content/uploads/2013/05/KStar_ConceptPaper_FINAL_Oct29_WEB.pdf</p> <p>Research to Reality: What New Investigators Need to Know about Dissemination and Implementation Research Video https://researchtoReality.cancer.gov/discussions/lets-continue-discussion-%E2%80%9Cwhat-new-investigators-need-know-about-dissemination-and</p> <p>McMaster University: Integrated Knowledge Translation in Childhood Disability: Engaging with partners throughout the research process https://www.canchild.ca/en/resources/111-integrated-knowledge-translation-in-childhood-disability-engaging-with-partners-throughout-the-research-process</p> <p>University of Cambridge: Knowledge translation in healthcare: A review of the literature www.ibs.cam.ac.uk/fileadmin/user_upload/research/workingpapers/wp1005.pdf</p>		
<p>Evidence Competencies: Skills Criteria</p> <p>► Do you usually/regularly...</p> <p>Identify different types of knowledge that contribute to decision-making, how each is generated and validated, the differences between knowledge and evidence?</p> <p>Identify the differences between stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public)?</p>							

Level KP1 *Developmental Health Research Producer: Learning About Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Identify implementation resources (e.g., tools) and apply evidence for multiple audiences?</p> <p>Identify the best model and framework for practicing/studying KT?</p> <p>Identify research methodologies and statistical analyses to examine the determinants of knowledge use across different settings and stakeholder groups?</p> <p>Identify and evaluate at a basic level the impact, effectiveness, and sustainability of KT strategies in different settings?</p> <p>Identify opportunities to learn about how to identify policy needs and research options (priority setting processes)?</p> <p>Identify opportunities to learn about how to transform clinical or management questions into research questions?</p>					<p>Alberta Health Services: Knowledge translation, when and how? www.youtube.com/watch?v=j2m581a89Cg</p> <p>Canadian Dementia Knowledge Translation Network: Knowledge Translation: an introduction. A guide to knowledge translation principles, frameworks and practicalities http://lifeandminds.ca/uploads/KT%20Intro%20b.pdf</p> <p>Graham, I., et al. (2006). Lost in Knowledge Translation: Time for a Map? Journal of Continuing Education in the Health Professions, 26(1), 13-24. http://onlinelibrary.wiley.com/doi/10.1002/chp.47/pdf;jsessionid=CAC1ACE90ACC146405D622AEA4493C45.f04t02</p>		
<p>Evidence Competencies: Attitude Criteria</p> <p>► Do you usually/regularly...</p> <p>Value continued learning about new technologies to support evidence-informed practice and policy?</p> <p>Show interest in continued learning about active engagement with stakeholders to support practice, policy and/or further research?</p> <p>Value why diverse sources of data are important to inform practice, policy and research?</p>					<p>Canadian Institutes of Health Research: Synthesis Resources www.cihr-irsc.gc.ca/e/36331.html</p> <p>International Development Research Centre: The Knowledge Translation Toolkit - Bridging the Know-Do Gap: A Resource for Researchers http://www.idrc.ca/EN/Resources/Publications/Pages/IDRCBookDetails.aspx?PublicationID=851</p> <p>Connecticut Center for Effective Practice, Child Health and Development Institute: Implementation Science: What do we know and where do we go from here? http://www.researchconnections.org/files/childcare/pdf/FranksPresentation.pdf</p>		
<p>Teamwork: Knowledge Criteria</p> <p>► Can you describe...</p> <p>The importance of building relationships with stakeholders, building opportunities for interaction into the research process, sharing work in ways that are meaningful and accessible to stakeholders?</p> <p>The importance of good communication and communication strategies?</p> <p>How to develop a KT plan?</p> <p>Community mobilization and social entrepreneurship?</p> <p>Theories of conflict management/resolution?</p> <p>The role of a knowledge broker?</p> <p>How to practice cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Teamwork Resources</p> <p>Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/</p> <p>Ontario Centre of Excellence for Child and Youth Mental Health: Teamwork and collaboration Learning Module http://www.excellenceforchildandyouth.ca/resource-hub/learning-modules/implementation-teamwork-and-collaboration</p> <p>National Cancer Institute: How engaged are we? Measuring community engagement and partnership Video https://youtu.be/9CUmDSCTVgI</p>		
<p>Teamwork: Skills Criteria</p>							

