The Knowledge Translation Academy at CeKTER

The Knowledge to Action Cycle: How do I apply it to my work?

2 session experiential course

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CENTER ON KNOWLEDGE TRANSLATION FOR EMPLOYMENT RESEARCH

Mission: To promote use of employment research findings & research-based products

Co-PI's Marianne Farkas & Marsha Ellison

BOSTON UNIVERSITY

UMass Chan MEDICAL SCHOOL

ACKNOWLEDGMENT

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The contents of this presentation do not necessarily represent the policy of NIDILRR, ACL or HHS, and you should not assume endorsement by the Federal Government.

The CeKTER stands on lands traditionally held by the Wampanoag, Massachusetts and Pocumtuc nations.

The Knowledge to Action Cycle: How do I apply it to my work (findings)? (Part 1)

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The Center on Knowledge Translation for Employment Research (CeKTER)
KT Academy Webinar

November 16, 2022

Université d'Ottawa | University of Ottawa

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Land Acknowledgement

I am privileged work and live on the ancestorial and unceded territory of the Algonquin Nation. I honor the Algonquin Elders and Knowledge Keepers, past, present and future, and hope to learn and respect the history and culture of the communities that have come before and presently reside here. I acknowledge the harms and mistakes of the past and present, and dedicate myself to move forward in partnership with First Nations, Inuit and Metis communities in the spirt of reconciliation and collaboration.

Disclosures

- Co-editor:
  - Turning Knowledge into Action: Practical Guidance on How to Do Integrated Knowledge Translation (2014)
  - Knowledge Translation in Health Care (2009, 2013)
  - Knowledge Translation in Nursing and Healthcare: Implementation Roadmap (2021)
  - Research Coproduction in Healthcare (2022)
- Co-originator of the OMRU model, the K2A Framework, the ADAPTE Collaboration, the CAN-IMPLEMENT process, Implementation Roadmap
- Member of the CIHR Advisory Board of the Institute of Gender

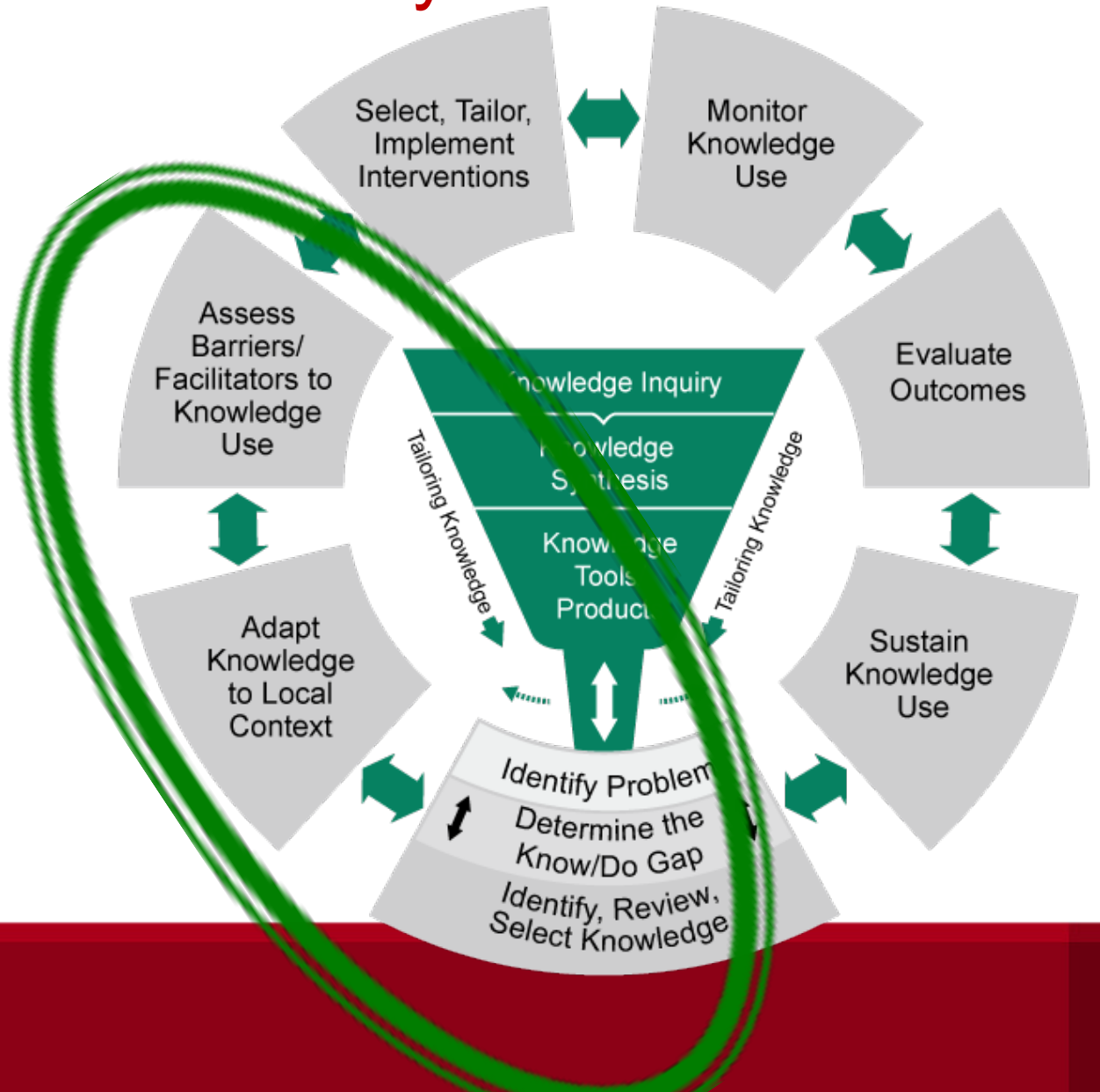
Disclosures

- Former VP- KT @ the Canadian Institutes of Health Research (CIHR) (2006-2012)
  - Responsible for KT/IKT funding opportunities
  - Architect of CIHR's citizen engagement and open access strategies
- Program Leader -Moving knowledge into action for more effective practice, programs and policy: A research program focusing on integrated knowledge translation. CIHR Foundation Grant Scheme, Inaugural competition, FDN #143237 https://iktrn.ohri.ca/
- Committee on the External Evaluation of NIDRR and Its Grantees. Review of Disability and Rehabilitation Research; NIDRR Grantmaking Processes and Products. Washington, DC: National Research Council 2012.
- No industry funding.

Session objectives, to:

- review some concepts of IKT/research coproduction and end of project KT (dissemination and implementation)
- quickly review the Knowledge to Action Cycle
- apply the KTA Cycle to end-of-project KT planning and preparation for session 2

The K2A Cycle



What are your objectives for this session?

Health and wellbeing equity (evidence-practice) gaps

- Consistent evidence of failure to translate research findings into clinical practice

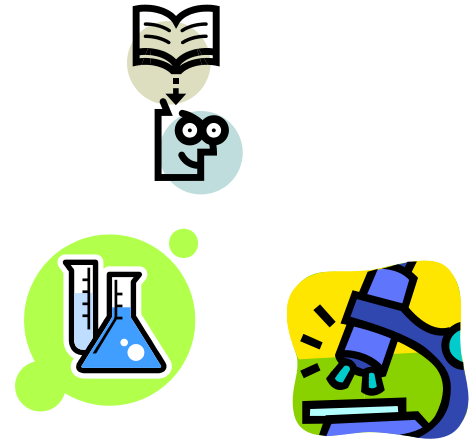
- 30-45% patients do not get treatments of proven effectiveness (under-use)
- 20–25% patients get care that is not needed or potentially harmful (over-use) (Grol 2001; McGlynn et al, 2003; Runciman et al, 2012 Schuster, McGlynn, Brook, 1998; Seddon et al 2001, Squires, 2019, 2022)
  - *Canadian data- 44% underuse; 14% overuse (174 studies, 228 practices, >28M patients (Squires et al 2022)*

- 60% of care on average, is in line with evidence or consensus-based guidelines,
- 30% is some form of waste or of low value,
- 10% is harmful (Braithwaite et al 2020- https://bmcmedicine.biomedcentral.com/articles/10.1186/s12916-020-01563-4)

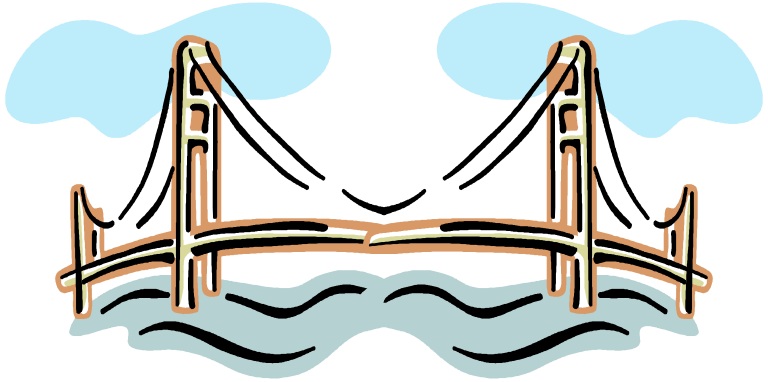
The Problem


THE LATEST RESEARCH SHOWS THAT WE REALLY SHOULD DO SOMETHING WITH ALL THIS RESEARCH

KT: the bridge between discovery and impact



Research Outputs



Research impacts

(The pathway to impact (and equity): KT/D+I practice and research)

It’s all in the name

Knowledge to action (KTA)

Knowledge Transfer (KT)

Knowledge Translation (KT)

Research Use/Utilization

Knowledge Exchange (KE)

Knowledge mobilization (KMb)

Dissemination + Implementation/
Implementation Science

Three pathways to impact

1. Research coproduction/IKT

- Research approaches that engage potential knowledge-users as partners in the research process.
- requires a collaborative or participatory approach to research that is action oriented and is solutions and impact focused.

