

# **Knowledge translation and behaviour change science: Building community in a pre- and post-pandemic world**

Dr. Jasmin K. Ma

# Who's in the 'Room'?

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- To me, behaviour change science and knowledge translation are:
  - ▣ Like cereal and orange juice, they just don't go together
  - ▣ Like two peas in a pod, they work well together
  - ▣ Confusing terms, let's start with a definition

# Today's Objectives

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Discuss the broader implications of IKT and behaviour change science for researchers, patients, and healthcare providers in the context of COVID-19 and beyond

Identify examples of building community to conduct IKT and behaviour change science work

Describe how IKT and behaviour change science are like two peas in a pod

# Today's Objectives

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Describe how IKT and behaviour change science are like  
two peas in a pod

# What Is A Behaviour Change Intervention?

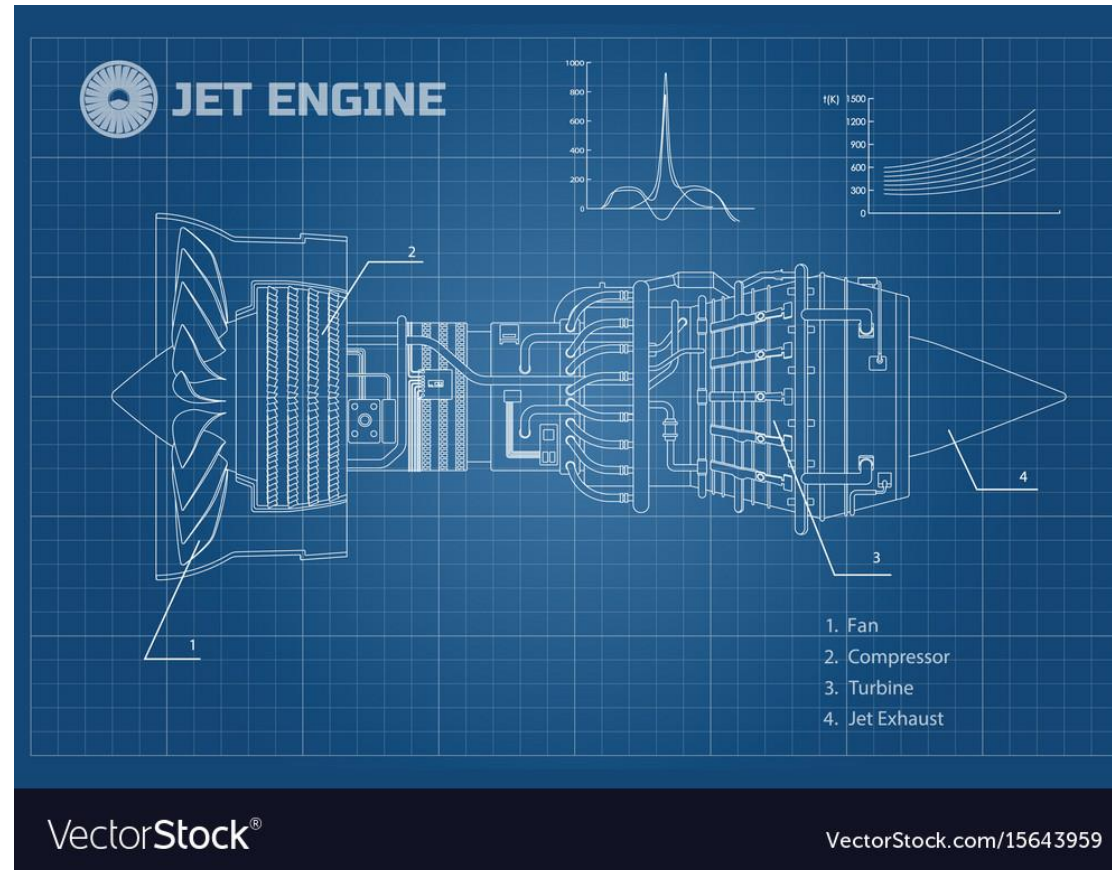
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- Behaviour=Anything you DO
  - ▣ Hand washing, recycling, brushing your teeth, smoking, **physical activity**
- **Behaviour change interventions: Affect what we DO**

# Behaviour Change Toolbox

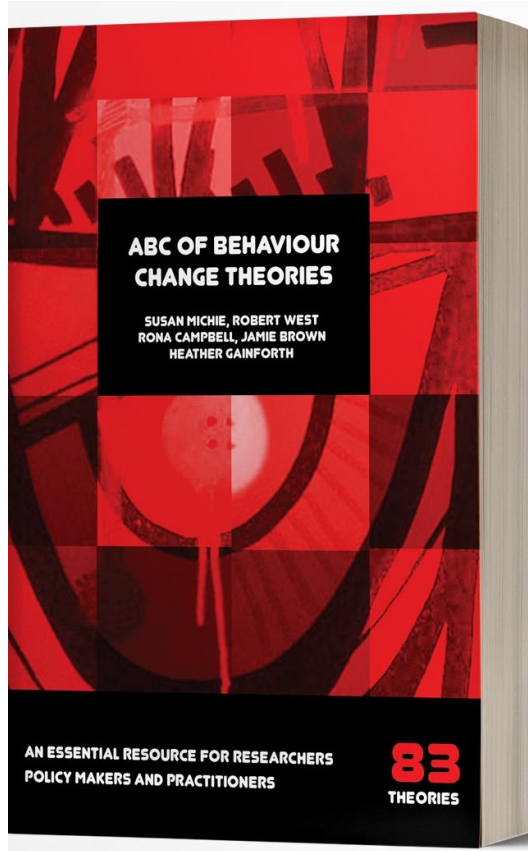
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## □ Frameworks, models, and theories



# Behaviour Change Theories

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- At least 83 theories of behaviour change
- Examples: Social cognitive theory, theory of planned behaviour, self-determination theory

Michie, S., Campbell, R., Brown, J., West, R., & Gainforth, H. L. (2014). *ABC of Behaviour Change Theories*. Sutton: Silverback Publishing.