Level KP1 *Developmental Health Research Producer: Learning About Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>► Do you usually/regularly...</p> <p>Connect problems and possible solutions, and work with groups to problem solve, facilitate participatory decision-making processes?</p> <p>Engage end users in a developing KT plan?</p> <p>Build relationships with stakeholders, build opportunities for interaction into the research process, share work in ways that are meaningful and accessible to stakeholders?</p> <p>Use existing tools to link researchers with policy/decision makers?</p> <p>Advocate for appropriate change/actions?</p> <p>Remain neutral and consider the stakeholder groups' divergent needs/political issues?</p> <p>Calibrate conflicting issues or practices in teams or between teams?</p> <p>Form collaborative relationships to generate, disseminate or collate knowledge and to embed knowledge management practices within existing procedures?</p> <p>Recognize the need for a shared level of consensus?</p> <p>Engage with stakeholders throughout the implementation process?</p> <p>Establish trusting relationships that encourage conversations about the introduction of changes into frontline practices?</p> <p>Identify the knowledge broker's ability to organize the interactive process between researchers and users?</p> <p>Develop cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Canadian Institutes of Health Research: <i>Guide to Researcher and Knowledge-User Collaboration in Health Research</i> http://www.cihr-irsc.gc.ca/e/44954.html</p>		
<p><i>Teamwork: Attitude Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Value a spirit of teamwork, cooperation and relationship building?</p> <p>Value a research culture in practice environments?</p> <p>Value equity, inclusivity, respect and cultural competence?</p> <p>Embrace the notion of sharing research with and engaging users?</p> <p>Value contributions of community partners?</p> <p>Hold interest in the political and value issues related to decision-making and control?</p> <p>Hold an open minded, supportive attitude?</p> <p>Exhibit self-awareness of your own abilities or limitations in collaborative situations?</p>							
<p><i>KT Activities: Knowledge Criteria</i></p> <p>► Can you describe...</p>					<p><i>Knowledge Translation Resources</i></p>		

Level KP1 *Developmental Health Research Producer: Learning About Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Definitions, purpose and the rationale for KT? The context where KT is to be used? Knowledge-to-action gaps? The concept of open access? Communications strategies? How planned KT activities contribute to the relevance, feasibility, and anticipated application of the research results to policy, practice, and health outcomes? The purpose of a dissemination plan? The principles of KT planning, including key factors and considerations and different models and templates? The barriers and facilitators to knowledge uptake? How social media can be used for KT? The ways in which KT plans should be linked to the goals of a specific research project? The differences/commonalities between research & evaluation? The principles of co-creation and co-production as they relate to KT? The diffusion of innovation in clinical practice? Planned action theories and their benefits to focus implementation efforts and provide all stakeholders with a common script or understanding of the action plan? Knowledge brokering? How the patient's values affect the balance between potential advantages and disadvantages of the available options?</p>					<p>Model Systems Knowledge Translation Center: Online Knowledge Translation Toolkit http://www.msktc.org/Knowledge-Translation</p> <p>Canadian Institutes of Health Research: Evidence in action, acting on evidence casebook http://www.cihr-irsc.gc.ca/e/30660.html</p> <p>McMaster University Health Forum: Finding and Using Research Evidence: Workshop for Policymakers, Stakeholders and Researchers https://www.mcmasterhealthforum.org/new-at-the-forum/2015/12/08/mcmaster-health-forum-offers-five-day-workshop-on-finding-and-using-research-evidence-february-16-20</p> <p>Institute for Work and Health: From Research to Practice: A Knowledge Transfer Planning Guide www.iwh.on.ca/from-research-to-practice</p> <p>SickKids Foundation: Guide for Developing Health Research Knowledge Translation (KT) Plans www.sickkidsfoundation.com/-/media/Files/SKF/PDFs/About%20Us/Grants/SKF-Guide-Knowledge-Translation-Plans.pdf?mw=1130</p> <p>Canadian Institutes of Health Research: Guide to Knowledge Translation Planning at CIHR: Integrated and End-of-Grant Approaches http://www.cihr-irsc.gc.ca/e/45321.html</p>		
<p>KT Activities: Skills Criteria ► Do you usually/regularly... Align with the trend to link research to action? Assemble knowledge-to-action gaps? Activate the processes involved in planning, implementing, and evaluating KT strategies? Adjust the individual, organizational and system-level barriers and enablers to using and sharing evidence in different contexts and among different target audiences? Calibrate methods of conducting stakeholder analyses to understand needs of target audiences, interest in and capacity to engage with the evidence? Construct the importance of co-creation of knowledge as they relate to KT?</p>					<p>USAID Health Policy Project: Capacity Development Resource Guide Knowledge Translation www.healthpolicyproject.com/pubs/272_KnowledgeTranslationResourceGuideFinal.pdf</p> <p>University of Toronto: Building Knowledge Exchange Into The Research Process: A Guide For Researchers http://www.crwht.org/knowledge_exchange/ke_guide.php</p> <p>Saskatchewan Population Health and Evaluation Research Unit: Innovations in Knowledge Translation: the SPHERU KT Casebook http://www.uoguelph.ca/omafra_partnership/ktt/en/researchintoaction/resources/kt_casebook.pdf</p> <p>Canadian Institutes of Health Research: Knowledge to Action: A Knowledge Translation Casebook</p>		

