

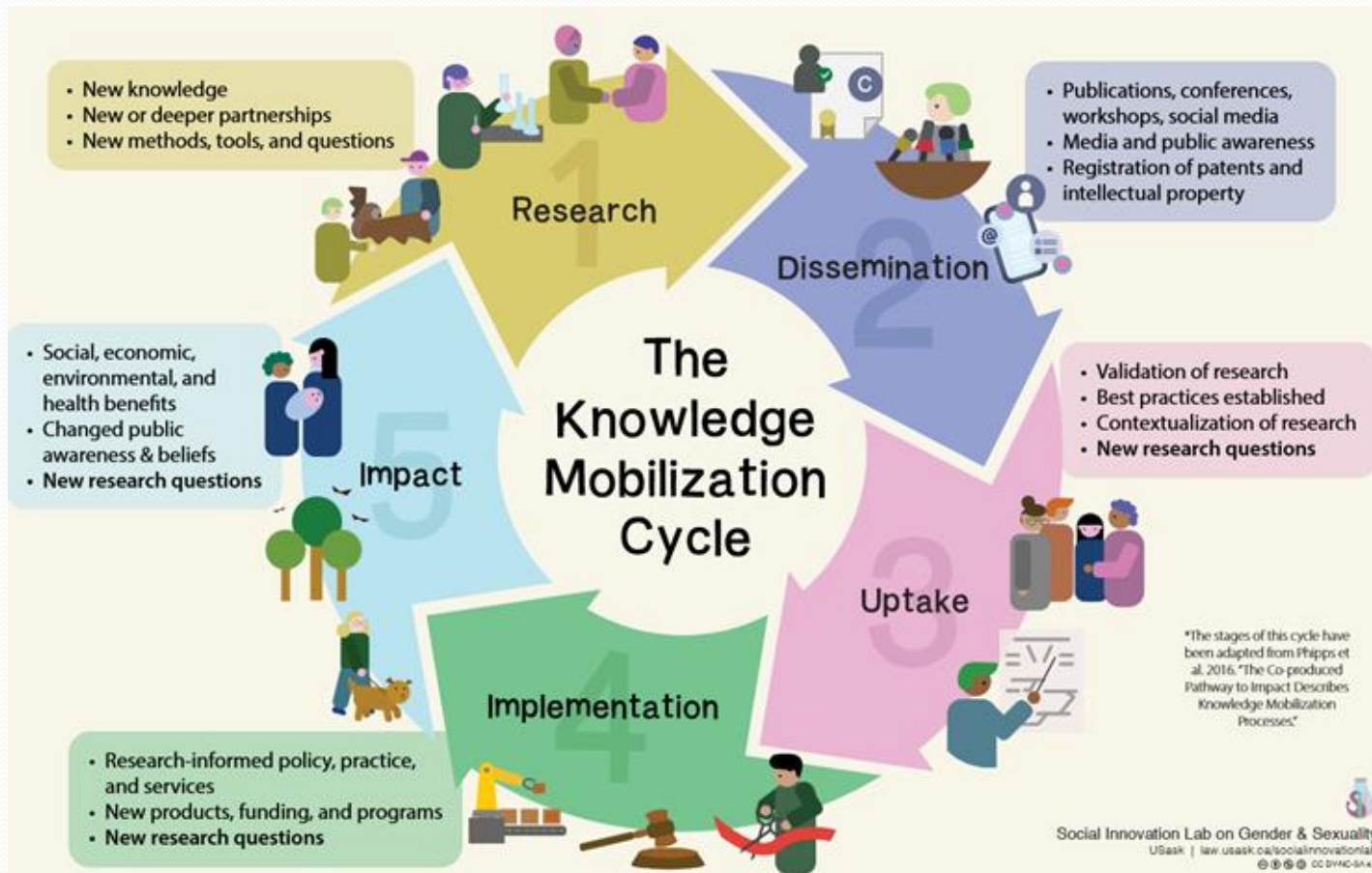
Overview of Knowledge Translation

Joy C MacDermid PT **PhD**

Planning for
Research Impact



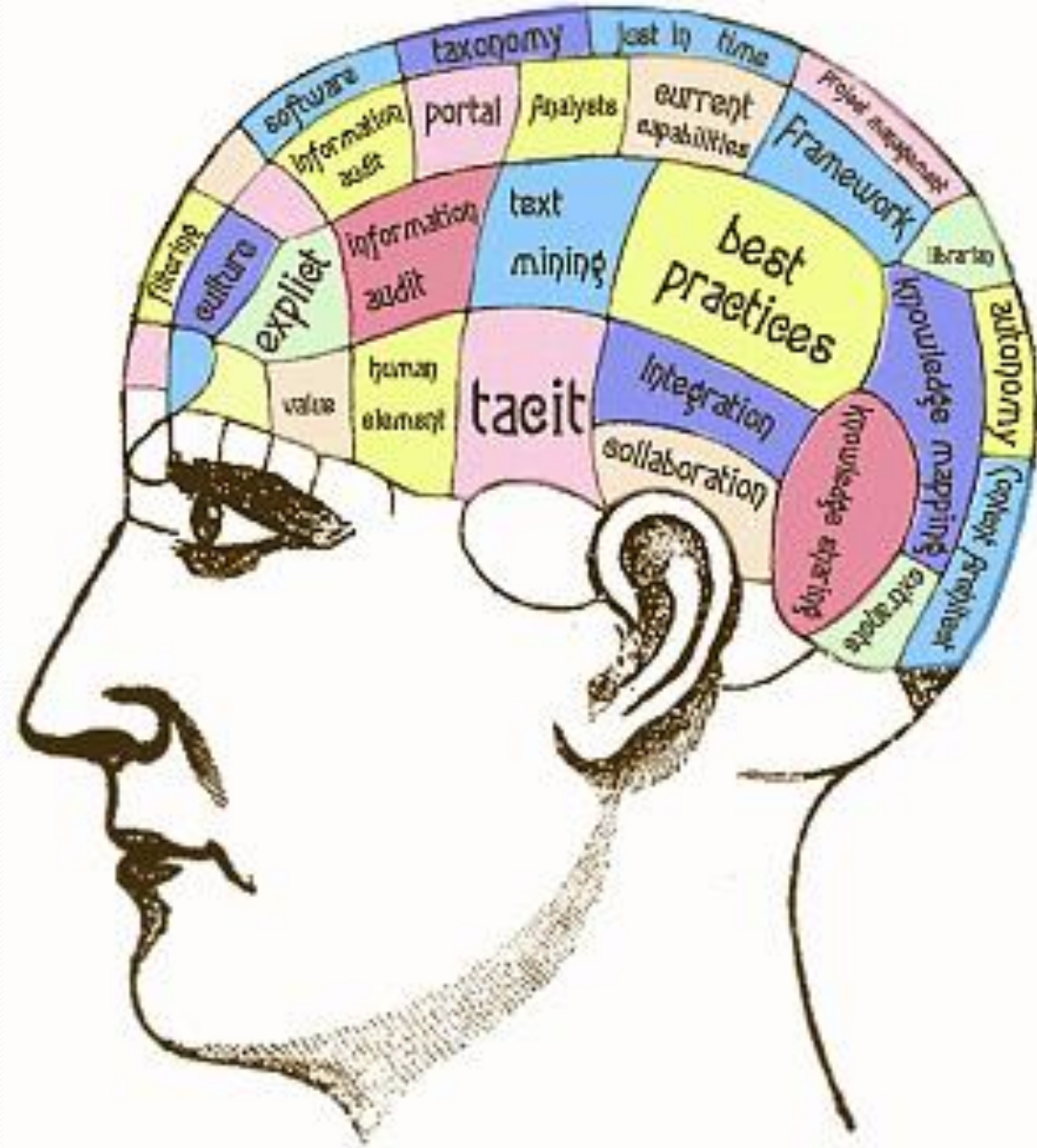
Learning Objectives



- Be able to explain why KM is important
- Describe different models of KM
- Be able to explain and apply the constructs within CFIR
- Differentiate IS and KM
- Consider examples of KM

Knowledge, if it does
not determine action,
is
dead to us.

—Plotinus, Roman philosopher
(205 AD–
270 AD)



Evidence to Practice Gap

- McGlynn
- et al (*N Engl J Med.* 2003;348)
- 400 quality indicators in some 6,700 patients drawn from a dozen metropolitan areas and suggested
- 45% are not receiving recommended care.



What is "Knowledge Translation"?

● Knowledge translation is about:

- Making users aware of knowledge and facilitating their use of it to improve health and health care systems
- Closing the gap between what we know and what we do (reducing the know-do gap)
- Moving knowledge into action

What does CIHR mean by "Knowledge Translation" –

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

Implementation science
linkage and exchange
popularization of research,
research into practice,
research mediation,
research transfer,
research translation,
science communication,
knowledge translation
applied health research,
capacity building,
co-optation - cooperation -
competing
Diffusion,
Dissemination,
getting knowledge into practice,
impact,
Implementation,
knowledge communication,
knowledge cycle,
knowledge exchange,
knowledge management.
knowledge mobilization

RESEARCH ARTICLE

Open Access

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?

K Ann McKibbon^{1*}, Cynthia Lokker¹, Nancy L Wilczynski¹, Donna Ciliska^{2,3}, Maureen Dobbins^{2,3}, David A Davis⁴, R Brian Haynes¹, Sharon E Straus^{5,6}

Background: The study of implementing research findings into practice is rapidly growing and has acquired many competing names (e.g., dissemination, uptake, utilization, translation) and contributing disciplines. The use of multiple terms across disciplines pose barriers to communication and progress for applying research findings. We sought to establish an inventory of terms describing this field and how often authors use them in a collection of health literature published in 2006.

Methods: We refer to this field as knowledge translation (KT). Terms describing aspects of KT and their definitions were collected from literature, the internet, reports, textbooks, and contact with experts. We compiled a database of KT and other articles by reading 12 healthcare journals representing multiple disciplines. All articles published in these journals in 2006 were categorized as being KT or not. The KT articles (all KT) were further categorized, if possible, for whether they described KT projects or implementations (KT application articles), or presented the theoretical basis, models, tools, methods, or techniques of KT (KT theory articles). Accuracy was checked using duplicate reading. Custom designed software determined how often KT terms were used in the titles and abstracts of articles categorized as being KT.