2. End of grant KT

- The researcher develops and implements a plan for making knowledge users aware of the knowledge generated through a research project

3. KT/implementation Science

- The study of how to promote uptake of research/knowledge in decision making (more for another day)

What do you consider some of the key ethical considerations related to KT/D+I (reflections)

- There is an ethical imperative to act on findings
- Should do more good than harm by promoting uptake of research findings (equity, diversity, inclusion, access, social justice considerations related to the findings)
    - Premature implementation
    - Opportunity costs related to implementation
- Are the benefits of the uptake of research findings equitably distributed?
- Are KT strategies aligned with norms and values of the targeted audience? Should they be or should they be disruptive?

1. Integrated knowledge translation/ research coproduction

What might be contributing to research-practice gaps? One theory (its a research production problem):

Researchers and those who would use research findings represent different communities that have different cultures, languages, priorities, incentive systems, timelines, etc (Caplan, 1979; Carden 2004; Newman et al 2016) leading to research not meeting the needs of research users

A potential solution to the divide

Research Coproduction (IKT)

a model of collaborative research that explicitly responds to knowledge user needs in order to produce research findings that are useful, useable and used.
(Graham et al 2022, p1)

Integrated knowledge translation (IKT) is a model of collaborative research, where researchers work with knowledge users who identify a problem and are in a position to act on the research findings.
(https://iktrn.ohri.ca/aboutus/what-is-ikt/)

IKT terminology

- collaborative, participatory, action oriented research,
- community based research,
- engaged scholarship,
- mode 2 knowledge production,
- co-production/co-creation of knowledge

(all have more in common than differences)

Research | Open Access | Published: 30 March 2020

How does integrated knowledge translation (IKT) compare to other collaborative research approaches to generating and translating knowledge? Learning from experts in the field

Tram Nguyen, Ian D. Graham, Kelly J. Mrklas, Sarah Bowen, Margaret Cargo, Carole A. Estabrooks, Anita Kothari, John Lavis, Ann C. Macaulay, Martha MacLeod, David Phipps, Vivian R. Ramsden, Mary J. Renfrew, Jon Salsberg & Nina Wallerstein

Health Research Policy and Systems **18**, Article number: 35 (2020) | Cite this article

9711 Accesses | **60** Citations | **54** Altmetric | Metrics

Abstract

Background

Research funders in Canada and abroad have made substantial investments in supporting collaborative research approaches to generating and translating knowledge as it is believed to increase knowledge use. Canadian health research funders have advocated for the use of integrated knowledge translation (IKT) in health research, however, there is limited research around how IKT compares to other collaborative research approaches. Our objective was to better understand how IKT compares with engaged scholarship, Mode 2 research, co-production and participatory research by identifying the differences and similarities among them in order to provide conceptual clarity and reduce researcher and knowledge user confusion about these common approaches.

Commonalities across traditions

- True partnership rather than simply engagement
- An approach to research rather than a methodology
- Core values and principles: co-creation, reciprocity, trust, fostering relationships, collaboration, respect, co-learning, active participation, democratisation of knowledge and shared decision-making in the generation and application of knowledge.

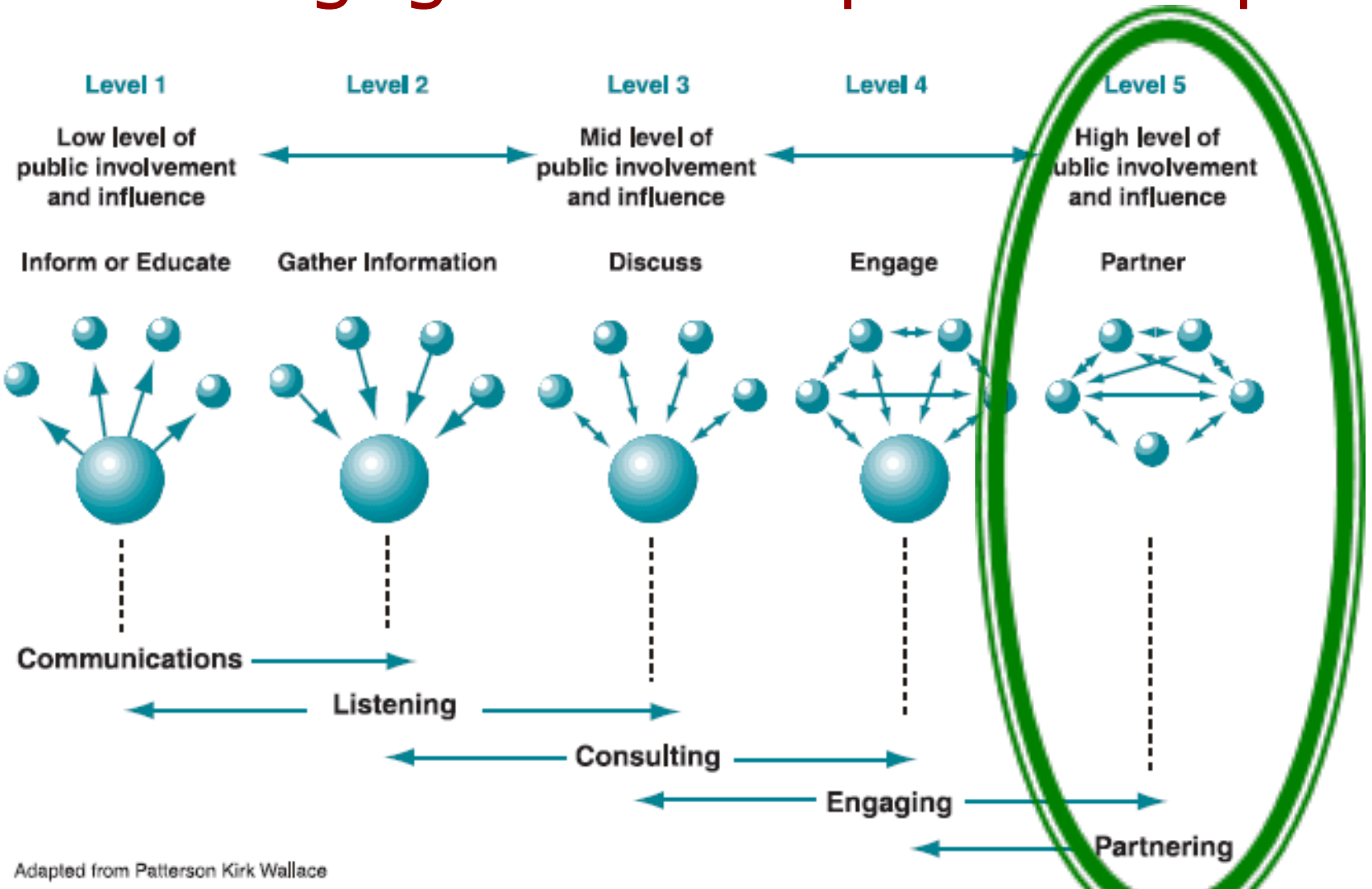
IKT: a snap shot

- Solutions focused (typically applied) research

- “Nothing about me without me.”
- IKTRN tagline- “Doing research with the people who use it”

- Knowledge/research users can be:
  - people with lived experience/patients/consumers, the public, policy and decision-makers from the community to the federal level, industry, clinicians, third sector/service providers, health system managers, whole communities,

Engagement vs partnership



What makes for IKT research?

Knowledge users and researchers working together to:

- ✓shape the research questions
- ✓decide on the methodology
- ✓help with data collection, tools development, selection of outcome measures
- ✓interpret the study findings and craft messaging around them
- ✓move the research results into practice
- ✓widespread dissemination and application

Does not necessarily mean involvement in every phase of research

The theory behind IKT research

Involving knowledge users as equal partners alongside researchers will lead to research that is more useful (relevant), useable, and used:

- end-user engaged in developing the research question =
  ↑ solutions-based research
- end user engaged in the research process =
  ↑ confidence in the results and in the researchers
- end-user engagement means readiness for the results and willingness to move those results into practice =
  ↑ impact (improved health and social care outcomes)

KTA Cycle: A Planned Action Model

- based on a concept analysis of 31 planned action theories
- was developed to help make sense of the black box known as ‘knowledge translation’ or ‘implementation’
- offers a holistic view of the phenomenon by integrating the concepts of knowledge creation and application/action

Graham ID et al. Lost in knowledge translation: time for a map. JCEPH 2006, (1):13-24

The K2A framework

The framework takes a systems perspective:

- knowledge producers and users are situated within a social system or systems that are responsive and adaptive, although not always in predictable ways.