Level KP1 *Developmental Health Research Producer: Learning About Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Break down various dissemination and implementation models and skills required for each?</p> <p>Assemble tailored messages and their use?</p> <p>Apply strategies to collect, collate and package evidence in a way that makes it accessible and relevant to users?.</p>					<p>http://www.cihr-irsc.gc.ca/e/38764.html</p> <p>Canadian Institutes of Health Research: Knowledge to Action: An End-of-Grant Knowledge Translation Casebook www.cihr-irsc.gc.ca/e/41594.html</p>		
<p>KT Activities: Attitude Criteria</p> <p>► Do you usually/regularly...</p> <p>Value the ongoing translation of new knowledge into practice?</p> <p>Value the importance of KT for practice innovation?</p> <p>Appreciate continuous self-directed learning about KT?</p> <p>Appreciate being sensitive to organizational and occupational culture as barriers to or enablers for change?</p> <p>Appreciate managing uncertainty and reflective learning?</p> <p>Value the use of data and research for policymaking?</p>					<p>Canadian Institutes of Health Research: Social media for population and public health researchers http://www.cihr-irsc.gc.ca/e/47185.html</p> <p>Melanie Barwick: Scientist Knowledge Translation Training & Tools http://www.melaniebarwick.com/training.php</p> <p>National Center for Injury Prevention and Control, Centers for Disease Control and Prevention: Understanding evidence part 1: best available research evidence. A Guide to the Continuum of Evidence of Effectiveness http://www.cdc.gov/violenceprevention/pdf/understanding_evidence-a.pdf</p> <p>Canadian Institutes of Health Research: Knowledge Translation in Health Care: Moving from Evidence to Practice http://www.cihr-irsc.gc.ca/e/40618.html</p> <p>Canadian Foundation for Healthcare Improvement: The Theory And Practice Of Knowledge Brokering In Canada's Health System http://www.cfhi-fcass.ca/migrated/pdf/Theory_and_Practice_e.pdf</p> <p>Primary Healthcare Research & Information Service, Australia: FOCUS on...Knowledge brokering http://www.phcris.org.au/resources/item.php?id=3238&spindex=14</p> <p>University of Leeds: Knowledge Brokering: Exploring the process of transferring knowledge into action. A project funded by the Medical Research Council http://medhealth.leeds.ac.uk/download/downloads/id/99/knowledge_brokering_final_report</p> <p>CanChild, School of Rehabilitation Science at McMaster University: Knowledge Brokering in Health Care https://www.canchild.ca/en/resources/41-knowledge-brokering-in-health-care</p> <p>London School of Hygiene & Tropical Medicine: Data Visualization: A practical guide to producing effective visualizations for research communications</p>		

Level KP1 *Developmental Health Research Producer: Learning About Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
					http://resyst.lshtm.ac.uk/sites/resyst.lshtm.ac.uk/files/docs/reseources/Guide%20to%20data-viz.pdf		

Examples that demonstrate competence	
Areas to learn and develop/improve	

Level KP2 KT Pathways Development Tool KT Competencies

Competency stage			
1 Need learning & practice	2 Knowledgeable, but need practice	3 Competent	4 Expert: can teach others



Level KP2 <i>Intermediate Health Research Producer: Mastery of Knowledge Translation</i>							
Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p><i>Evidence Competencies: Knowledge Criteria</i></p> <p>► Can you describe...</p> <p>How to analyze the different contexts for types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated, validated and used, and the differences between knowledge and evidence?</p> <p>How to classify/compare stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public)?</p> <p>How to analyze the use implementation resources available (e.g., tools) and how to apply evidence for multiple audiences?</p> <p>How to interpret the various KT models and frameworks for practicing and/or studying KT?</p> <p>How to interpret research methodologies and advanced statistical analyses to examine the determinants of knowledge use across different settings and stakeholder groups?</p> <p>How to interpret design and its impact, effectiveness, and sustainability of KT strategies in different settings?</p> <p>How to interpret synthesis reports and summaries of evidence in response to questions raised by stakeholders?</p> <p>How to interpret/discern the use of a variety of dissemination tools for communicating with different audiences and stakeholders?</p>					<p><i>Evidence Competencies Resources</i></p> <p>Network for Transdisciplinary Research (td-net): <i>Co-producing Knowledge Toolkit</i> http://www.naturalsciences.ch/topics/co-producing_knowledge</p> <p>Canadian Foundation for Healthcare Improvement: <i>Development of a Framework for Knowledge Translation: Understanding User Context</i> http://www.cfhi-fcass.ca/SearchResultsNews/07-06-01/8475ae3a-37c8-4777-b2f7-293b8ee47511.aspx</p>		
<p><i>Evidence Competencies: Skills Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Summarize the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated and validated, the differences between knowledge and evidence?</p>							