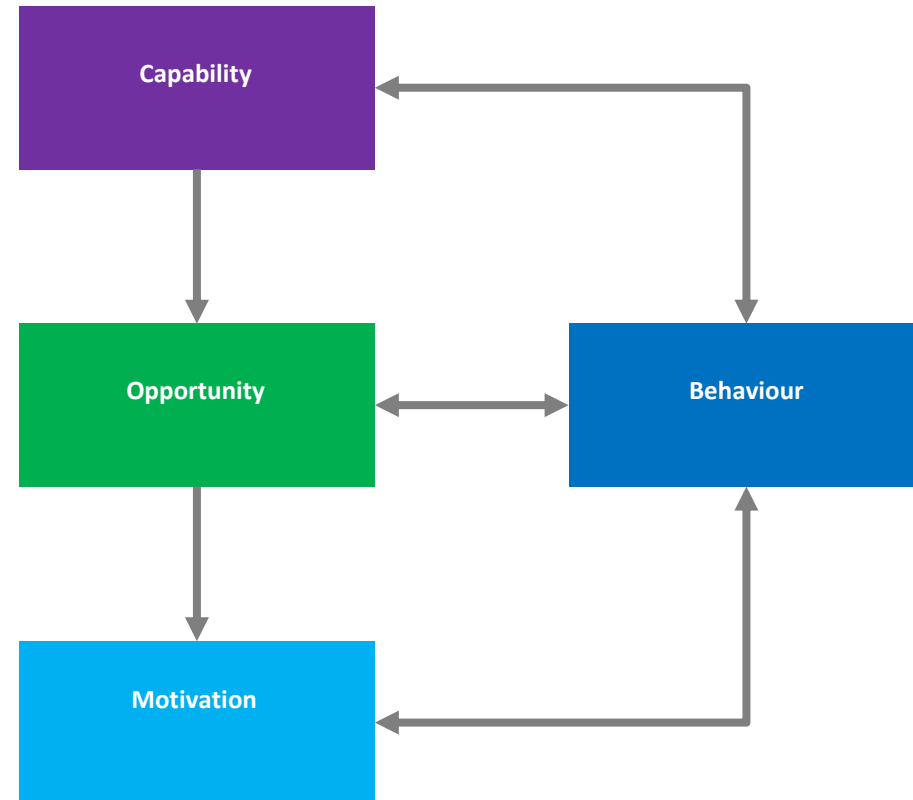
# Identifying Barriers Using the COM-B

**Behaviour: Something you DO**

**Capability:** Knowledge, skills, and the abilities to engage in the behaviour

**Opportunity:** Outside factors that make the behaviour possible

**Motivation:** Brain processes which direct our decisions and behaviours



# Theoretical Domains Framework

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- 1) Social influences
- 2) Environment context/resources
- 3) Professional role and identity
- 4) Beliefs about capabilities
- 5) Emotion
- 6) Knowledge
- 7) Memory, attention, and decision processes
- 8) Behavioural regulation
- 9) Skills
- 10) Optimism
- 11) Goals
- 12) Intentions
- 13) Reinforcement
- 14) Beliefs about consequences



# Identifying Solutions Using the Theory and Techniques Tool

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## The Theory and Techniques Tool

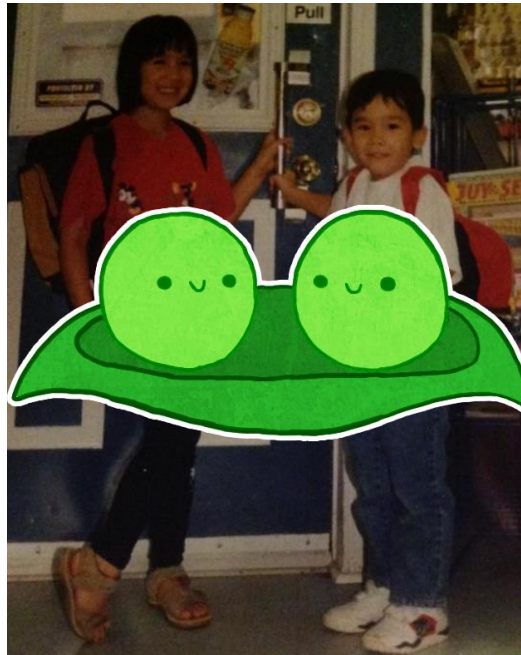
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		Kn	Sk	SPRI	BaCa	Op	BaCo	Re	In	Go	MADP	ECR
<div> <div>Links</div> <div>Non-links</div> </div>		<div> <div>Inconclusive</div> <div>No evidence</div> </div>										
		+	+	+	+	+	+	+	+	+	+	+
+	1.1. Goal setting (behaviour)											
+	1.2. Problem solving											
+	1.3. Goal setting (outcome)											
+	1.4. Action planning											
+	1.5. Review behaviour goal(s)											
+	1.6. Discrepancy between current behaviour ...											
+	1.7. Review outcome goal(s)											
+	1.8. Behavioural contract											
+	1.9. Commitment											
+	2.1. Monitoring of behaviour by others witho...											
+	2.2. Feedback on behaviour											
+	2.3. Self-monitoring of behaviour											

# Two Peas in a Pod

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**Behaviour  
Change  
Science**

**What do we  
need to do?**



**Integrated  
Knowledge  
Translation**

**How do we  
know it will  
work in the  
'real world'?**

# What is Knowledge Translation?

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The broad range of activities meant to improve the use of research evidence in practice, policy and further research



Source: <https://www.msfhr.org/ourwork/activities/knowledge-translation/kt-at-a-glance>