- the K2A process is considered iterative, dynamic, and complex, with the boundaries between the knowledge creation and action components are fluid and permeable.

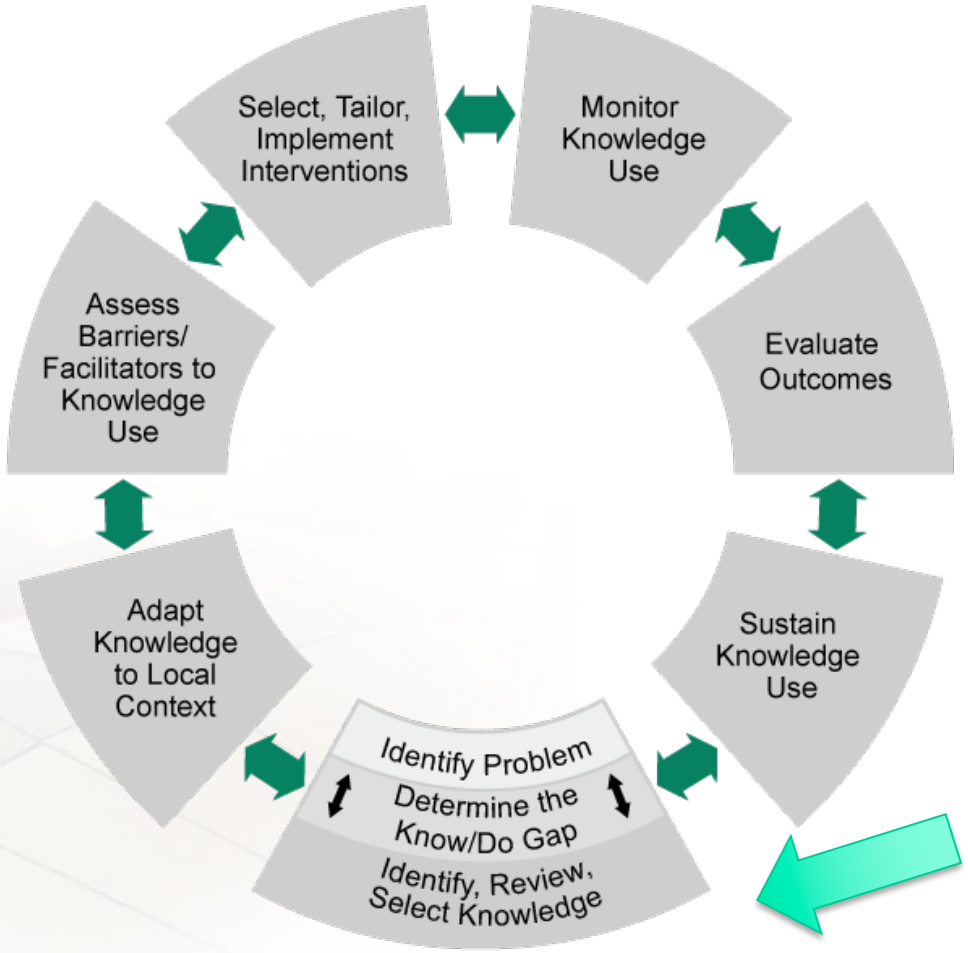
The K2A framework

- falls within the social constructivist paradigm which privileges social interaction and adaptation of research/evidence and takes local evidence, context and culture into account

- designed to be used by a broad range of audiences

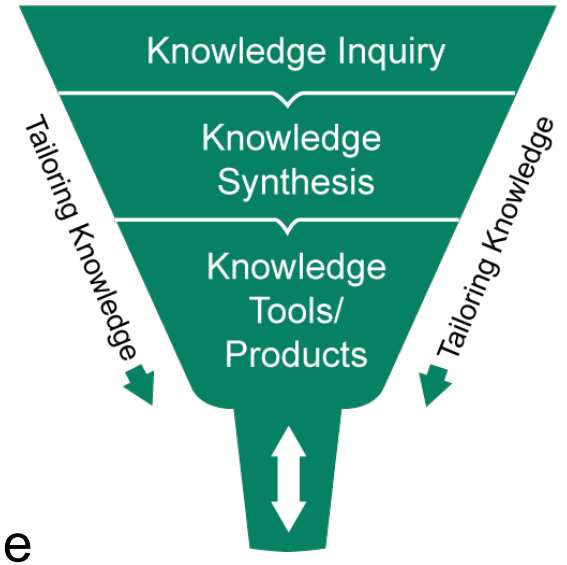
- At each phase of the cycle other theories can apply (e.g. psychological, sociological, organizational, educational, etc theories)

Action Cycle Phases



Start here

The **knowledge creation funnel** conveys the idea that knowledge needs to be increasingly distilled before it is ready for application



- **Knowledge Inquiry:** First generation knowledge (e.g., broad base primary studies or information)
- **Knowledge Synthesis:** Methodologies for determining what is known in a given area or field and what the knowledge gaps are (e.g., Systematic reviews) – 2nd generation knowledge
- **Knowledge Tools/Products:** Refined knowledge for decision-making (e.g., guidelines, decision aids, algorithms)- 3rd generation knowlege

Source: Graham ID et al. *JCHEP* 2006;26:13-24.

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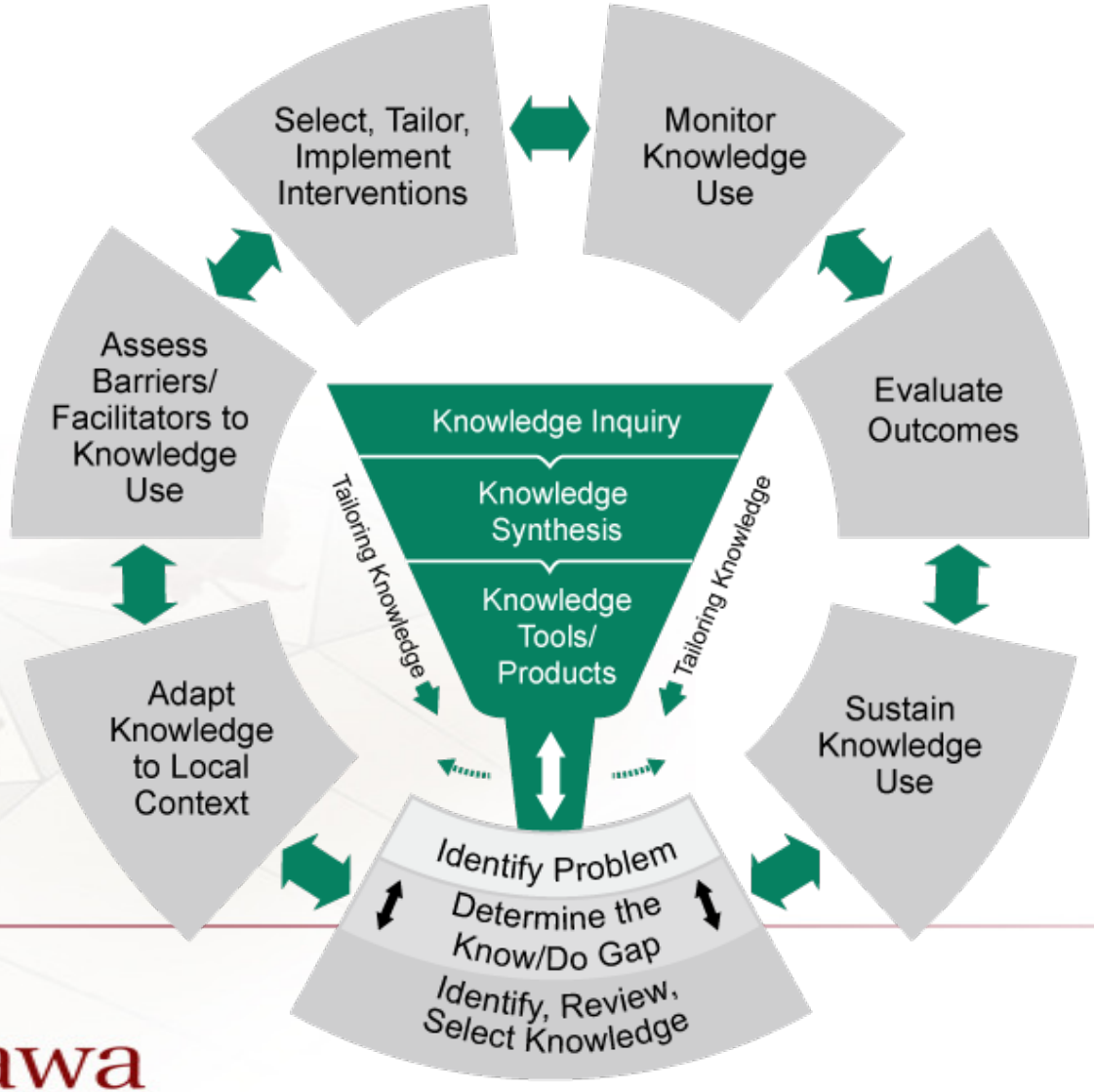
The K2A Cycle



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2. End-of-grant/project KT

A broad spectrum of activities including:

Diffusion (let it happen)

Dissemination (help it happen)

⇨ activities that tailor the message and medium to a specific audience

Application/Implementation (make it happen)

⇨ moving research into practice/policy in cases where the strength of evidence is sufficient

⇨ use of a conceptual model to guide application is recommended

⇨ (can also be achieved through research coproduction)

Reflections

- Think of a particular project that is coming to fruition, where might your end of project KT be focused and why?