Level KP2 *Intermediate Health Research Producer: Mastery of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Incorporate stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public)?</p> <p>Summarize available implementation resources (e.g., tools) and explain how to apply evidence for multiple audiences?</p> <p>Incorporate the various models and frameworks for practicing/studying KT?</p> <p>Summarize research methodologies and advanced statistical analyses including qualitative methods to examine the determinants of knowledge use across different settings and stakeholder groups?</p> <p>Evaluate different designs and evaluation methods for the impact, effectiveness, and sustainability of KT strategies in different settings?</p> <p>Evaluate policy needs and research options (priority setting processes)?</p> <p>Evaluate the transformation of clinical or management questions into research questions?</p>							
<p><i>Evidence Competencies: Attitude Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Appreciate collaborations with research users to inform evidence-informed practice/policy and practice/policy-informed research?</p> <p>Appreciate technology use to support evidence-informed practice, policy and research?</p> <p>Appreciate active engagement of stakeholders in evidence-informed practice, policy and/or research?</p> <p>Appreciate diverse sources of data to better inform practice, policy and research?</p>							
<p><i>Teamwork: Knowledge Criteria</i></p> <p>► Can you describe...</p> <p>How to interpret varying approaches to build relationships with stakeholders, build opportunities for interaction into the research process, share work in ways that are meaningful and accessible to stakeholders?</p> <p>How to interpret communication skills and strategies and when to use which one?</p> <p>How to analyze/interpret strategies for working with stakeholders to develop a KT plan?</p> <p>How to interpret community mobilization and social entrepreneurship?</p>					<p><i>Teamwork Resources</i></p> <p>Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/</p> <p>Ontario Centre of Excellence for Child and Youth Mental Health: Teamwork and collaboration Learning Module http://www.excellenceforchildand youth.ca/resource-hub/learning-modules/implementation-teamwork-and-collaboration</p>		

Level KP2 *Intermediate Health Research Producer: Mastery of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>How to interpret best practices in conflict management/resolution when engaging stakeholders?</p> <p>How to interpret the competencies of a knowledge broker and how the role fits into knowledge translation?</p> <p>How to interpret the concept of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>National Cancer Institute: <i>How engaged are we? Measuring community engagement and partnership Video</i> https://youtu.be/9CUmDSCTVgl</p> <p>Canadian Institutes of Health Research: <i>Guide to Researcher and Knowledge-User Collaboration in Health Research</i> http://www.cihr-irsc.gc.ca/e/44954.html</p>		
<p>Teamwork: Skills Criteria ► Do you usually/regularly...</p> <p>Facilitate problems solutions, work with groups to problem solve, facilitate participatory decision-making processes?</p> <p>Facilitate KT planning among end users?</p> <p>Facilitate opportunities for interaction into the research process, shares work in ways that are meaningful and accessible to stakeholders?</p> <p>Connect researchers with policy/decision makers?</p> <p>Facilitate the use of the advocacy role in others?</p> <p>Manage conflicts of interest, creating networks of users, researchers and decision makers?</p> <p>Facilitate conflict resolution?</p> <p>Leverage developed relationships to generate, disseminate or collate knowledge and to embed knowledge management practices within existing procedure?</p> <p>Build a shared level of consensus?</p> <p>Incorporate stakeholder views and needs throughout implementation process?</p> <p>Foster and enrich trusting relationships that encourage conversations about the introduction of changes into frontline practices?</p> <p>Facilitate the knowledge broker to organize the interactive process between researchers and users?</p> <p>Demonstrate cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Community-Campus Partnerships for Health (CCPH): <i>Community-Engaged Scholarship Toolkit</i> https://ccph.memberclicks.net/ces-toolkit</p> <p>National Cancer Institute: <i>Research-Practice Partnerships</i> http://cancercontrol.cancer.gov/IS/tools/partnerships.html</p> <p>Research to Reality: <i>How engaged are we? Measuring community engagement and partnership Video, discussion</i> https://researchto reality.cancer.gov/discussions/how-engaged-are-we-measuring-community-engagement-and-partnership</p>		
<p>Teamwork: Attitude Criteria ► Do you usually/regularly...</p> <p>Appreciate an environment of teamwork, cooperation and relationship building?</p> <p>Appreciate the research-practice interface as an essential part of own professional work?</p>							