# My Road Map of Knowledge Translation (Work In Progress)

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Knowledge  
Translation

Patient-  
Oriented  
Research

Integrated KT

Implementation

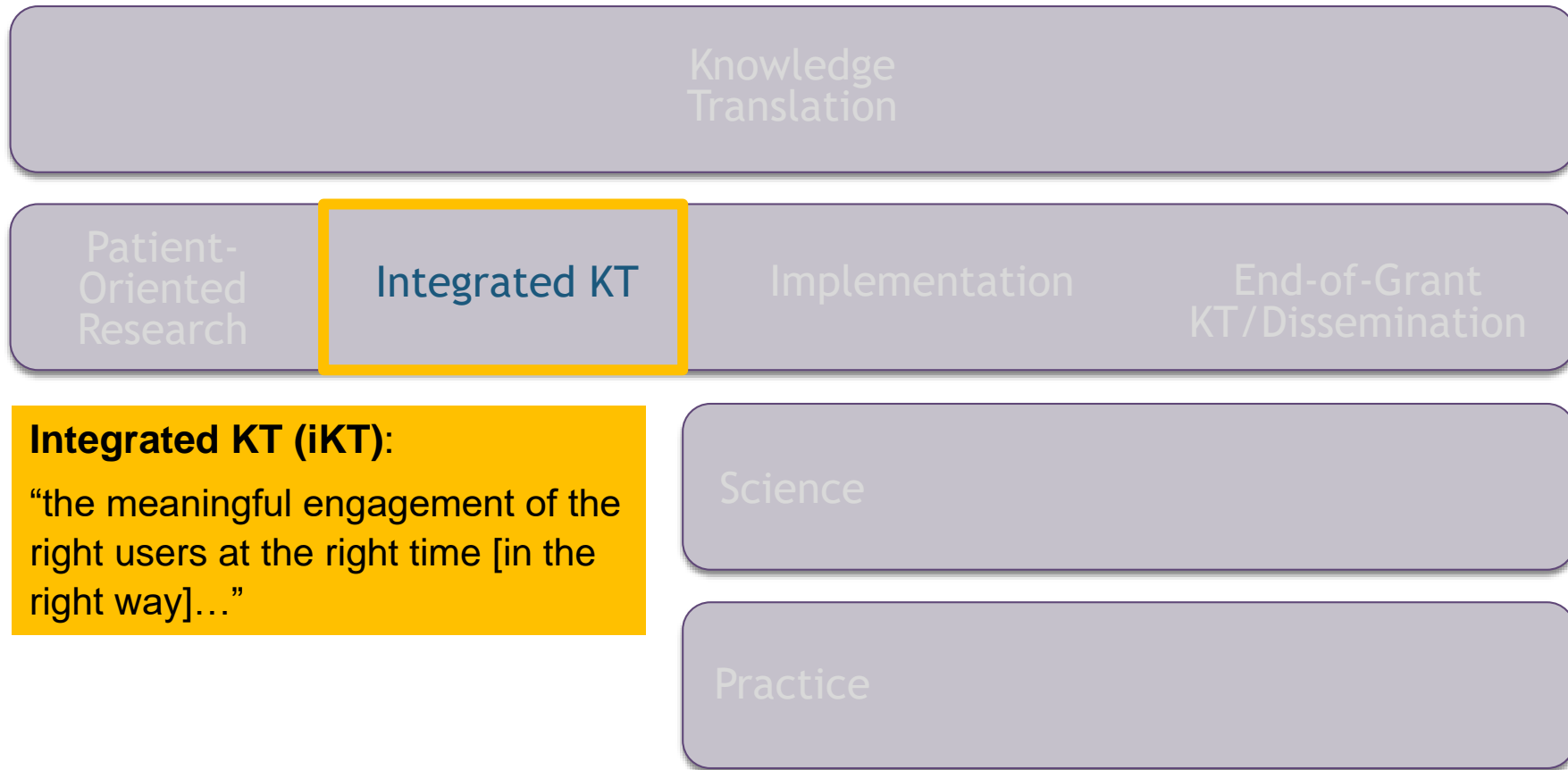
End-of-Grant  
KT/Dissemination

Science

Practice

# My Road Map of Knowledge Translation (Work In Progress)

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# Knowledge User Definition

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- Members of groups for which the research holds significance.
  - ▣ May act on (or may be affected by) the research
- Examples: research funders, patients, caregivers, members of the public, health system and policy decision-makers, health care providers, etc.

# At which stages of the research process have you involved knowledge-users?

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- ❑ Applying for grants
- ❑ Ethics
- ❑ Development and refinement of the research questions
- ❑ Selection of the methods/outcome measures
- ❑ Recruitment
- ❑ Data collections
- ❑ Data analysis
- ❑ Interpretation of the findings
- ❑ Manuscript writing/review
- ❑ Crafting of the message/tool development
- ❑ Dissemination and implementation of the results

# How Do We Engage Knowledge Users Effectively?

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## **Integrated KT (iKT):**

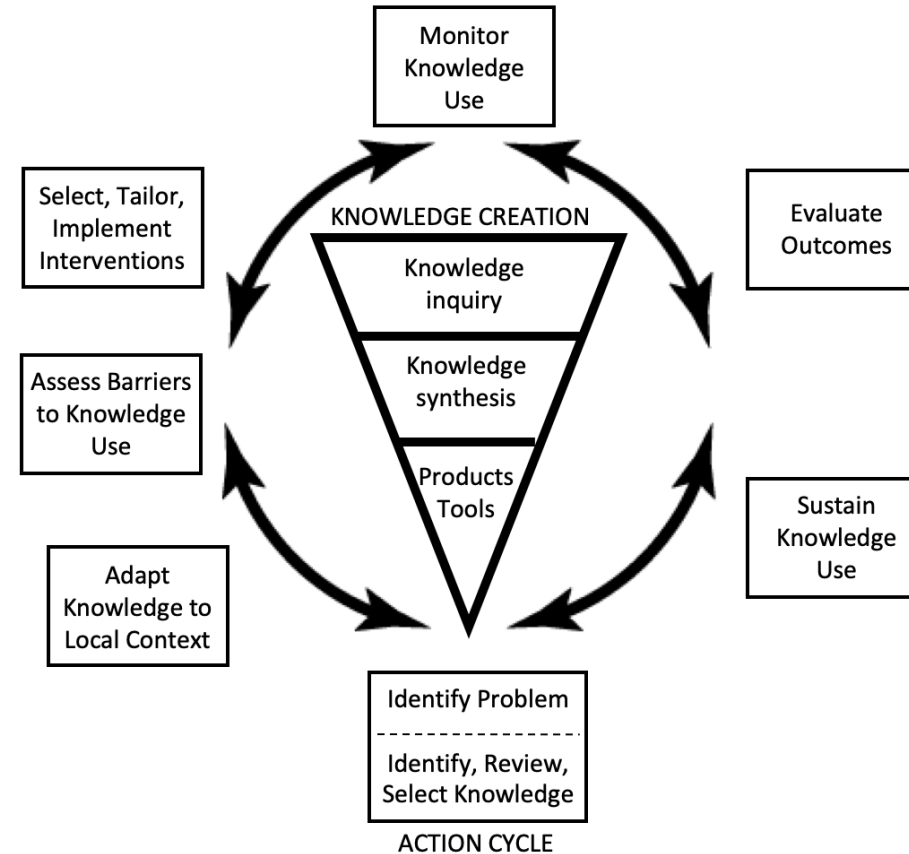
“the meaningful engagement of the right users, at the right time, [in the right way]...”