Results: A total of 2,603 articles were assessed, and 581 were identified as KT articles. Of these, 201 described KT applications, and 153 included KT theory. Of the 100 KT terms collected, 46 were used by the authors in the titles or abstracts of articles categorized as being KT. For all 581 KT articles, eight terms or term variations used by authors were highly discriminating for separating KT and non-KT articles ($p < 0.001$): implementation, adoption, quality improvement, dissemination, complex intervention (with multiple endings), implementation (within three words of research, and complex intervention. More KT terms were associated with KT application articles ($n = 13$) and KT theory articles ($n = 18$).

Conclusions: We collected 100 terms describing KT research. Authors used 46 of them in titles and abstracts of KT articles. Of these, approximately half discriminated between KT and non-KT articles. Thus, the need for consolidation and consistent use of fewer terms related to KT research is evident.

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¹Health Information Research Unit, Department of Clinical Epidemiology and Biostatistics, McMaster University Faculty of Health Sciences, 1200 Main Street West, Hamilton, ON, Canada



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KT starts when you tell other people about your research



Knowledge Translation is part of CIHR mandate

Canadian
Institutes of
Health
Research

3. (1) There is hereby established a corporation, to be known as the Canadian Institutes of Health Research, in this Act referred to as the “CIHR”.

3. (1) Est constituée une personne morale appelée Instituts de recherche en santé du Canada, ci-après dénommée IRSC.

Instituts de
recherche en
santé du
Canada

Agent of Her
Majesty

(2) The CIHR is an agent of Her Majesty in right of Canada.

(2) IRSC est mandataire de Sa Majesté du chef du Canada.

Statut

Head office

(3) The head office of the CIHR shall be at the place in Canada that is designated by the Governor in Council.

(3) Son siège social est situé au lieu du Canada fixé par le gouverneur en conseil.

Siège social

OBJECTIVE

Objective

4. The objective of the CIHR is to excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system, by

(a) exercising leadership within the Canadian research community and fostering collaboration with the provinces and with individuals and organizations in or outside Canada that have an interest in health or

MISSION

Mission

4. IRSC a pour mission d'exceller, selon les normes internationales reconnues de l'excellence scientifique, dans la création de nouvelles connaissances et leur application en vue d'améliorer la santé de la population canadienne, d'offrir de meilleurs produits et services de santé et de renforcer le système de santé au Canada, et ce par :

a) l'exercice d'un leadership dans les milieux canadiens de la recherche et l'encouragement à la collaboration avec les provinces ainsi que les personnes et orga-

Joining a conversation: the problem/gap/hook heuristic

Lorelei Lingard

- Join a conversation
- •Identify a problem
- •Map a gap
- •Use a hook

● <https://link.springer.com/article/10.1007/s40037-015-0211-y>

Making your intro compelling

Your research does more than ask a question:

- It tackles a problem in the world
- It's a problem we don't have all the answers for
- And the answers matter, because we'd do things differently if we knew them

Problem, Gap & Hook

- The problem is that ...
- What we know is But we don't know ...
- And this matters because ...