Level KP2 *Intermediate Health Research Producer: Mastery of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Appreciate the importance of commitment to principles of equity, inclusivity, respect and cultural competence?</p> <p>Appreciate the importance of building relationships with public-policy makers?</p> <p>Appreciate the contributions of community partners?</p> <p>Appreciate the importance of attention to the political and value issues related to decision-making and control?</p> <p>Appreciate the difference between influencing by facilitation and wielding power?</p> <p>Appreciate the impact of self-awareness of your own abilities or limitations in collaborative situations?</p>							
<p><i>KT Activities: Knowledge Criteria</i></p> <p>► Can you...</p> <p>Interpret concepts and models of KT?</p> <p>Interpret the meaning of various contexts where KT is to be used?</p> <p>Identify the knowledge-to-action gaps in context?</p> <p>Interpret the concept of open access?</p> <p>Interpret differences/commonalities between KT and communications' push, pull and exchange approaches?</p> <p>Analyze how planned KT activities contribute to the relevance, feasibility, and anticipated application of the research results to policy, practice, and health outcomes?</p> <p>Analyze the use of a dissemination plan (in context)?</p> <p>Interpret the use of health service management and organizational learning?</p> <p>Analyze the principles of KT planning, including key factors and considerations; different models and templates?</p> <p>Interpret barriers and facilitators to knowledge uptake?</p> <p>Interpret how social media can be used for KT?</p> <p>Explain the ways in which KT plans should be linked to the goals of a specific research project?</p> <p>Interpret the differences/commonalities between research & evaluation in contexts?</p> <p>Interpret the principles of co-creation and co-production as they relate to KT?</p> <p>Interpret diffusion of innovation in clinical practice?</p> <p>Interpret planned action theories and their benefits to focus implementation efforts and provide all stakeholders with a common script or understanding of the action plan?</p> <p>Interpret knowledge brokering?</p>					<p><i>Knowledge Translation Resources</i></p> <p>Agency for Healthcare Research & Quality (AHRQ): Dissemination Planning Tool http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/advances-in-patient-safety/vol4/planningtool.html</p> <p>FHI360: Eight Strategies for Research to Practice http://www.fhi360.org/resource/eight-strategies-research-practice</p> <p>Model Systems Knowledge Translation Center: Engaging Policymakers: A Self-Paced Course www.msktc.org/Model-Systems-Grantees/webinars/engaging-policymakers</p> <p>Ontario Centre of Excellence for Child and Youth Mental Health: Knowledge Mobilization Toolkit http://www.kmbtoolkit.ca/what-is-kmb</p> <p>The Conference Board: Bridging the gaps: How to transfer knowledge in today's multigenerational workplace http://www.conferenceboard.ca/e-library/abstract.aspx?did=2663</p> <p>Model Systems Knowledge Translation Center: Using Social Media to Promote Research www.msktc.org/Model-Systems-Grantees/webinars/Using_Social_Media_To_Promote_Research</p> <p>Canadian Coalition for Global Health Research: Knowledge Translation Curriculum http://www.cghr.ca/resources/knowledge-translation/</p>		

Level KP2 *Intermediate Health Research Producer: Mastery of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Interpret how the patient's values affect the balance between potential advantages and disadvantages of the available options?</p> <p><i>KT Activities: Skills Criteria</i></p> <p>▶ Do you usually/regularly...</p> <p>Facilitate/apply research to action strategies?</p> <p>Facilitate knowledge-to-action gaps?</p> <p>Apply the processes involved in planning, implementing, and evaluating KT strategies?</p> <p>Manage the individual, organizational and system-level barriers and enablers to using and sharing evidence in different contexts and among different target audiences?</p> <p>Conduct stakeholder analyses to understand needs of target audiences, interest in and capacity to engage with the evidence?</p> <p>Work with knowledge users to co-create knowledge?</p> <p>Integrate the dissemination & implementation model that best fits research question or practice problem?</p> <p>Assist decision makers develop tailored messages?</p> <p>Create strategies to collect, collate and package evidence in a way that makes it accessible and relevant to users?</p> <p>Use, evaluate effectiveness of social media for KT?</p> <p>Develop dissemination plans as a key component of initial research designs?</p> <p>Identify the difference between KT and evaluation?</p> <p>Select appropriate monitoring and evaluation tools and techniques to assess the impact of KT processes and engagement efforts including issues of attribution and sustainability?</p> <p>Demonstrate various convening models (such as workshops and communities of practice) and facilitation techniques to support engagement with and dialogue around evidence?</p> <p>Develop KT planning using a template, ensuring partners, expertise, users, messages, goals, strategies, process, evaluation, resources, budget, implementation and sustainability are identified?</p> <p>Create KT engagement plans?</p> <p>Determine the various roles of KT partners and practitioners in enhancing user engagement?</p> <p>Support the generation and implementation of complex KT strategies, including program-level and organization-level KT?</p> <p>Access, synthesize, package and communicate evidence for policy and practice and for policy-relevant research agenda?</p>					<p>NHSScotland: Knowledge into Action Toolkit http://www.knowledge.scot.nhs.uk/k2atoolkit.aspx</p> <p>Group Health Research Institute: Readability Toolkit https://www.grouphealthresearch.org/about-us/capabilities/research-communications/prism/</p> <p>Knowledge Translation Program, St. Michael's Hospital: KT Tools http://knowledgedtranslation.net/kt-tools</p> <p>Alberta Health Services: Knowledge Translation Evaluation Planning Guide http://www.albertahealthservices.ca/assets/info/res/mhr/if-res-mhr-kt-evaluation-guide.pdf</p> <p>McGill University: Outcome Evaluation Framework http://www.mcgill.ca/spot/files/spot/outcome_evaluation_framework_2015.pdf</p> <p>University of North Dakota: Communications Toolkit For Health Researchers https://www.ruralhealthresearch.org/pdf/toolkit.pdf</p> <p>Harvard School of Public Health: Knowledge Translation for Health: The Marriage of Relevance and Excellence https://obssr-archive.od.nih.gov/news_and_events/conferences_and_workshops/DI2010/documents/Plenary%20Session/1_Frenk_NIHPresentation.pdf</p> <p>Western University: Knowledge Translation in the Age of Social Media Video www.youtube.com/watch?v=vfSNZtSIXKM</p>		