# How Do We Engage Knowledge Users Effectively?

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“While the promotion of full engagement of knowledge users throughout the research process is described in the literature as an ideal, dictating when and how knowledge users and researchers need to be involved is not helpful nor is it realistic.”


Jull, J. E., Davidson, L., Dungan, R., Nguyen, T., Woodward, K. P., & Graham, I. D. (2019). A review and synthesis of frameworks for engagement in health research to identify concepts of knowledge user engagement. *BMC medical research methodology*, 19(1), 211.



# How Do We Engage Knowledge Users Effectively?

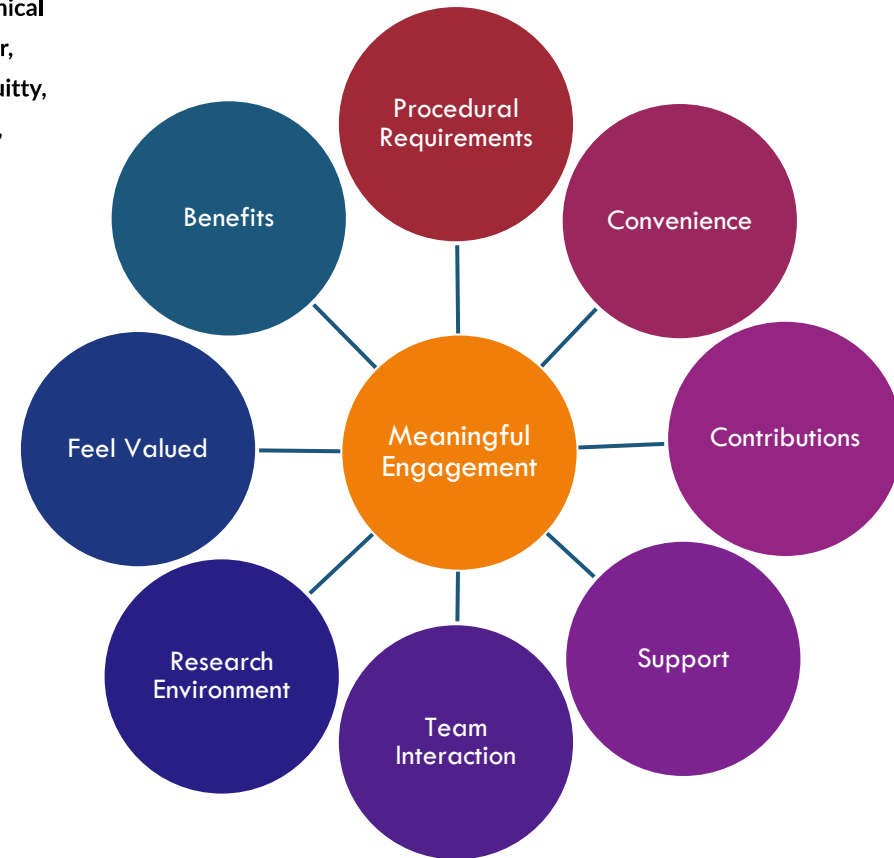
19

An empirically based conceptual framework for fostering meaningful patient engagement in research

Clayton B. Hamilton PhD, Post-Doctoral Fellow<sup>1,2</sup>  | Alison M. Hoens BScPT, MSc, Clinical Professor, Knowledge Translation Specialist<sup>1,2,3,4</sup> | Catherine L. Backman PhD, Professor, Senior Scientist<sup>2,5</sup> | Annette M. McKinnon, Patient Research Partner<sup>5</sup> | Shanon McQuitty, Patient Research Partner<sup>5</sup> | Kelly English, Patient Research Partner<sup>5</sup> | Linda C. Li PhD, Professor<sup>1,2,3</sup>

There's an assessment tool and workbook too!

- ☐ What do you hope to benefit from the project?
- ☐ In what ways and how often would you like to communicate?
- ☐ What training/support can we provide?
- ☐ What expertise or skills would you like to be able to bring to the table?
- ☐ What is fair and adequate compensation?
- ☐ Which parts of the project do you want to be involved in?

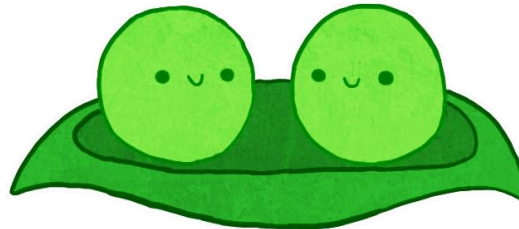


# Recap: Two Peas in a Pod

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## Behaviour Change Science

- ☐ Mechanisms
  - ☐ Strategies
  - ☐ Evaluation
- ... of our  
interventions



## Integrated Knowledge Translation

Engagement of  
the...