Diffusion (let it happen)

Dissemination (help it happen)

Application/Implementation (make it happen)

Judicious Knowledge Translation/D+I

- Decisions about the extent and ambitiousness of KT/D+I plans should be guided by the:
  - » Reliability
  - » Validity
  - » Strength
    - &
  - » Significance of the findings

All of which can be affected by the extent to which sex, gender and intersectionality considerations have been incorporated into the research.

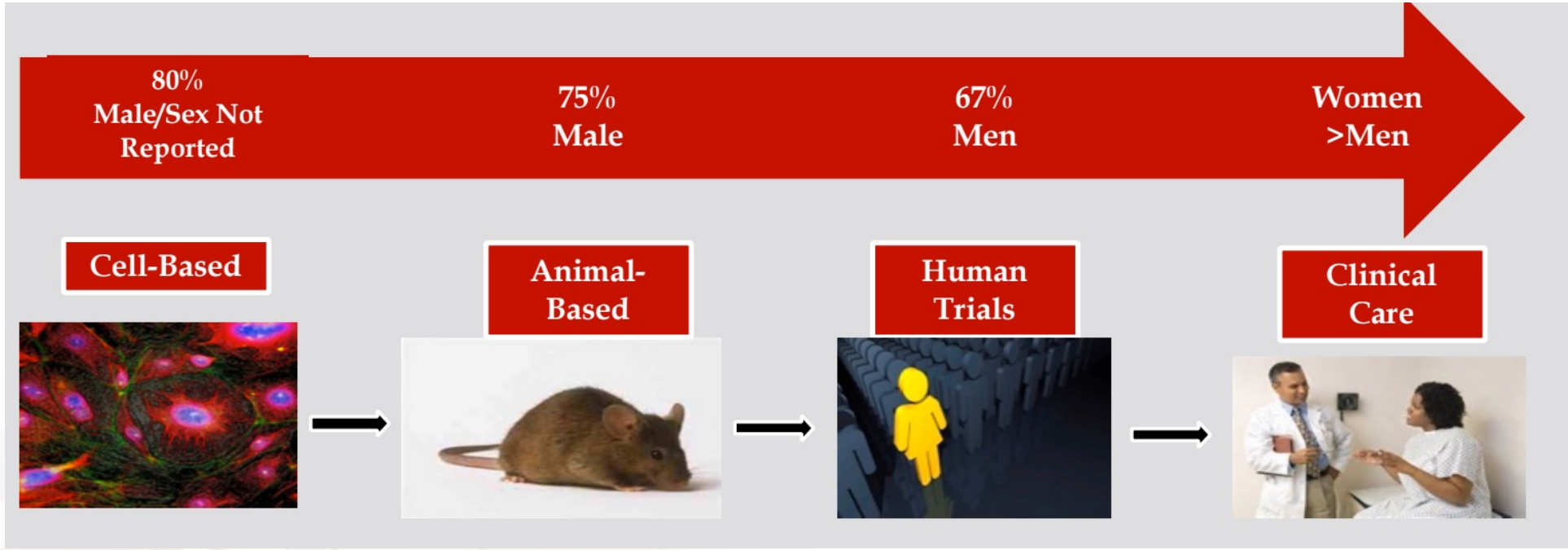
GENDER

Socially-constructed roles, behaviours, expressions and identities of girls, women, boys, men and gender-diverse people.

SEX

Biological attributes of humans and animals, including physical features, chromosomes, gene expression, hormones and anatomy.

One example: A research pipeline that *does not* represent all consumers



…is *not* scientifically excellent

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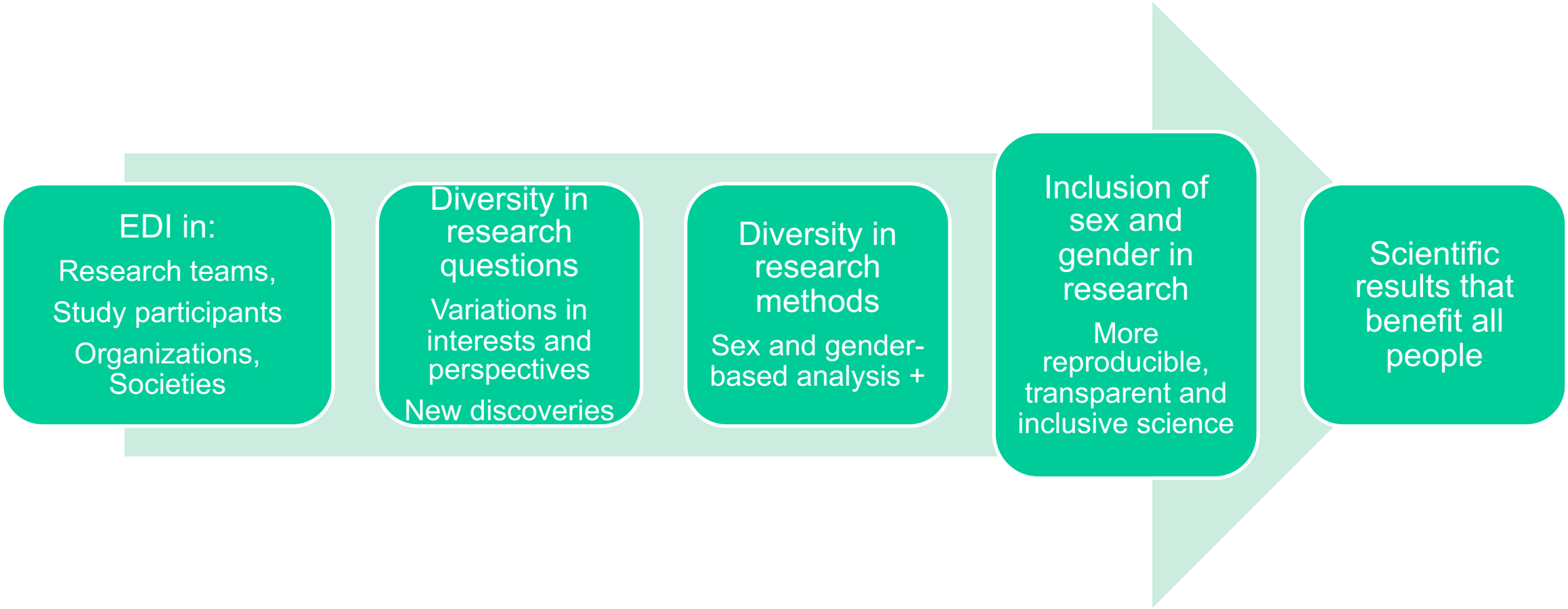
Credit to: MARJORIE R. JENKINS, MD
Professor of Medicine, Texas Tech University Health Sciences Centre, Associate Dean for Women in Medicine,
Director and CSO, Laura W. Bush Institute for Women's Health


EDI in:
Research teams,
Study participants
Organizations, Societies
Diversity in research questions
Variations in interests and perspectives
New discoveries
Diversity in research methods
Sex and gender-based analysis +
Inclusion of sex and gender in research
More reproducible, transparent and inclusive science
Scientific results that benefit all people

CIHR- http://www.cihr-irsc.gc.ca/e/50833.html

Sex, Gender and Health Research

There is significant evidence to demonstrate that biological and social differences between women and men contribute to differences in their health. Sex (biological attributes) and gender (socio-cultural factors) influence our risk of developing certain diseases, how well we respond to medical treatments, and how often we seek health care *(and the effectiveness of research translation strategies to increase the use of research).* Accounting for sex and gender in health research (and its translation into practice and policy) has the potential to make health research more rigorous, more reproducible and more applicable to everyone (and more applied, resulting in greater impact). (my additions)

INTERSECTIONALITY AND KNOWLEDGE TRANS LATION

Enhancing KT projects with an intersectional lens

What is this? | What did we do? | What were the results?

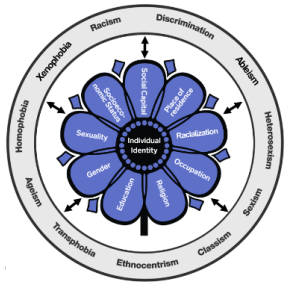
- KT practitioners use frameworks to design KT projects.
- Intersecting social factors (e.g., age, education, gender identity) can have significant impacts on KT projects.
- Intersectionality (Figure 1) explores the complex nature of intersecting social factors and their interaction with compounding power structures (e.g., media, education system) and forms of discrimination (e.g., sexism).[1-5]
- Currently, KT frameworks do not fulsomely explore individual-level social factors and how they interact with wider systems to produce unique human experiences.
- The purpose of this research study is to support KT practitioners to use an intersectional approach in their work. To do this, we are enhancing existing KT frameworks with an intersectional lens and creating tools and training to support taking an intersectional approach in KT. Specifically, we are exploring how to support KT interventions that target older adults.