Level KP2 *Intermediate Health Research Producer: Mastery of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Use tools to support complex models of knowledge production, including ethics approval, collaboration agreements, and shared decision-making structures?</p>							
<p><i>KT Activities: Attitude Criteria</i> ▶ Do you usually/regularly... Appreciate research-practice interface as an essential part of your own professional work? Exhibit a willingness to take on leadership in KT activities? Embrace continuous self-directed learning in KT? Assume responsibility for organizational and occupational culture as barriers to or enablers for change? Embrace managing uncertainty and reflective learning? Appreciate how data and research can be used for policymaking?</p>							

<p>Examples that demonstrate competence</p>	
<p>Areas to learn and develop/improve</p>	

Level KP3 KT Pathways Development Tool KT Competencies

Competency stage			
1 Need learning & practice	2 Knowledgeable, but need practice	3 Competent	4 Expert: can teach others



Level KP3 *Expert Health Research Producer: Leading a Program of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p><i>Evidence Competencies: Knowledge Criteria</i></p> <p>► Can you...</p> <p>Differentiate various types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated, validated and used, and the differences between knowledge and evidence?</p> <p>Synthesize differing stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public) into the research and implementation cycle?</p> <p>Critique implementation resources (e.g., tools) when applying evidence for multiple audiences?</p> <p>Differentiate various models and frameworks for practicing and/or studying KT?</p> <p>Differentiate research methodologies and statistical analyses including qualitative methods to examine the determinants of knowledge use across different settings and stakeholder groups?</p> <p>Differentiate designs to evaluate the impact, effectiveness, and sustainability of KT strategies in different settings?</p> <p>Synthesize information for reports and summaries of evidence in response to questions raised by stakeholders?</p> <p>Differentiate among communication products for different audiences and stakeholders?</p>					<p><i>Evidence Competencies Resources</i></p> <p>The Center for Research in Implementation Science and Prevention: Dissemination & Implementation Models in Health Research & Practice http://www.dissemination-implementation.org/index.aspx</p> <p>National Cancer Institute: Implementation Science Research Tools http://cancercontrol.cancer.gov/IS/tools/research.html</p>		
<p><i>Evidence Competencies: Skills Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Apply the different types of knowledge (e.g., research; practice; theory) that contribute to decision-making, how each is generated and validated, the differences between knowledge and evidence?</p>							

Level KP3 *Expert Health Research Producer: Leading a Program of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Select among stakeholder perspectives (e.g., service provider, researcher, policy maker, patient/public) into the research and implementation cycle?</p> <p>Select among implementation resources (e.g., tools) and apply evidence for multiple audiences?</p> <p>Select among the various models and frameworks for practicing/studying KT?</p> <p>Apply research methodologies and statistical analyses including qualitative methods to examine the determinants of knowledge use across different settings and stakeholder groups?</p> <p>Select among designs and evaluate the impact, effectiveness, and sustainability of KT strategies in different settings?</p> <p>Prioritize outcomes of roundtable discussions as an expert in policy needs and research options (priority setting processes)?</p> <p>Lead others to transform clinical or management questions into research questions?</p>							
<p><i>Evidence Competencies: Attitude Criteria</i></p> <p>► Do you usually/regularly...</p> <p>Commit to developing others to collaborate to inform evidence-informed practice/policy and practice/policy-informed research?</p> <p>Commit to using information technology and communications (ICT) strategies to support own research program including with research user partners throughout the research process?</p> <p>Internalize the role of research mentors and support for stakeholders?</p> <p>Commit to sharing data for public good?</p>							
<p><i>Teamwork: Knowledge Criteria</i></p> <p>► Can you...</p> <p>Critique varying approaches for use to build relationships with stakeholders, and to build opportunities for interaction into the research process, while sharing work in ways that are meaningful and accessible to stakeholders?</p> <p>Discern appropriate communication skills within individual and situational contexts?</p> <p>Prioritize appropriate KT activities when working with teams to develop a KT plan?</p> <p>Critique appropriate strategies to use when participating in community mobilization and social entrepreneurship?</p> <p>Critique appropriate strategies for in conflict management/ resolution between stakeholders with differing interests?</p>					<p><i>Teamwork Resources</i></p> <p>Provincial Health Services Authority: Indigenous Cultural Safety (ICS) Online Training Program http://www.sanyas.ca/</p> <p>Ontario Centre of Excellence for Child and Youth Mental Health: Teamwork and collaboration Learning Module http://www.excellenceforchildandtheyouth.ca/resource-hub/learning-modules/implementation-teamwork-and-collaboration</p> <p>National Cancer Institute: How engaged are we? Measuring community engagement and partnership Video https://youtu.be/9CUmDSCVgI</p>		