- ☐ Right people
- ☐ At the right  
time
- ☐ In the right way

# Today's Objectives

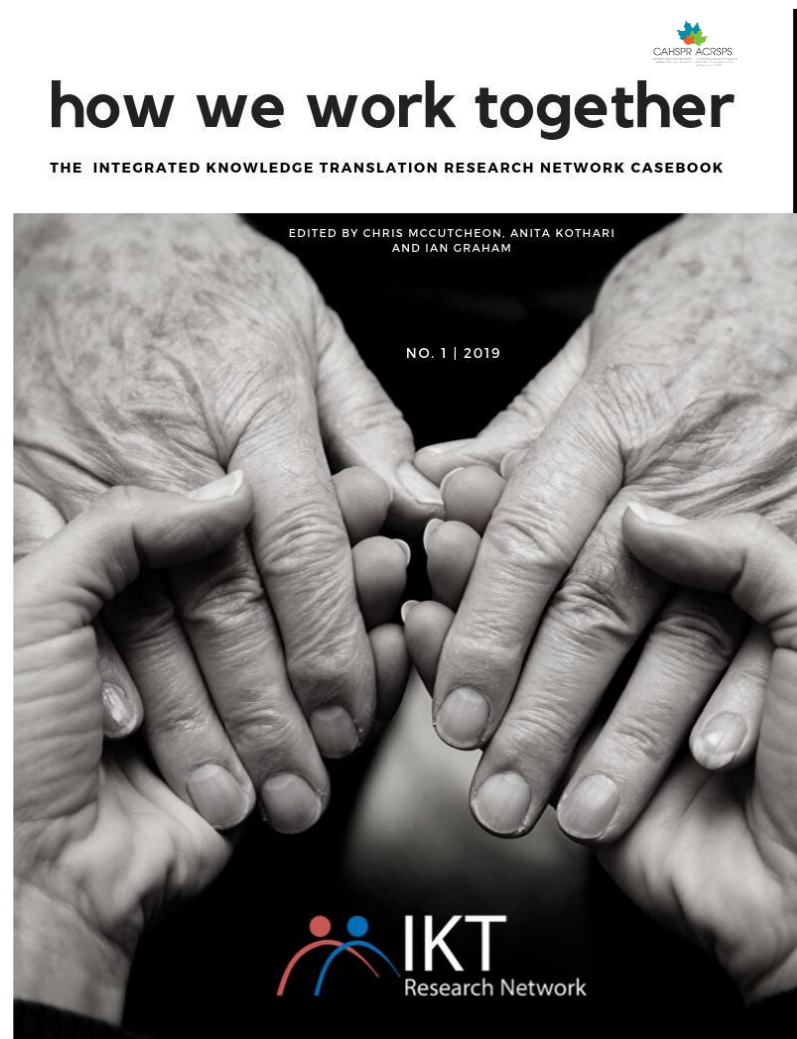
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Identify examples of building community to conduct KT and behaviour change science work

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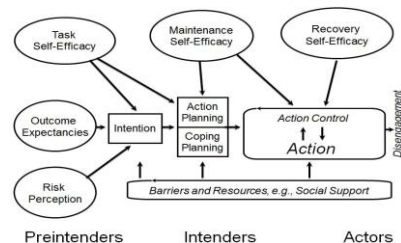
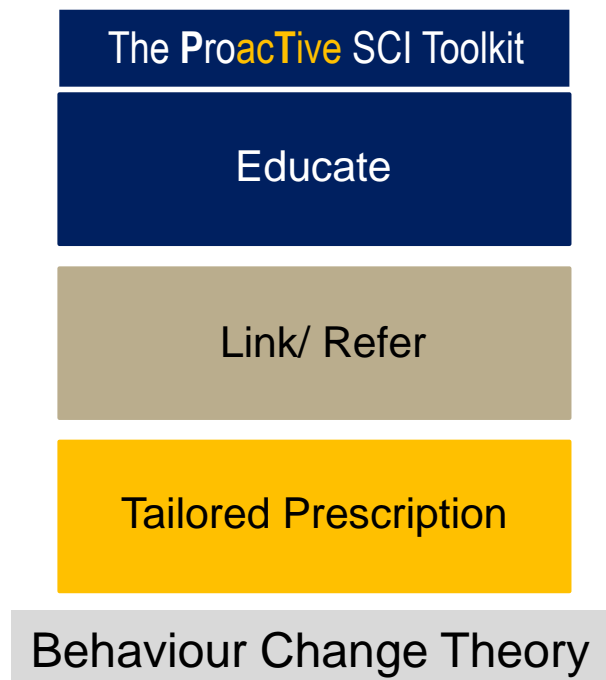
# IKT Casebook

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<https://iktrn.ohri.ca>

# ProACTIVE Intervention



A physical activity intervention developed to support physiotherapists in providing physical activity coaching for people with SCI

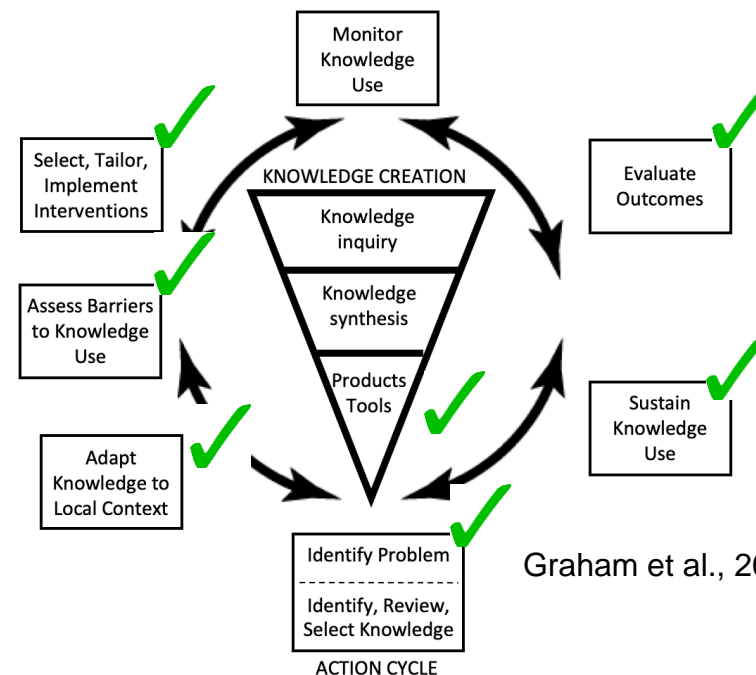
Ma, Cheifetz, Todd, Chebaro, Phang, Shaw, Whaley, Martin Ginis; Spinal Cord, 2019

Ma, West, and Martin Ginis; Sports Medicine, 2019

# ProACTIVE Intervention



**G. F. Strong Rehab Centre**



Graham et al., 2006

## Community and clinician partners:

- Refined the research question
- Reviewed the funding application
- Adapted implementation intervention and supporting resources
- Identified important outcomes

- **Selected strategies for sustainability: e.g., champions**
- **Delivered the training**
- **Collecting the data**
- **Manuscript writing**