Who is this done for? This is a Canadian Institutes of Health Research (CIHR) –funded research project

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

Share Buttons

[ssba-buttons]



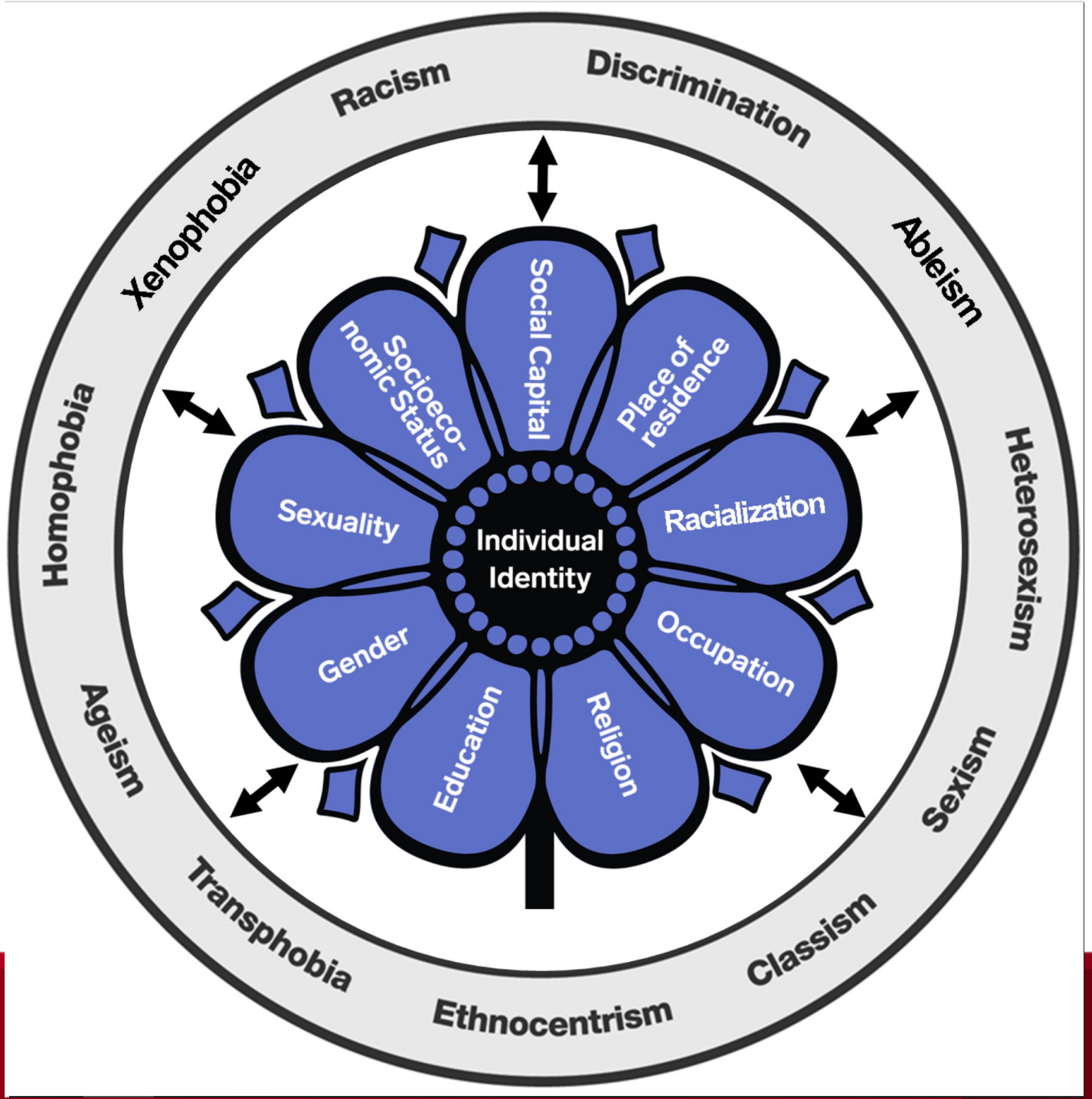
Click to view Figure 1. Visual depiction of intersectionality.[5-8]

References

1. Collins. Routledge. 1990. https://trove.nla.gov.au/version/21207078.

2. Crenshaw, K.U. Chi. Legal F. 1989;139.

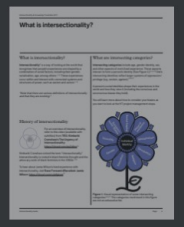
3. Crenshaw, K. The politics of law: A progressive critique. 1990;195.


Racism
Discrimination
Ableism
Heterosexism
Sexism
Classism
Ethnocentrism
Transphobia
Ageism
Homophobia
Xenophobia
Individual Identity
Social Capital
Place of residence
Racialization
Occupation
Religion
Education
Gender
Sexuality
Socioeco-nomic Status


1


2


3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Intersectionality & Knowledge Translation (KT)

Intersectionality Guide

Judicious Knowledge Translation continued

- Carefully consider dissemination of single small studies, studies of poor methodological quality, or ones where the strength of evidence in low- but also need to balance with what is the best available evidence

- Knowledge synthesis should usually be unit of KT/implementation but may not always be possible

- Not every finding needs extraordinary dissemination or implementation efforts- match the scale and intensity of dissemination efforts to the quality and significance of the research findings

Components of an end of grant KT Plan

https://cihr-irsc.gc.ca/e/45321.html

- KT Goals (typically to raise awareness and/or promote action)
  - To increase awareness
  - To increase knowledge/educate/enlighten
  - To inform future research
  - To inform/influence attitudes
  - To inform/influence behavior/practice
  - To inform/influence policy
  - To inform/influence technology
  - To encourage volunteerism or donation
  - To ???
- Audience (researchers, public, patients/clients, service providers, health system leaders, policy makers, industry, etc)
- Strategies (communication strategies, infographics, videos, reminder systems, apps etc)
- Expertise
- Resources

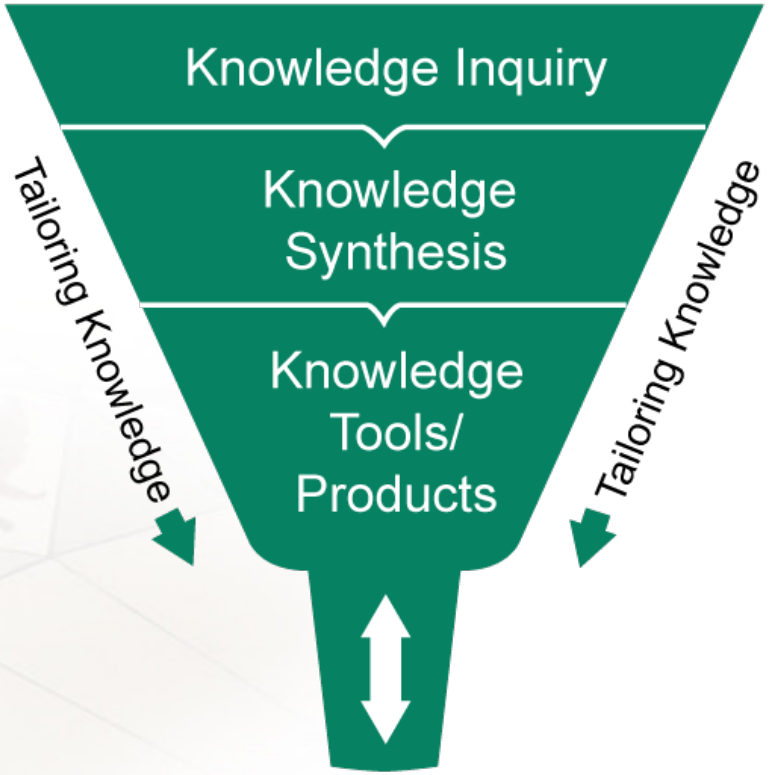
At the end of the project- the KT plan may need revising

- Have the goals changed now the message is known?
  - To increase awareness
  - To increase knowledge/educate
  - To inform future research
  - To inform/influence attitudes
  - To inform/influence behavior

-To inform/influence clinical practice
-To inform/influence policy
-To inform/influence technology
-To encourage volunteerism or donation
-To ???