Reliability- example

- Problem – XX construct in XX patients is important because...
- Gap... we need to measure XX and one way is XX. We know that XX can do XX but we do not know if reliable and valid in XX
- Hook .. We might make errors in deciding if patients have changed which results in inability to access needed treatment or wasting resources
- research studies could fail to detect true treatment benefit

Develop a KT plan at the start of your research

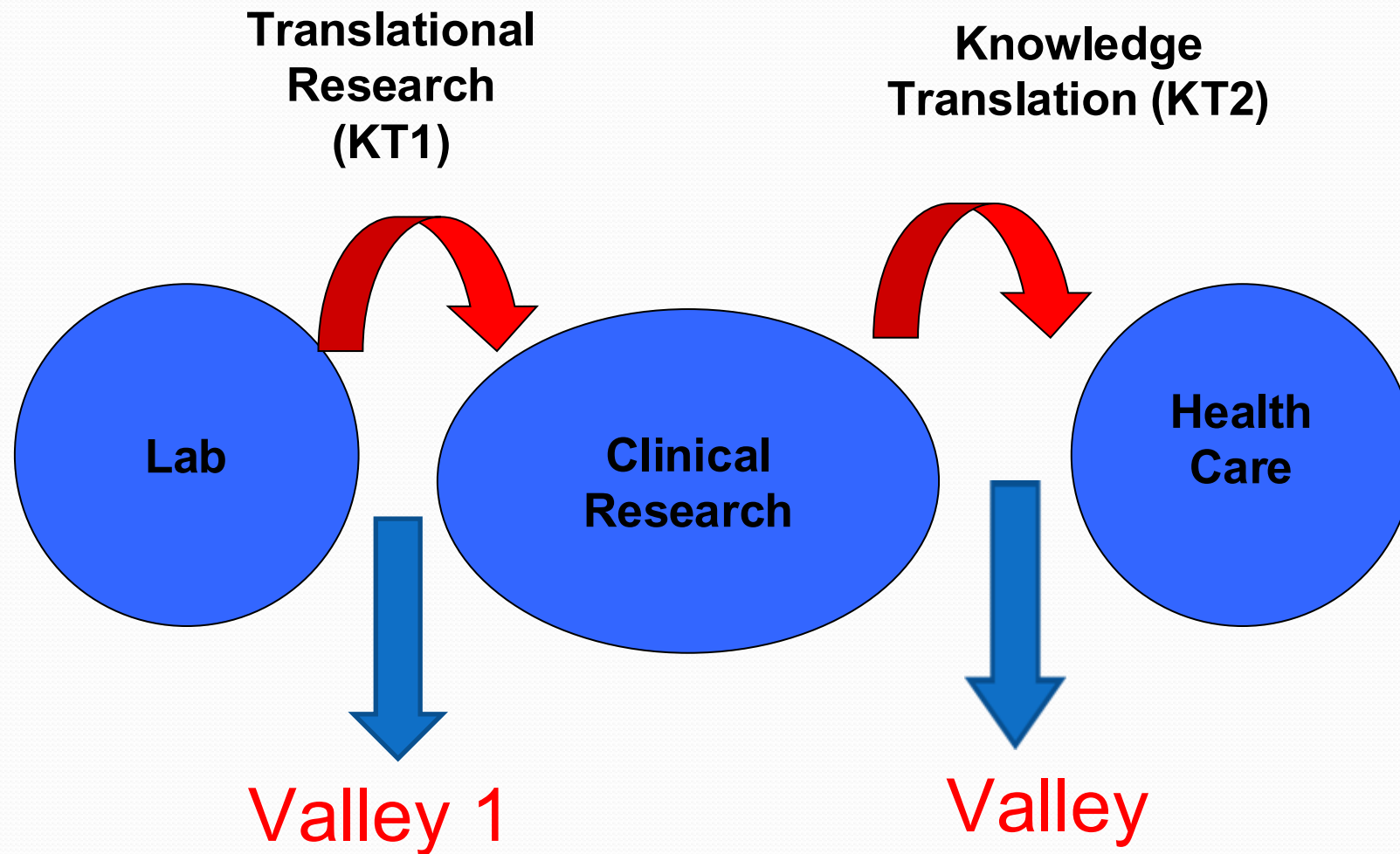
The
plan
.....
is to have a
plan
before you need a
plan

IF YOU FAIL TO PLAN,
YOU ARE PLANNING

TO FAIL.