# Improving Strength Training and tailoring in rheumatoid ARthritis (I START)



Behaviour Change Theory



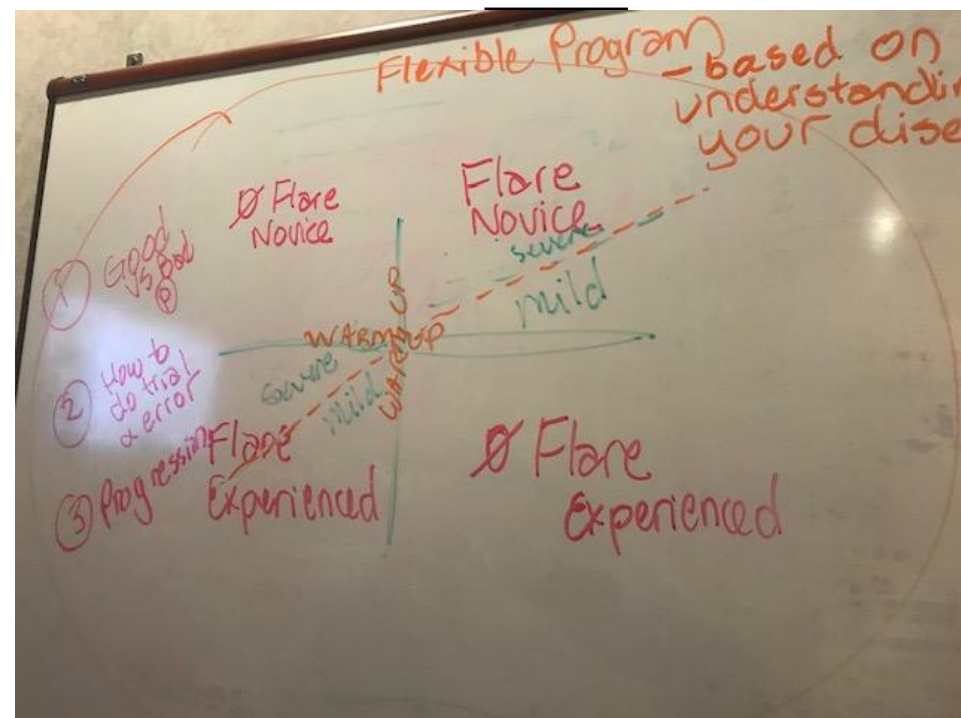
Identify barriers and strategies to develop and implement tailored strength training interventions for people with rheumatoid arthritis

# I START



Arthritis Patient  
Advisory Board

Partners in Research



## Patient partners:

- Refined the research question and methods
- Letters of support, provided feedback on the grant applications
- Recruit participants

- Interview guide development
- Data interpretation
- Prioritizing findings and identify future directions
- Manuscript writing

# Resistance Exercise Initiative (RExI)

RExI

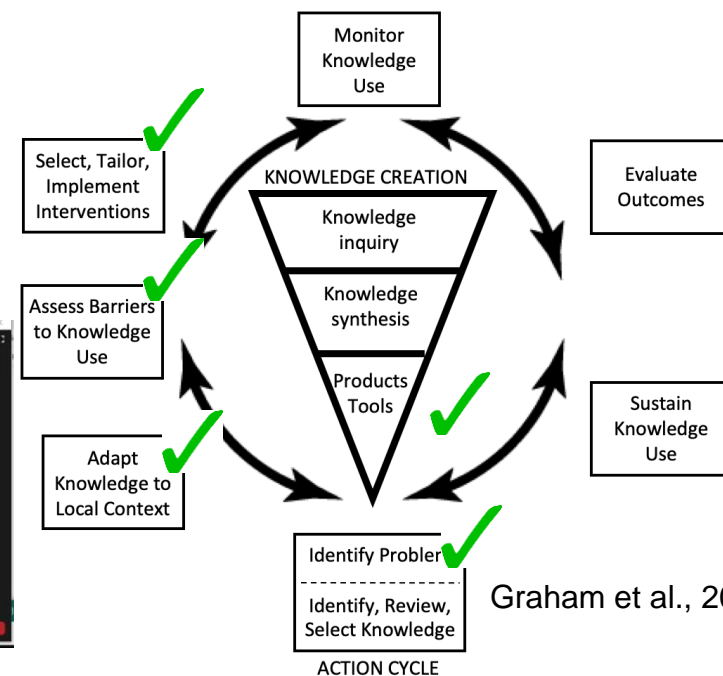


Behaviour Change Theory



Evaluate  
prescription rates  
and identify  
barriers/KT  
strategies for  
physiotherapist-  
prescribed  
resistance exercise  
for older adults in  
acute care

# RExI



Graham et al., 2006

## Clinician partners:

- Developed the research question
- Developed the methods
- Wrote the protocol for ethics
- Refined survey and interview guide
- Distributed survey

- Conducted interviews
- Transcribed data
- Prioritizing findings and identify future directions
- Develop toolkit
- Manuscript

# Participating in Each Other's Worlds

## **Community and clinician partners:**

- Refined the research question
- Reviewed the funding application
- Adapted implementation intervention and supporting resources
- Identified important outcomes
- Selected strategies for sustainability: e.g., champions
- Delivered the training
- Collecting the data

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- Manuscript

# Participating in Each Other's Worlds

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ACE Arthritis Consumer Experts

JointHealth Education



#MotivationMonday May 25, 2020

#ArthritisAtHome Episode 26  
15 minutes of exercise "snacks"  
during #COVID19 with  
Dr. Jasmin Ma (Part 4 of 4)

Arthritis At Home  
#ArthritisAtHome



Alternative to wheeling program

Workout with Jasmin Ma  
Tuesday | June 30 | 11 am

Spinal Cord Injury BC

SCOTIABANK CHARITY CHALLENGE TRAINING



Ask an Expert:  
What are the rehab options now?



with funding support from

Spinal Cord Injury BC

CRAIG-H NEILSEN FOUNDATION

Exercise After SCI  
How to adapt equipment



SCIRE  
SPINAL CORD INJURY RESEARCH EVIDENCE

Discover how gym equipment can be adapted for people with SCI to compensate for grip, balance, mobility, or core strength issues.  
[youtube.com/user/SCIREWebVideo](https://youtube.com/user/SCIREWebVideo)

# Today's Objectives

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# Is now a pivotal time to make changes to the way we do things?