- Tailor message to the audience (researchers, public, patients, health system leaders, policy makers, industry, etc)
- Strategies (communication strategies, infographics, videos, reminder systems, app etc)
- Expertise
- Resources

Using the KTA Action Cycle to (co)create knowledge tools and products (the things to be disseminated/implemented)



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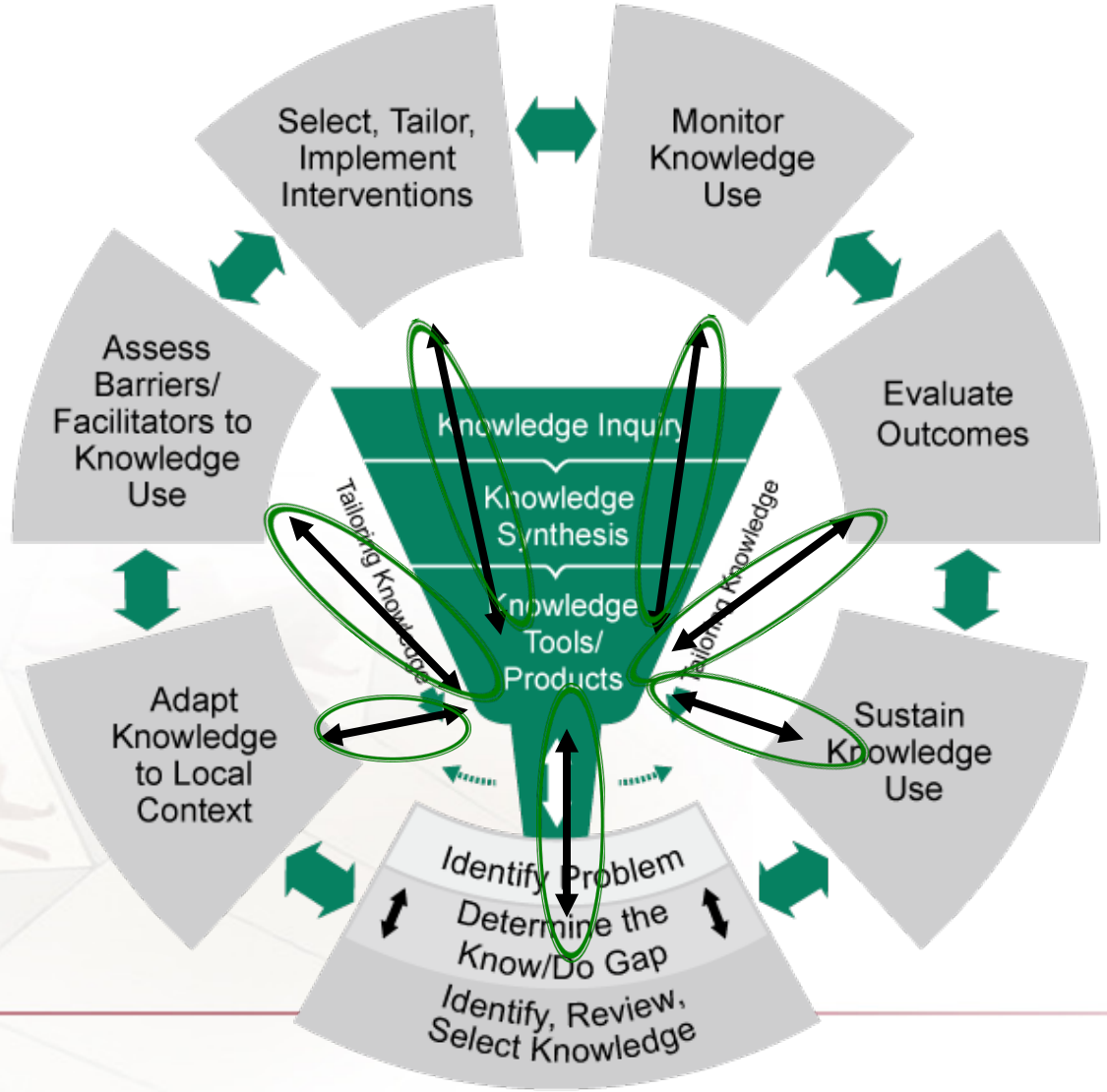
Action to Knowledge



- Traditionally the action phases are used to influence the uptake of the knowledge/evidence (KTA)
- But let's consider how the action phases could be used to influence creation of the knowledge tools/products? (ATK)

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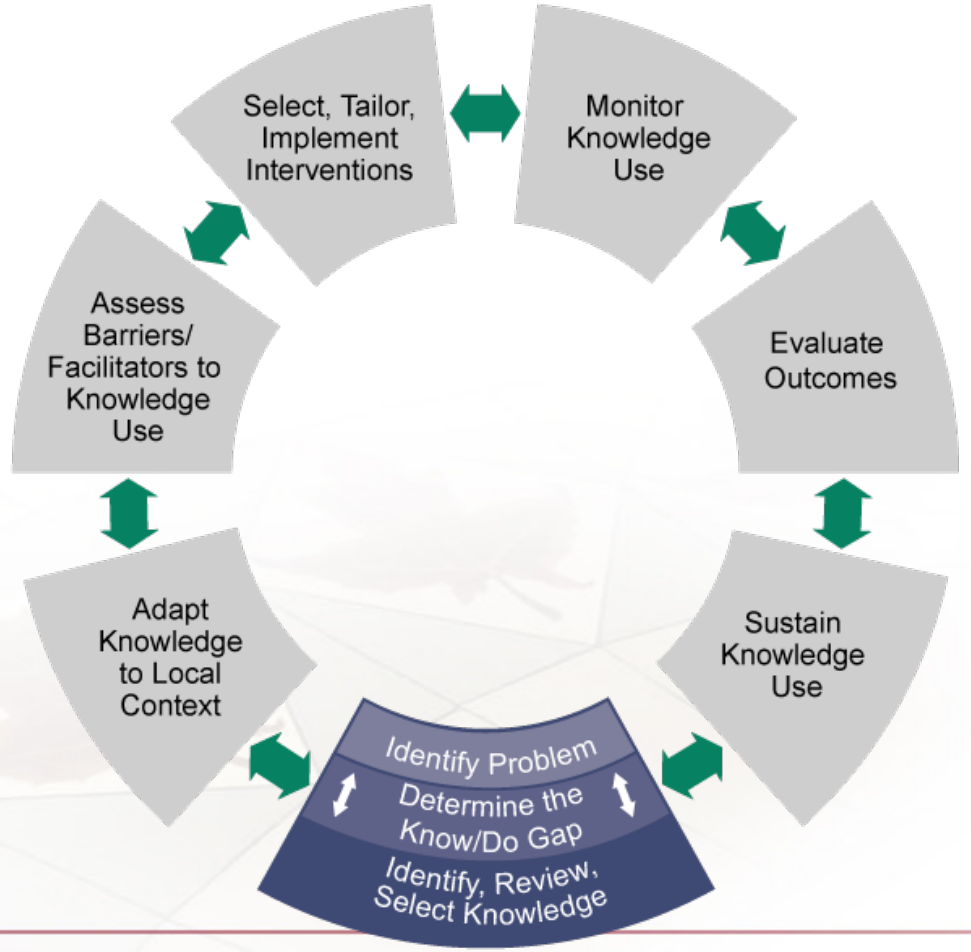
Applying the KTA to D+I planning



- Identify, review, select the knowledge to be disseminated/implemented
- The problem: who needs to know what about the findings or do what with the findings?
- The gap: determine how much effort/resources should go into dissemination and implementation

Source: Graham ID et al. *JCHEP* 2006;26:13-24.

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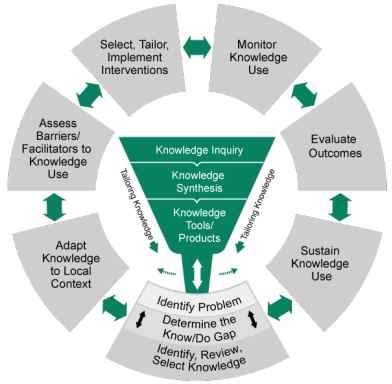
Identify Problem

Identify, Review, Select Knowledge



- Involve knowledge users in the analysis and interpretation phases of the project (findings are socially constructed and different perspective bring richness to interpretation)
- Consider the findings in light of the global literature
- Seek to obtain a sense of who the potential audiences/intended users could be and what the messages for them might be (have knowledge users help identify the key findings and audiences)

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Consider Judicious KT (reflections)

- What are your criteria for determining whether findings should be ‘disseminated’ (help it happen)?

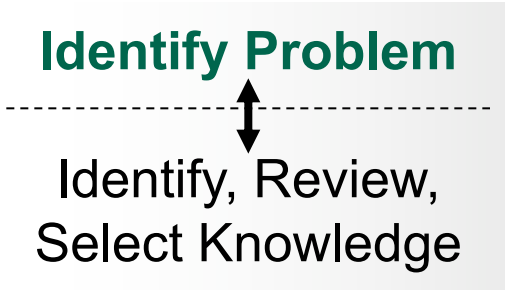
- What are your criteria for determining whether the findings should be used to influence ‘implementation’ (make it happen)?

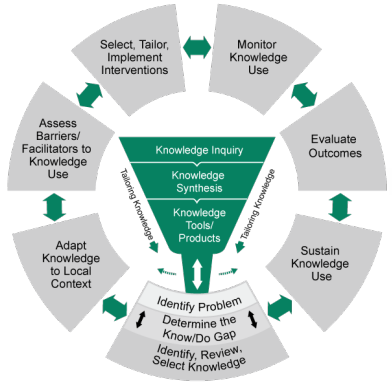
Judicious KT considerations

- What are your criteria for determining whether findings should be 'disseminated' (help it happen)?
  - All findings should at the very least be diffused/disseminated, it is an ethical imperative
  - Depends on available resources (open access fees)
  - Need publications to obtain tenure and promotion

Judicious KT considerations (reflections)

- What are your criteria for determining whether the findings should be used to influence 'implementation' (make it happen)?
  - Does the strength and significance of the findings justify implementing?
  - Are the findings sufficiently reliable and valid (generalizable/transferrable) to be implemented?
  - Has the research sufficiently included sex, gender, & intersectionality considerations?
  - Will implementation of the findings lead to greater equity (or inequity) for some? Are the trade-offs worth it?