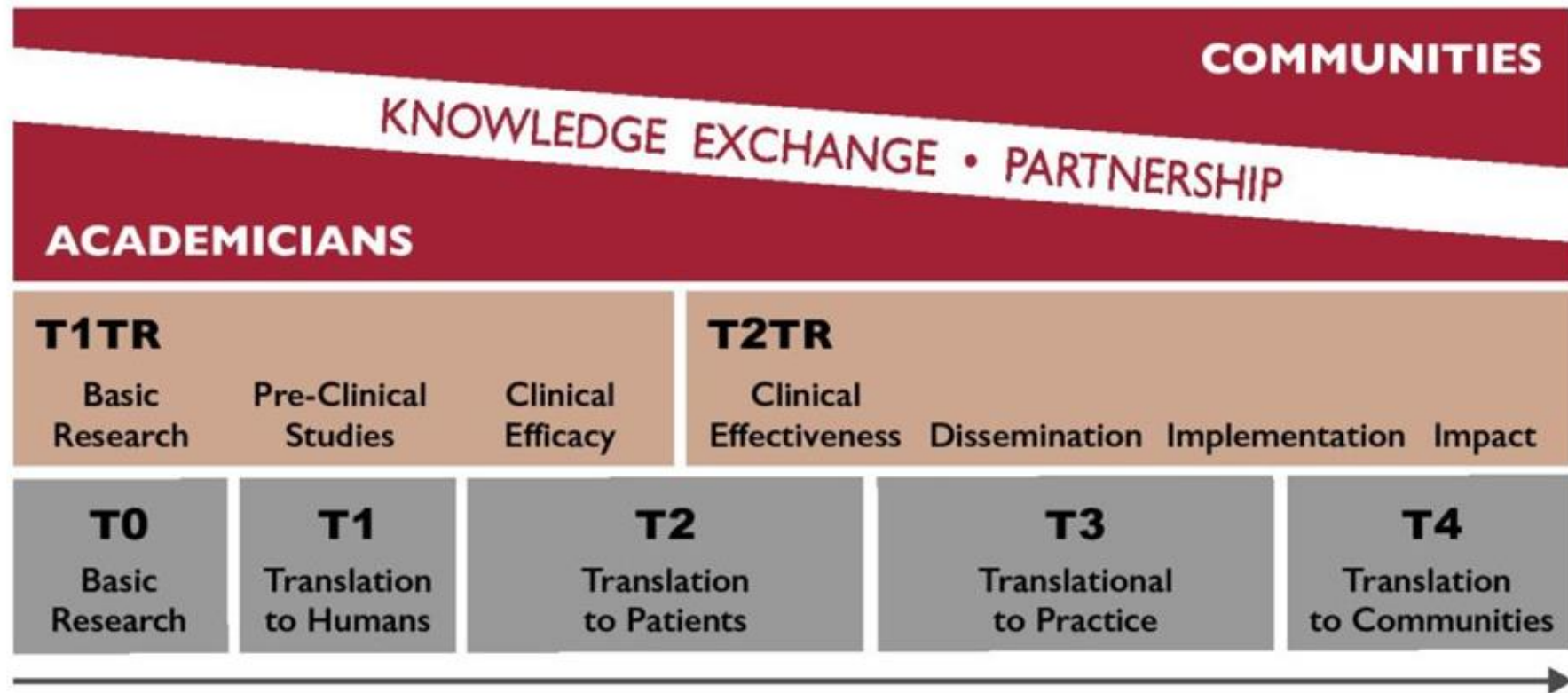
-BENJAMIN FRANKLIN

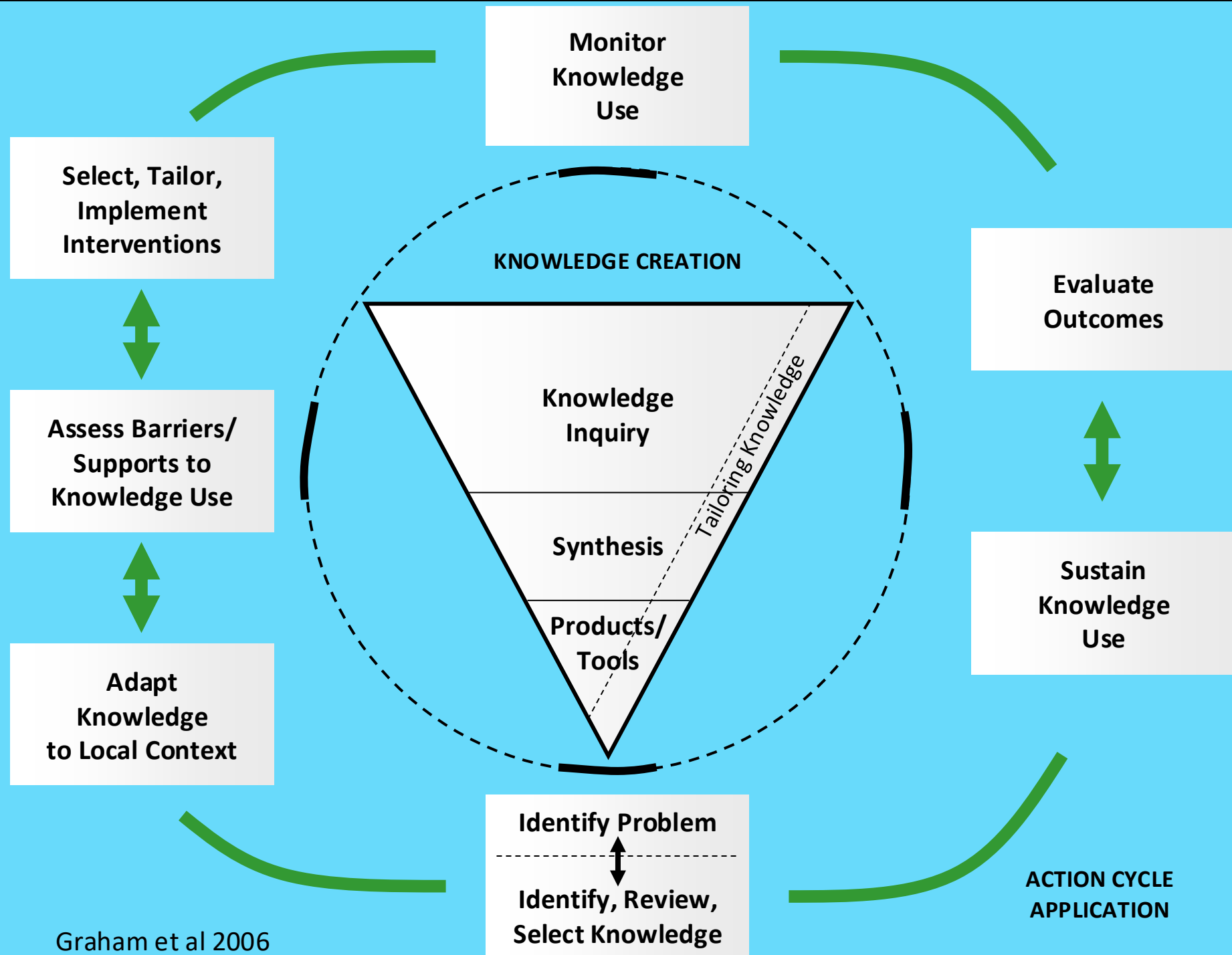
Types of KT



Translational Research

What is the T0 to T4 Translational Research Continuum?