32

Wensing et al. *Implementation Science* (2020) 15:42  
<https://doi.org/10.1186/s13012-020-01006-x>

Implementation Science

EDITORIAL

Open Access

## Implementation science in times of Covid-19

Michel Wensing<sup>1,2\*</sup>, Anne Sales<sup>3,4</sup>, Rebecca Armstrong<sup>5</sup> and Paul Wilson<sup>6,7</sup>



“We also observe that many decision-makers in times of Covid-19 are prepared to take radical decisions. This is almost opposite to previous situations, when many decision-makers were not particularly inclined to implement new practices.”

# Is now a pivotal time to make changes to the way we do things?

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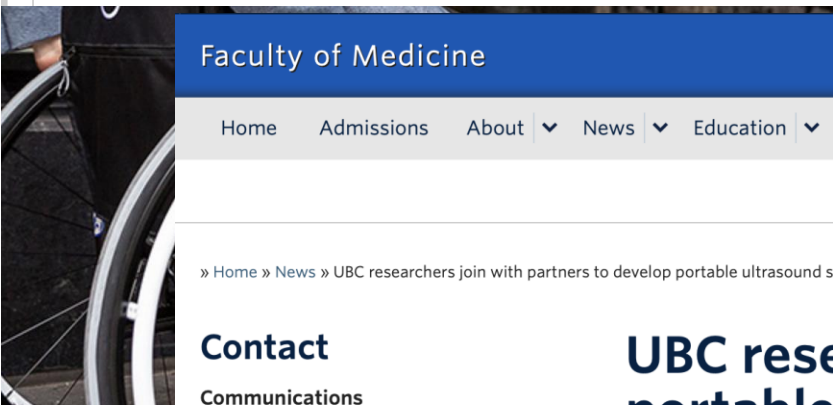
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# Collaboration helps frontline workers see clearly during long hours at work

May 21, 2020



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# UBC researchers join with partners to develop portable ultrasound scanner network for COVID-19

May 26, 2020

## Contact

**Communications**  
UBC Faculty of Medicine  
Email: [communications.med@ubc.ca](mailto:communications.med@ubc.ca)  
Office: 604.822.2421

Share this Story

# Is now a pivotal time to make changes to the way we do things?

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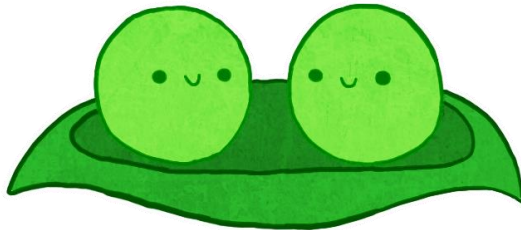
Establish the new normal?

# How Can We Help Make Change?

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## Behaviour Change Science

Our theories teach  
us to look beyond  
the individual to  
make change



## Integrated Knowledge Translation

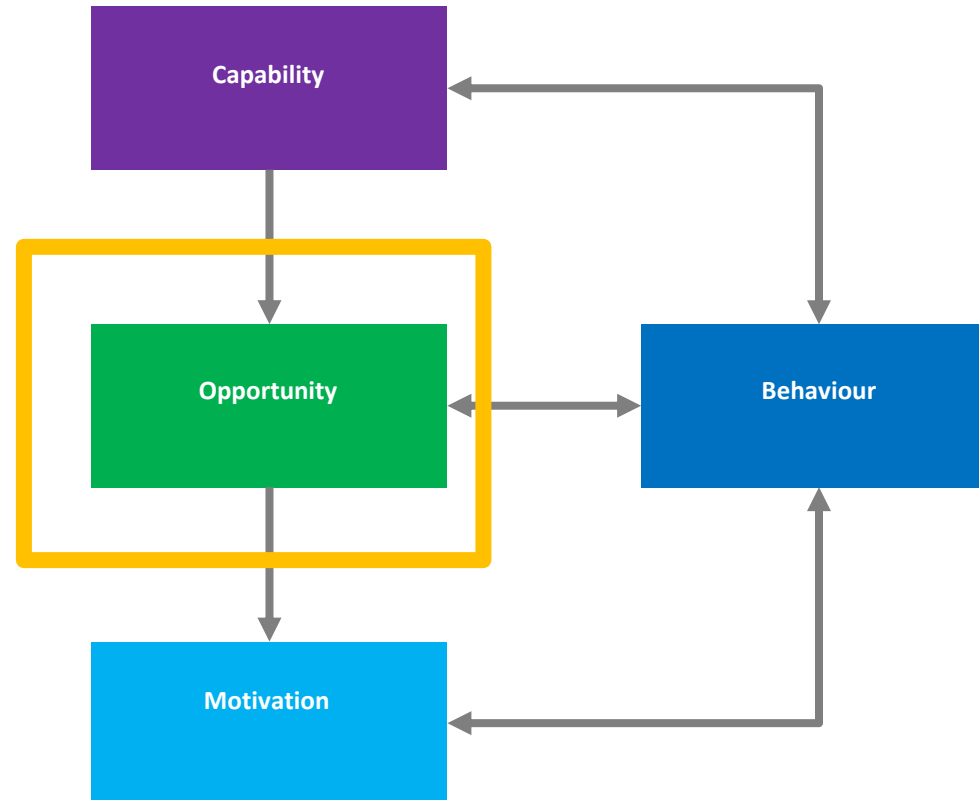
Involve the right  
people, at the right  
time, in the right  
way