- Do the findings (still) address a meaningful/important knowledge user problem/issue?
- Who gets to decide? (whose opinions matter? Who is not at the table that should be?)
- What to do with conflicting input (or when some don't know what they don't know)?

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Keep in mind

"To result in an action, the knowledge being translated needs to be relevant, appropriate, applicable, timely and reasonable to the needs of the intended users"

*Campbell B. Applying knowledge to generate action: A community-based knowledge translation framework. JCEHP 2010, 30(1):65-71

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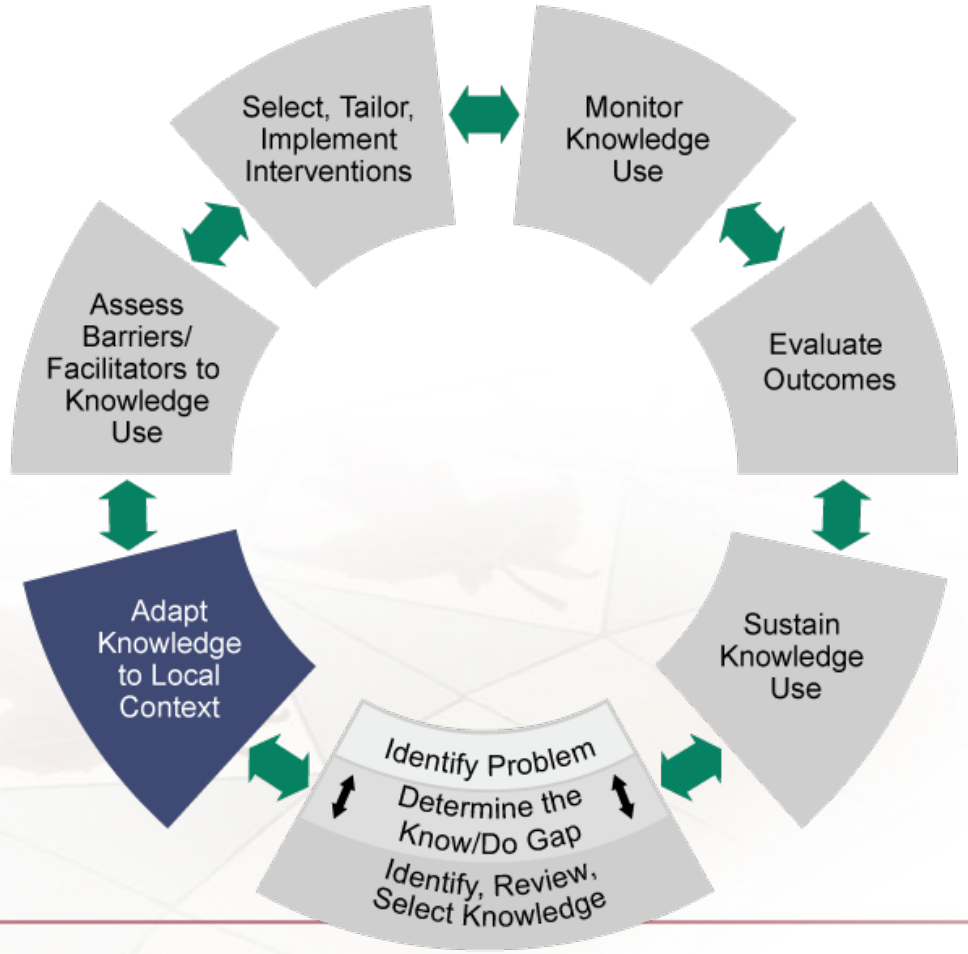
The KT gap

- Will the potential benefits of D+I likely outweigh potential harms?
- How should KT planning proceed? (how much effort should go into D vs I? who should be responsible for what aspects of the plan?)
- No matter what, establish KT goals

Applying the KTA to D+I planning



- Confirm the audiences
- Tailor messages to the audiences
- Contextualize the findings
- Develop KT tools and products

Source: Graham ID et al. *JCHEP* 2006;26:13-24.

Categories of stakeholders*/audiences

Those who:

a) can use the research findings in decision making (knowledge/research users),

b) are impacted by use of the research (ie impacted by the decisions)

c) are interested (but not directly using or impacted by the research)

AACTT: another way to think about D+I

https://implementationscience.biomedcentral.com/articles/10.1186/s13012-019-0951-x

- Action
- Actor
- Context
- Target
- Time

- Who (actor) needs to do what (action), how (action), to whom (target), under what circumstances (context), when (time)

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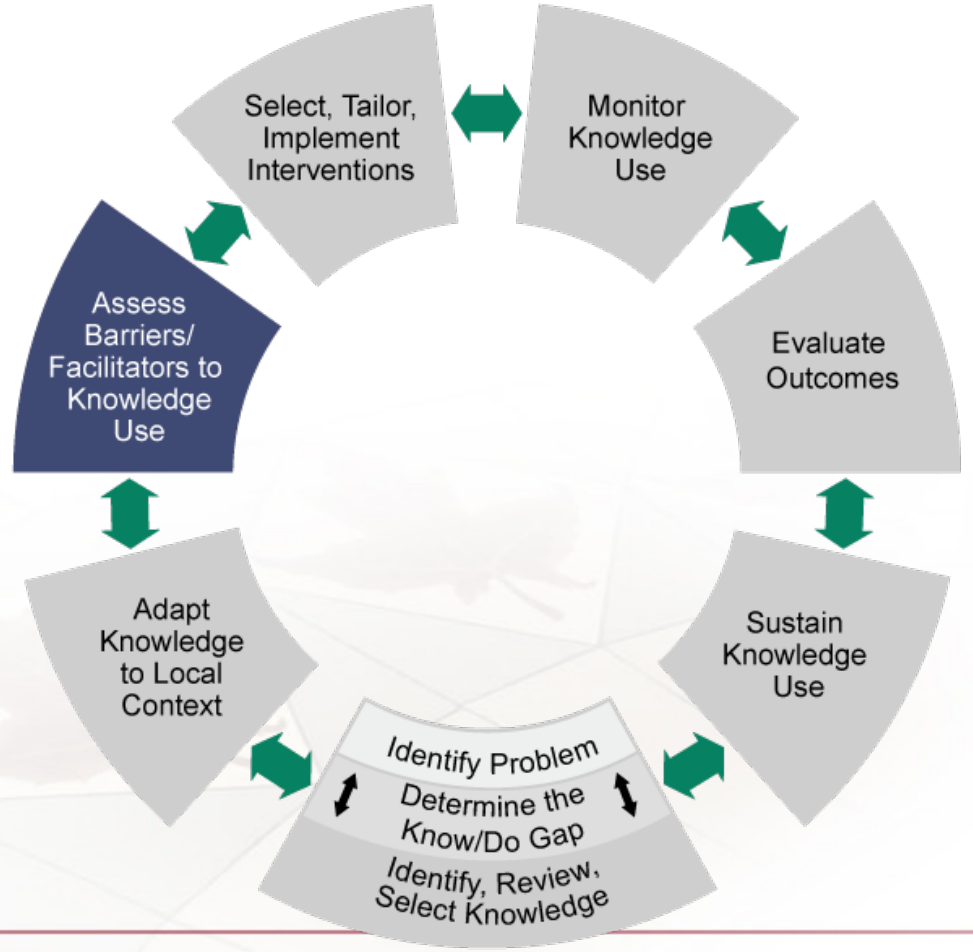
Revisit the KT goal(s) and finalize

- Goals (to raise awareness and/or promote action)
  - To increase awareness
  - To increase knowledge/educate/enlighten
  - To inform future research
  - To inform/influence attitudes
  - To inform/influence behavior/practice
  - To inform/influence policy
  - To inform/influence technology
  - To encourage volunteerism or donation
  - To ???

Coproducing the KT tools and products for D+I

- Support knowledge users on the team and/or bring others in to craft messages for relevant audiences
- Clarify the AACTT
- Finalize the KT goals

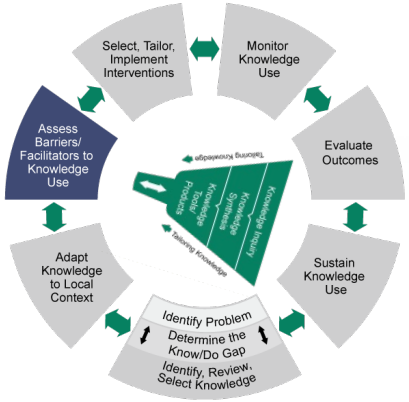
Applying the KTA to D+I planning



- Considering the KT/D+I goal(s) and AACTT, assess areas that will impede and facilitate the uptake of findings/knowledge/tools by research users.

Source: Graham ID et al. *JCHEP* 2006;26:13-24.

Assess barriers/ supports to knowledge use



- Engage knowledge users and others to identify what might be barriers/supports to uptake related to: the findings/messages, adopters/researcher users, the setting/context?