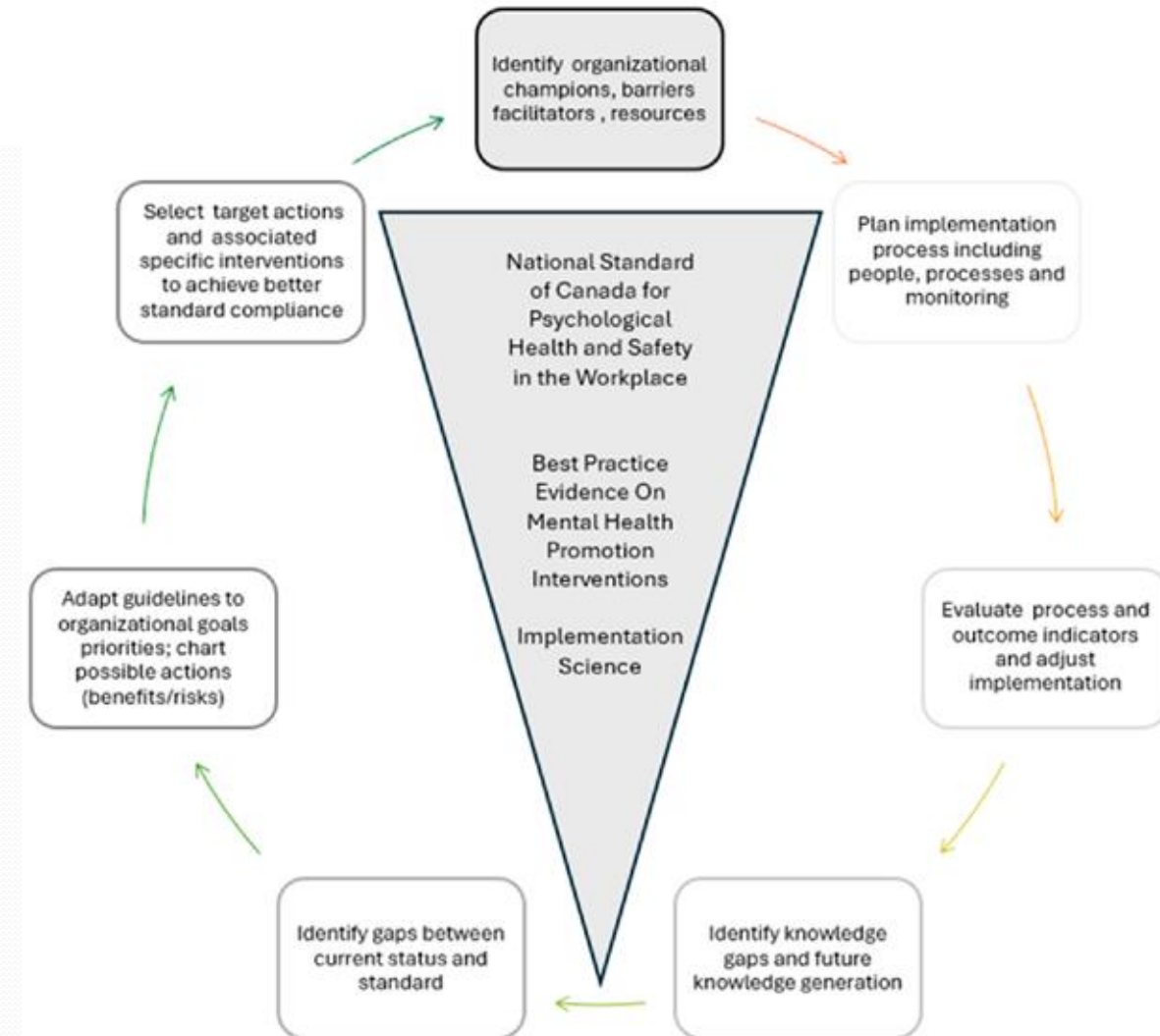




Building a Resilience Ecosystem to Improve Employee Mental Health and Wellbeing in Canadian High-Stress Low-Control Occupations

by Gregory S. Anderson ^{1,*} , Yan Song ¹ , Rosemary Ricciardelli ² , Joy C. MacDermid ³ , Heidi Cramm ⁴ , Deborah Norris ⁵ and R. Nicholas Carleton ⁶

- longitudinal multiple-cohort implementation science study
- described mental health strategies implemented and associated organizational outcomes across five PSP organizations implementing change within the psychological standard framework.



In person versus online KM??



Disability and Rehabilitation

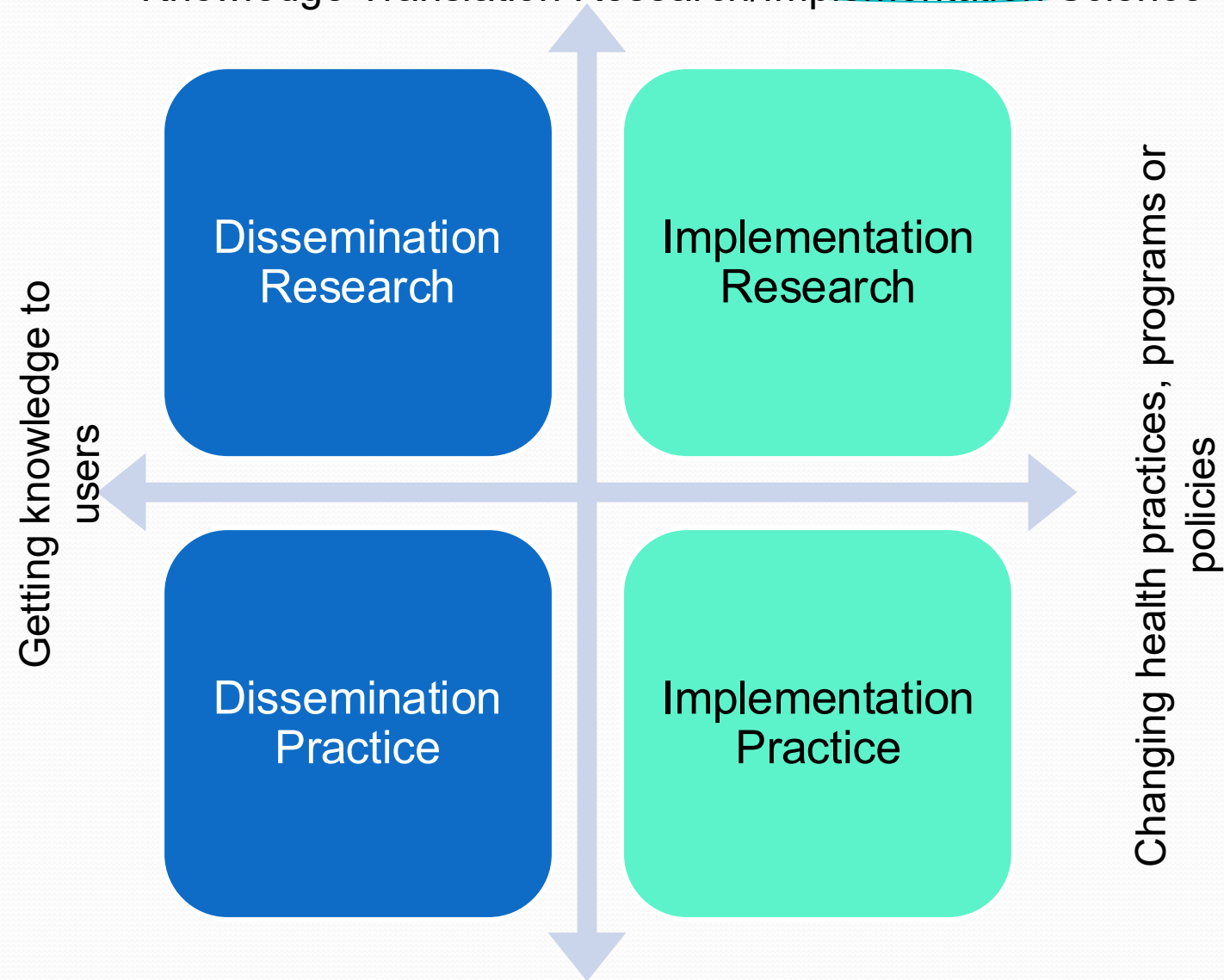


ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/idre20

Online learning versus workshops: a rank minimized trial comparing the effect of two knowledge translation strategies designed to alter knowledge, readiness to change, and self-efficacy with respect to rehabilitation outcome measures