# Recap: It Takes Two to Tango

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## Behaviour Change Science

Our theories teach us to look beyond the individual to solve problems

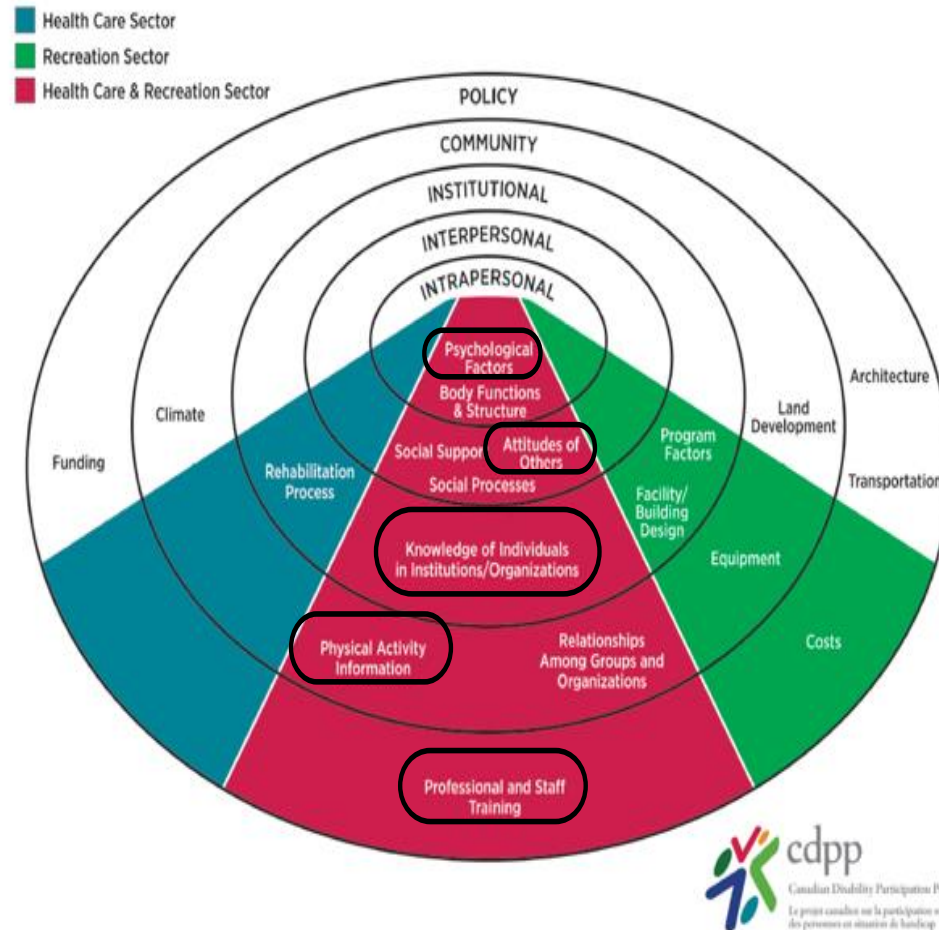


# Recap: It Takes Two to Tango

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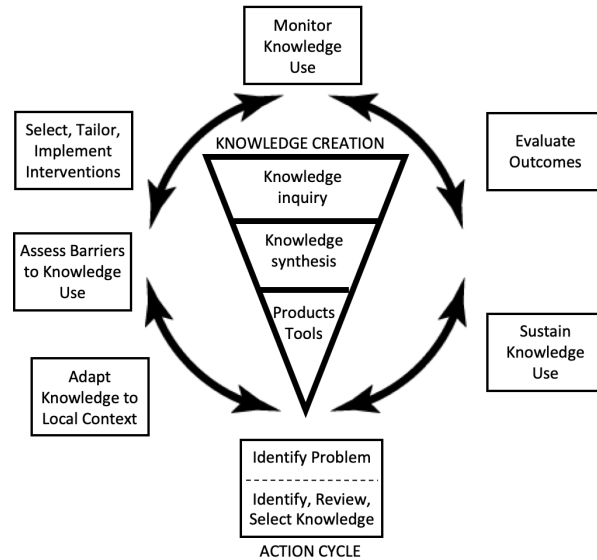
## Behaviour Change Science

Our theories teach us to look beyond the individual to solve problems



# Recap: It Takes Two to Tango

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## Integrated Knowledge Translation

**Involve the right people, at the right time, in the right way**

# Partners' Pearls of Wisdom: What can researchers do to be good partners during COVID?

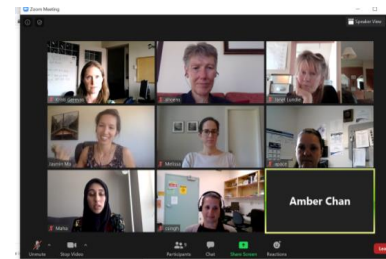
- ❑ There's a tsunami of COVID-related research directed towards our membership, it's great that people want to help
  - ❑ The urgency of a pandemic does not mean we should forget our IKT principles
  - ❑ [BC AHSN Covid 19 project inventory: https://bcahsn.ca/covid-19-response/covid-19-research-inventory/](https://bcahsn.ca/covid-19-response/covid-19-research-inventory/)
- ❑ There is rapid acceptance that things need to be done differently, don't be afraid to approach partners
  - ❑ Treat your partners like gold: Ask them how the partnership is going, how do partners want to benefit from the project?
- ❑ Don't come when the cake is just about ready to come out of the oven, we already know it's baked
- ❑ Give us time to engage
- ❑ Zoom is helpful to connect, but record sessions. Life happens and we can't always be there 'in-person'

# My Pearls of Wisdom: What can researchers do to be good partners during COVID?

1. Engage early, engage often
2. Recognize that I am not the only expert in the room and that sharing knowledge is a two-way street
3. Be prepared... to be flexible and to learn
4. Be in it for the long-run (Dr. Heather Gainforth)
5. Show compassion, kindness, and empathy to others as well as yourself

# Thank You to My Community

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# Thank You! Questions?

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## Supervisors

- Dr. Linda Li
- Dr. Kathleen Martin Ginis
- Dr. Christopher West
- Dr. Brendon Gurd

## Funders

- CIHR
- MSFHR
- The Arthritis Society
- Ontario Neurotrauma Foundation
- PRAXIS

## Institutions

- Arthritis Research Canada
- University of British Columbia

## Trainees

- Hattie Shu
- Amber Chan
- Michael Wu
- Smruthi Ramachandran
- Lamiah Adamjee
- Jenny Leese

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- Stephanie Therrien
- Amrit Sandhu
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- Gen Creighton
- Jenny Leese
- Amrit Sandhu
- Linda Li
- Michael Smith Foundation for Health Research
- Arthritis Research Canada