Level KP3 *Expert Health Research Producer: Leading a Program of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Critique the impact of knowledge brokering to connect evidence to practice/policy?</p> <p>Cultivate/ justify concepts of advancing cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Canadian Institutes of Health Research: <i>Guide to Researcher and Knowledge-User Collaboration in Health Research</i> http://www.cihr-irsc.gc.ca/e/44954.html</p> <p>Research to Reality: <i>CBPR and CENr: Facilitating Implementation Science Outcomes</i> https://researchto reality.cancer.gov/discussions/lets-discuss-cbpr-and-cenr-facilitating-implementation-science-outcomes-0</p> <p>University of Michigan: <i>Leading Teams Online Course</i> https://www.coursera.org/learn/leading-teams</p> <p>Case Western Reserve University: <i>Inspiring Leadership through Emotional Intelligence Online Course</i> https://www.coursera.org/learn/emotional-intelligence-leadership</p> <p>Case Western Reserve University: <i>Leading Positive Change through Appreciative Inquiry Online Course</i> https://www.coursera.org/learn/appreciative-inquiry</p> <p>Northwestern University: <i>Leadership Through Social Influence Online Course</i> https://www.coursera.org/learn/leadership-socialinfluence</p> <p>HEC Paris: <i>Inspirational Leadership: Leading with Sense Specialization</i> https://www.coursera.org/specializations/inspirational-leadership</p> <p>HRCouncil.ca: <i>Productive Work Teams</i> http://hrcouncil.ca/hr-toolkit/workplaces-teams.cfm</p> <p>TED Talks: <i>Roselinde Torres: What it takes to be a great leader Video</i> https://www.youtube.com/watch?v=aUYSDYdmzw</p> <p>TED Talks: <i>How great leaders inspire action Simon Sinek Video</i> https://www.youtube.com/watch?v=qp0HIF3Sfl4</p>		
<p>Teamwork: Skills Criteria ▶ Do you usually/regularly...</p> <p>Lead others to define problems/problem solve, work with groups to problem solve, facilitate participatory decision-making processes?</p> <p>Partner with government, industry, academia and funders. Leads with commitment from stakeholders, builds opportunities for interaction into the research process, shares work in ways that are meaningful and accessible to stakeholders?</p> <p>Foster collaborative networks of researchers, policy/decision-makers?</p> <p>Lead others in successful advocacy?</p> <p>Lead others to manage conflicts of interest, and to create and foster networks?</p> <p>Lead others in addressing conflicting issues?</p> <p>Apply own knowledge networks of researchers and decision makers who have common interests to improve care?</p> <p>Lead others in building a shared level of consensus?</p> <p>Lead others in collaborating with and involving stakeholders throughout implementation process?</p> <p>Lead others in growing relationships that encourage conversations about the introduction of changes into frontline practices?</p> <p>Support and actively encourage connections between researchers and knowledge brokers to organize the interactive process between researchers and users?</p> <p>Lead others to demonstrate cultural humility and cultural safety in working with First Nations and Aboriginal peoples?</p>					<p>Harvard Business Review: <i>Social Intelligence and Leadership Video</i> https://www.youtube.com/watch?v=7Qv0o1oh9f4</p>		
<p>Teamwork: Attitude Criteria ▶ Do you usually/regularly...</p> <p>Commit to leading others in teamwork, cooperation and relationship building?</p> <p>Feel compelled to produce and disseminate knowledge for the public good?</p> <p>Commit to leading others to adopt principles of equity, inclusivity, respect and cultural competence?</p>							