Mike Szekeres & Joy C. MacDermid

Knowledge Translation Research/Implementation Science



Knowledge Translation/Mobilization,
Implementation

Implementation - Research definitions

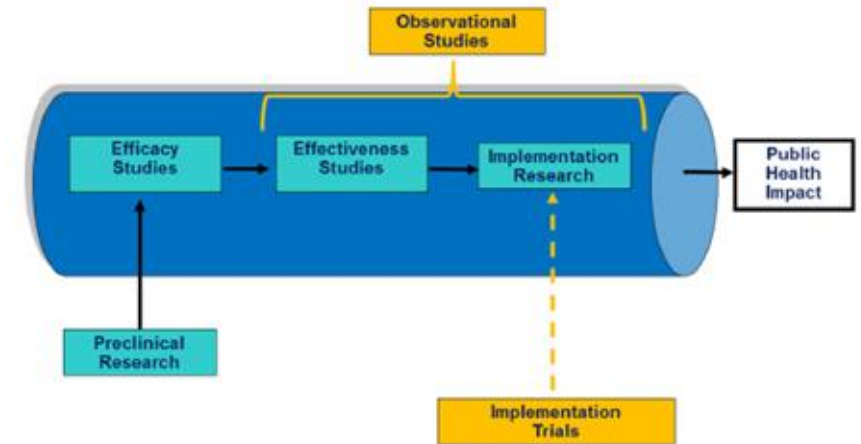
- **Knowledge translation research** is the scientific study of the determinants of knowledge use and the methods to promote the uptake of research findings by health care providers, policy makers, and patients...often used interchangeably with implementation research or quality improvement research and involves investigating the methods, mechanisms, and measurements, which influence the KT process.
- **Implementation Science** is the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services and care
- **Implementation research**: “the scientific study of the processes used in the implementation of initiatives as well as the

How IS fits/differs from other research

When defining implementation science, some very non-scientific language can be helpful...

- The intervention/practice/innovation is **THE THING**
- *Effectiveness* research looks at whether **THE THING** works
- *Implementation* research looks at how best to help people/places **DO THE THING**
- Implementation strategies are the stuff we do to try to help people/places **DO THE THING**
- Main implementation outcomes are **HOW MUCH** and **HOW WELL** they **DO THE THING**

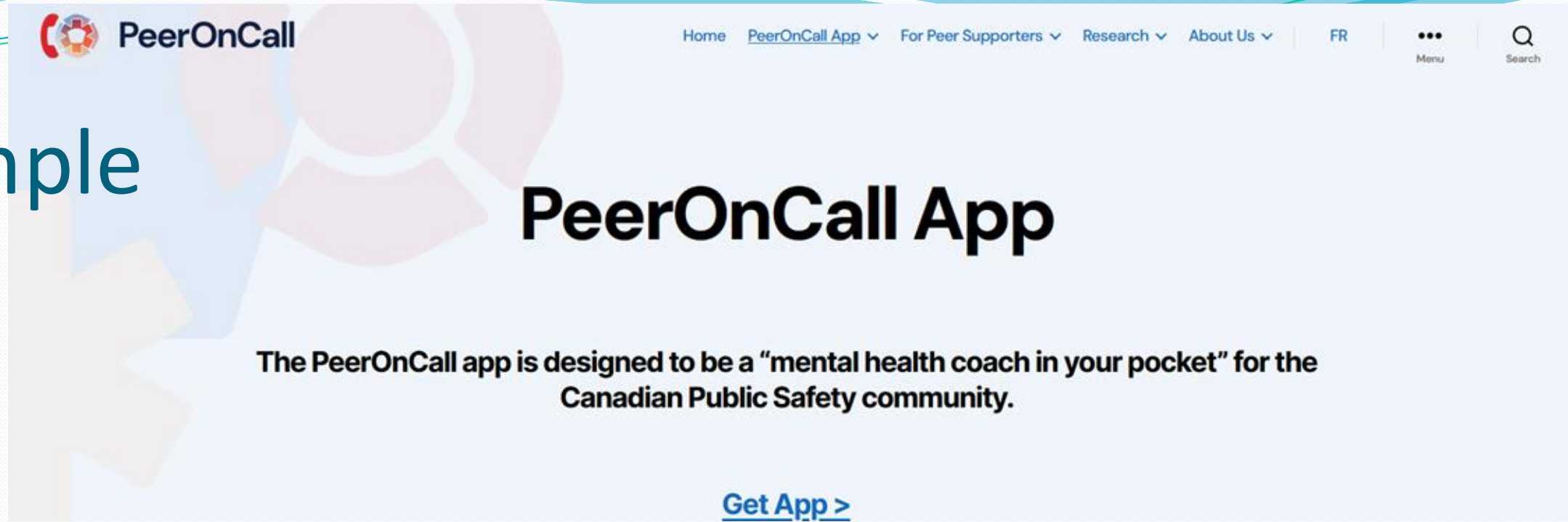
Types of implementation research



Research Questions: clinical vs IS

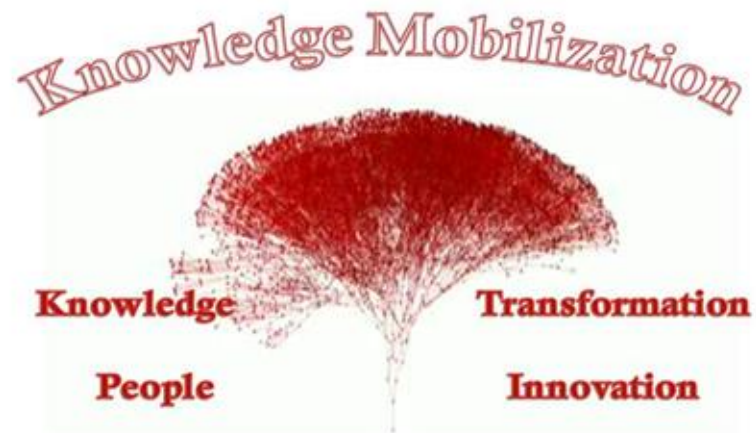
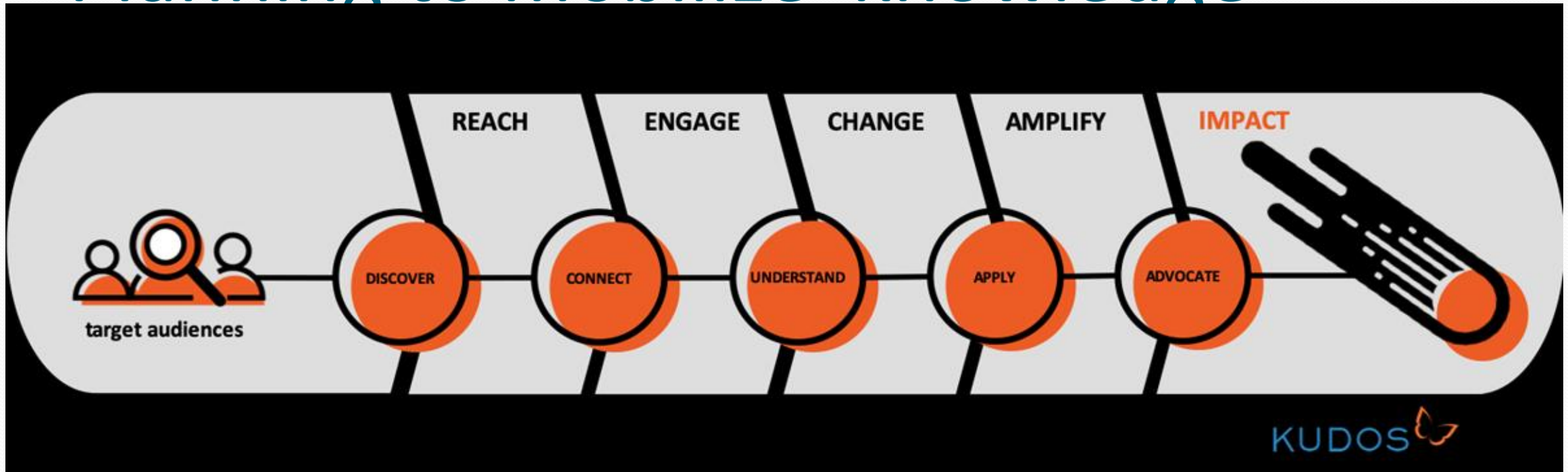
Stage	Clinical	Implementation Science
Hypothesis-effectiveness	Treatment A is more effective than treatment B	A multimodal implementation strategy can increase use of intervention A compared to intervention B
Research Question - prediction	Predictor X will predict health outcome y	Predictors x1, x2, x3 will influence uptake of strategy/intervention I
Use of model	To identify mechanisms, predictors of health outcomes within individuals	To identify mechanisms, predictor, uptake, fidelity and impact of implementation within a context/system