Action Map (adapted from Harrison and Graham 2022)

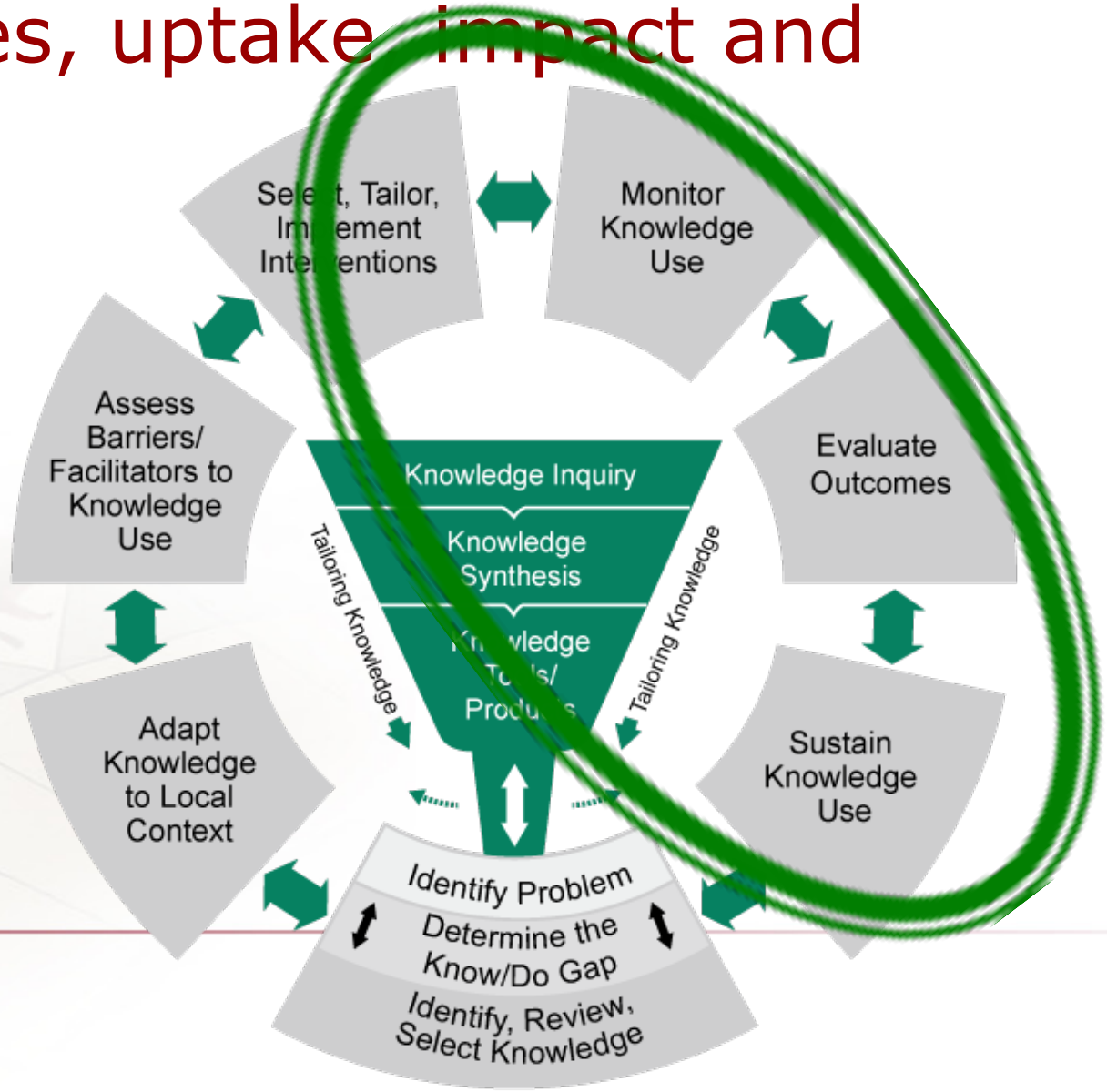
Stakeholders / audiences	KT Goals Awareness/action	Messages (AACTT)	Potential barriers/supports related to the message/behavior
Research users		Diffusion: Dissemination: Implementation:	
Those impacted by decisions based on the research		Diffusion: Dissemination: Implementation:	
Other interested parties		Diffusion: Dissemination: Implementation:	

Preparing for session 2

- What are the criteria you might use to assess the extent of effort to put towards advancing the implementation of your findings (consider the concept of judicious KT in relation to your findings)?
- To what extent should efforts focus on diffusion, dissemination, implementation?
- If the decision is to coproduce the KT plan, who needs to be involved (e.g. research users, advocacy groups, other organizations)? What will the engagement/partnership look like (roles, activities, etc)?
-

Q +A

Applying the KTA to D+I planning: Part 2: KT strategies, uptake, impact and sustainability



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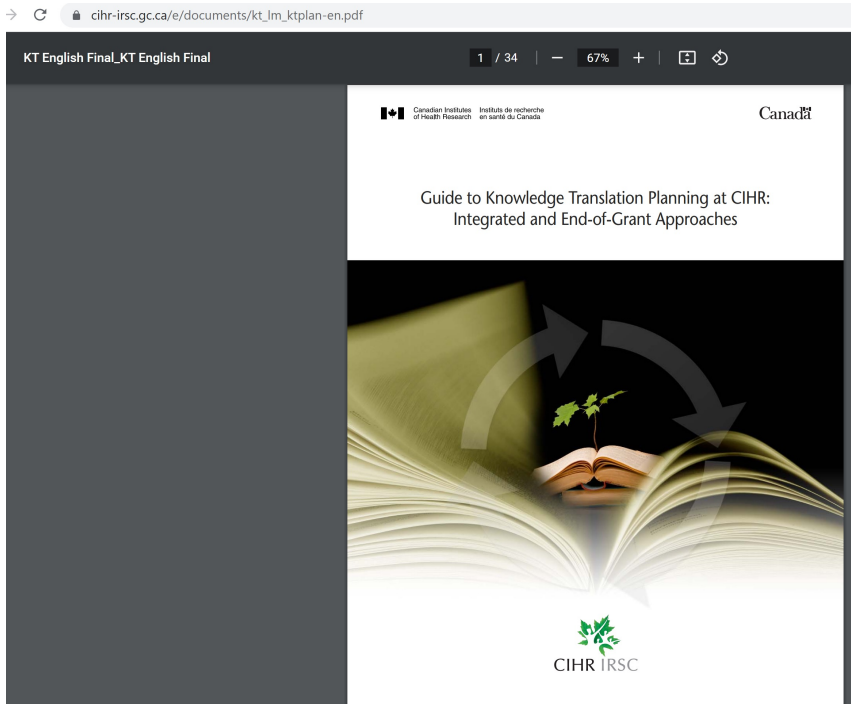
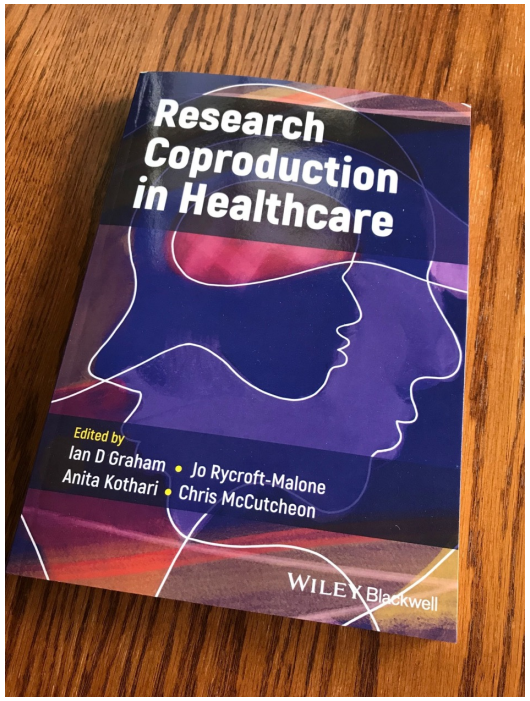
Acknowledgements and References

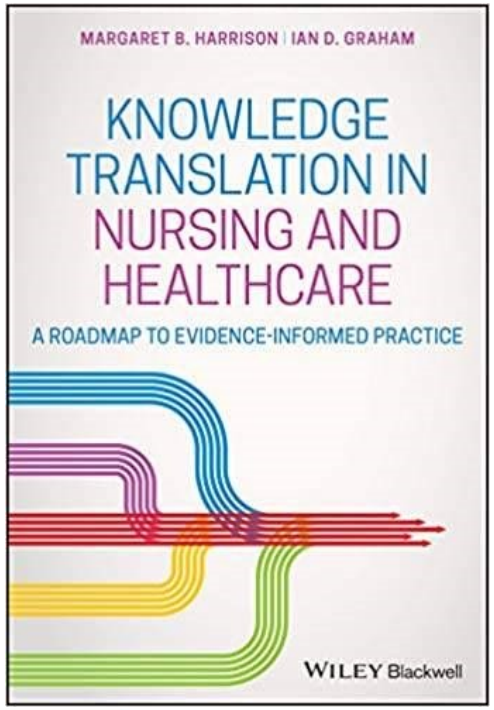
- CIHR Institute of Gender and Health provided so of the slides on sex and gende



Ch 4.2 Coproduced Dissemination (McCutcheon et al)



The Action Map



Thank you for the opportunity to share our work

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