Level KP3 *Expert Health Research Producer: Leading a Program of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Commit to maintaining relationships with public policy-makers?</p> <p>Respect the contributions of community partners?</p> <p>Respect the influences of political and value issues related to decision-making and control?</p> <p>Respect the power of charisma and persuasiveness in working with others?</p> <p>Respect the influence that awareness of your own abilities or limitations have in collaborative situations?</p>							
<p><i>KT Activities: Knowledge Criteria</i></p> <p>► Can you...</p> <p>Synthesize meaning from various KT models and approaches?</p> <p>Differentiate among KT models for use in various contexts?</p> <p>Prioritize approaches in closing knowledge-to-action gaps individual contexts?</p> <p>Conceptualize the rationale for maintaining open access. Differentiates among approaches in KT and communications' push, pull and exchange approaches?</p> <p>Prioritize KT planning activities planning as contributing to the relevance, feasibility, and anticipated application of the research results to policy, practice, and health outcomes?</p> <p>Prioritize the steps of dissemination planning?</p> <p>Prioritize health service management and organizational learning activities?</p> <p>Synthesize the knowledge gained from models for KT planning?</p> <p>Differentiate the barriers and facilitators to knowledge uptake?</p> <p>Synthesize knowledge of social media for KT?</p> <p>Conceptualize the means of connecting project goals in KT plans?</p> <p>Critique the differences and commonalities between research & evaluation in contexts?</p> <p>Conceptualize the principles of co-creation and co-production as they relate to KT?</p> <p>Synthesize concepts and ideas from diffusion of innovation for use in clinical practice?</p> <p>Synthesize concepts and ideas from planned action theories for use in clinical practice?</p> <p>Critique the value of the role of knowledge brokering in KT activities?</p> <p>Synthesize the ways in which patient's values affect the balance between potential advantages and disadvantages of the available options?</p>					<p><i>Knowledge Translation Resources</i></p> <p>Research to Reality: Applying Models and Frameworks to D&I Research: An Overview & Analysis Video https://researchtoReality.cancer.gov/discussions/lets-discuss-applying-models-and-frameworks-di-research-overview-analysis</p> <p>Research to Reality: Identifying, Specifying, and Applying Implementation Strategies Video https://researchtoReality.cancer.gov/discussions/lets-discuss-identifying-specifying-and-applying-implementation-strategies</p> <p>The SUPPORT Project: SUPPORT Tools for Evidence-Informed Health Policymaking http://www.health-policy-systems.com/supplements/7/S1</p>		

Level KP3 *Expert Health Research Producer: Leading a Program of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p><i>KT Activities: Skills Criteria</i></p> <p>▶ Do you usually/regularly...</p> <p>Lead others to engage in research to action strategies?</p> <p>Lead others to identify and evaluate knowledge-to-action gaps?</p> <p>Evaluate the processes involved in planning, implementing, and evaluating KT?</p> <p>Lead others to decrease barriers and support enablers to using and sharing evidence in different contexts and among different target audiences?</p> <p>Lead others in conducting stakeholder analyses to understand needs of target audiences, interest in and capacity to engage with the evidence?</p> <p>Lead others to work with knowledge users to co-create knowledge?</p> <p>Lead others in developing dissemination & implementation skills?</p> <p>Lead others in developing tailored messages with decision makers?</p> <p>Lead others to create strategies to collect, collate and package evidence in a way that makes it accessible and relevant to users?</p> <p>Lead others through leveraging social media connections for KT?</p> <p>Lead others in the development of dissemination plans as a key component of initial research designs?</p> <p>Lead others to identify the difference between KT and evaluation?</p> <p>Lead others to select appropriate monitoring and evaluation tools and techniques to assess the impact of KT processes and engagement efforts including issues of attribution and sustainability?</p> <p>Sharpen expertise in convening models (such as workshops and communities of practice) and facilitation techniques to support engagement with and dialogue around evidence?</p> <p>Lead others in KT planning using a template, ensuring partners, expertise, users, messages, goals, strategies, process, evaluation, resources, budget, implementation and sustainability are identified?</p> <p>Lead others to create a KT engagement plan?</p> <p>Lead others to determine the various roles of KT partners and practitioners in enhancing user engagement?</p>							

Level KP3 *Expert Health Research Producer: Leading a Program of Knowledge Translation*

Criteria	1	2	3	4	Recommended Learning Activities & Resources	Have I done this?	Learning Goals Met Date
<p>Lead others to support the generation and implementation of complex KT strategies, including program-level and organization-level KT?</p> <p>Lead others to access, synthesize, package and communicate evidence for policy and practice and for policy-relevant research agenda?</p> <p>Lead others to use tools to support complex models of knowledge production, including ethics approval, collaboration agreements, and shared decision-making structures?</p>							
<p><i>KT Activities: Attitude Criteria</i></p> <p>▶ Do you usually/regularly...</p> <p>Feel compelled to produce and disseminate knowledge for the public good?</p> <p>Commit to improving practice and policy through KT leadership?</p> <p>Respect the outcomes and benefits of s continuous learning in KT?</p> <p>Respect the influence of organizational and occupational culture as barriers to or enablers for change?</p> <p>Respect the value of and need for dealing with uncertainty and engaging in reflective learning?</p> <p>Commit to using of data and research for policymaking?</p>							

Examples that demonstrate competence	
Areas to learn and develop/improve	