Example



- CIHR funded implementation cluster randomized trial comparing structured/push versus less structured pull approaches to implement in 20 fire services across Canada
 - Develop a pool of peer supporter
 - App upgrades

Planning to mobilize knowledge



DEBATE

Open Access

Knowledge translation of research findings

Jeremy M Grimshaw^{1*}, Martin P Eccles², John N Lavis³, Sophie J Hill⁴ and Janet E Squires⁵

1. What should be transferred?
2. To whom should research knowledge be transferred?
3. By whom should research knowledge be transferred?
4. How should research knowledge be transferred?
5. With what effect should research knowledge be transferred?

What???

- Best evidence

- Repeated
- Synthesized
- Unlikely to change with further studies

- Key Message is clear

- Actionable message



To Whom?

Table 1 Stakeholders for different types of research

Potential stakeholder	Type of research			
	Basic	Clinical	Health Services	Population Health
Consumers	-	+++	+++	-
Professionals	-	+++	+++	-
Local Administrators	-	++	+++	+++
National Policy Makers	-	+++	+++	+++
Regulatory Bodies	+++	+++	+++	+++
Industry	+++	+++	++	+
Research Funder	+++	+++	+++	+++
Researchers	+++	+++	+++	+++

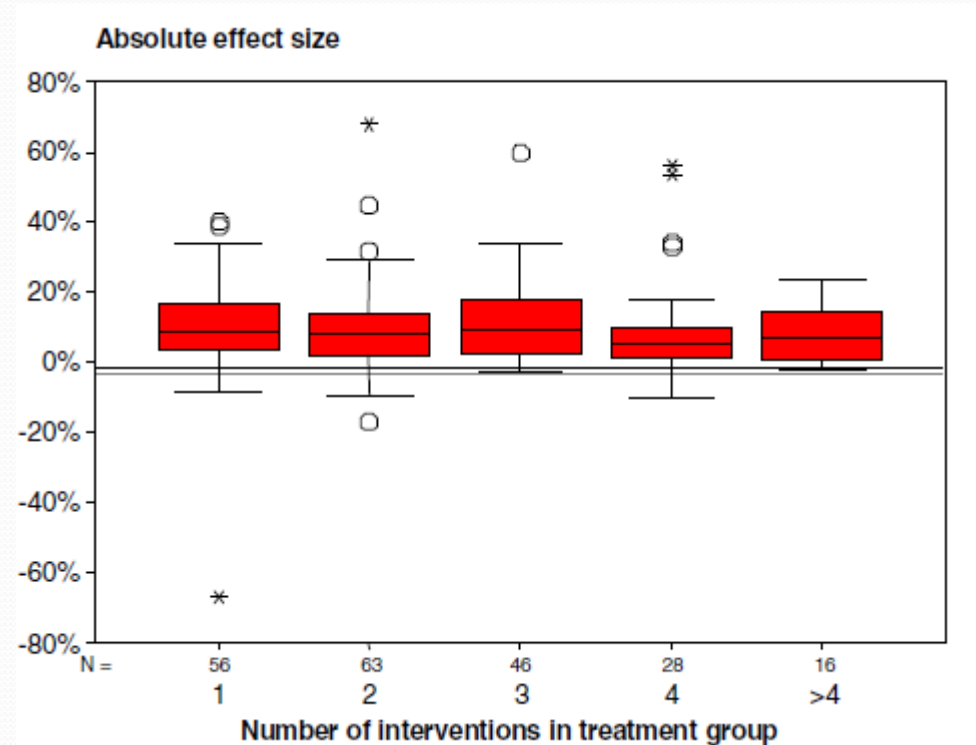
By whom? How???

Whom

- Credible person
- Linked in
 - Sustained relationships

How?

- Many different interventions
- Moderate effects sizes



HOW
TO...



Diffusion

- conference presentations
 - non-peer-reviewed publications
 - peer-reviewed publications (open-access journal/archive)
 - web-based activities (e.g. postings, wikis, blogs, podcasts, etc.)
 - other:
- patient decision-support aids
 - new educational materials/sessions
 - events/courses
 - interactive small group meeting/workshop
 - plain-language summaries
 - summary briefings to stakeholders
 - reminders
 - social media/marketing
 - knowledge broker involvement
 - media release/outreach campaign
 - networks/networking

Dissemination

- Engaging networks
- patient-mediated intervention
- performance feedback
- engage champions/opinion leaders to enact KT
- financial intervention or incentive
- arts-based KT activity
- audit and feedback
- communities of practice
- Other-BE CREATIVE

Application (with users)

- adapt knowledge for use
- commercialize
- identify barriers/supports to the use of findings
- tailor messages and interventions to promote use
- monitor knowledge use
- evaluate outcomes
- ensure sustainability
- other: ??

With what effect?

Ideally,

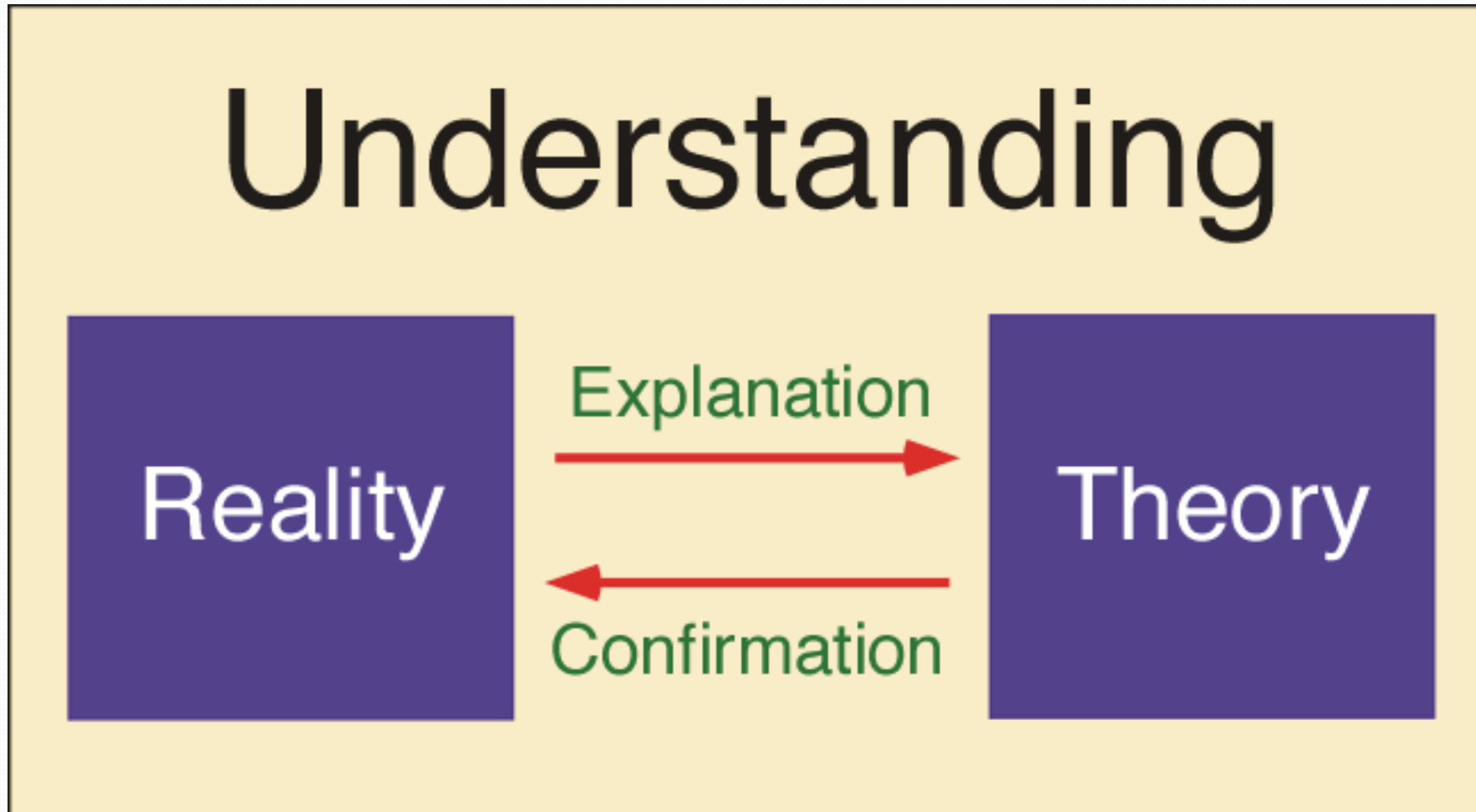
- BETTER HEALTH



Often

- Simple process outcomes that can be monitored
 - Ordering of imaging
 - Prescriptions
- Intention
- Knowledge
- Self-reported Behaviour
- Responses to Scenarios

We use models to help us frame KT



Diffusion of Innovation

Knowledge



Persuasion



Decision



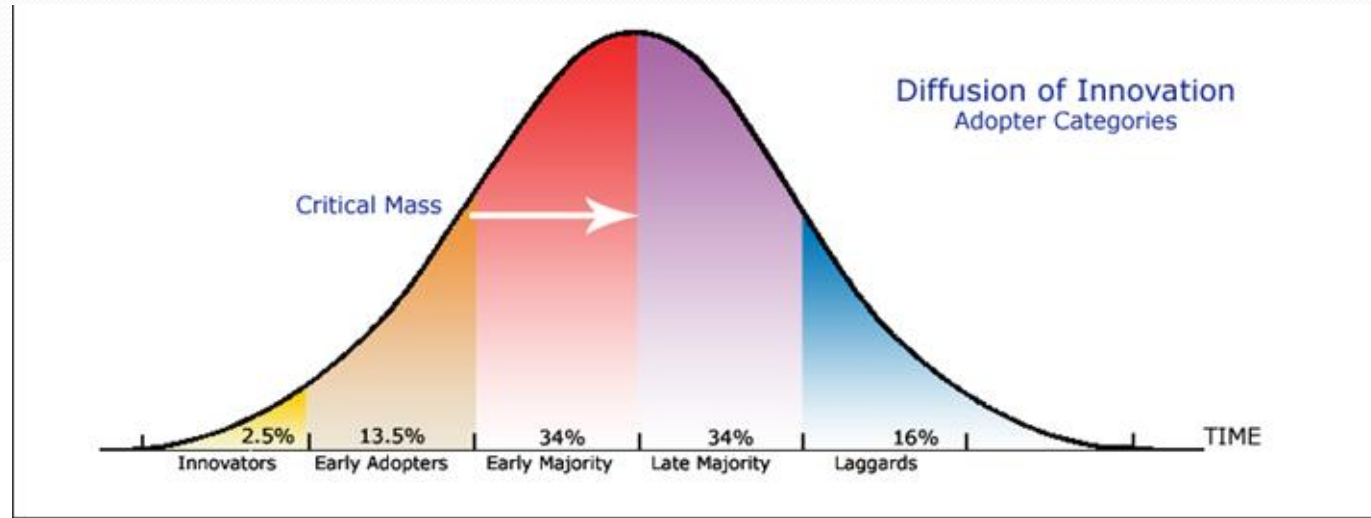
Implementation



Rejection



Confirmation



Rogers' Diffusions of Innovations

1. **Compatibility** – be compatible with the values, beliefs and current needs of individuals
2. **Relative Advantage** – beneficial to the user
3. **Simplicity** – message needs to be easy to understand and communicate to others
4. **Trialability** – able to be tested by the user on a small scale before being implemented more widely
5. **Observability** – potential users can watch others try new knowledge first

Pick a strategy that leverages these factors



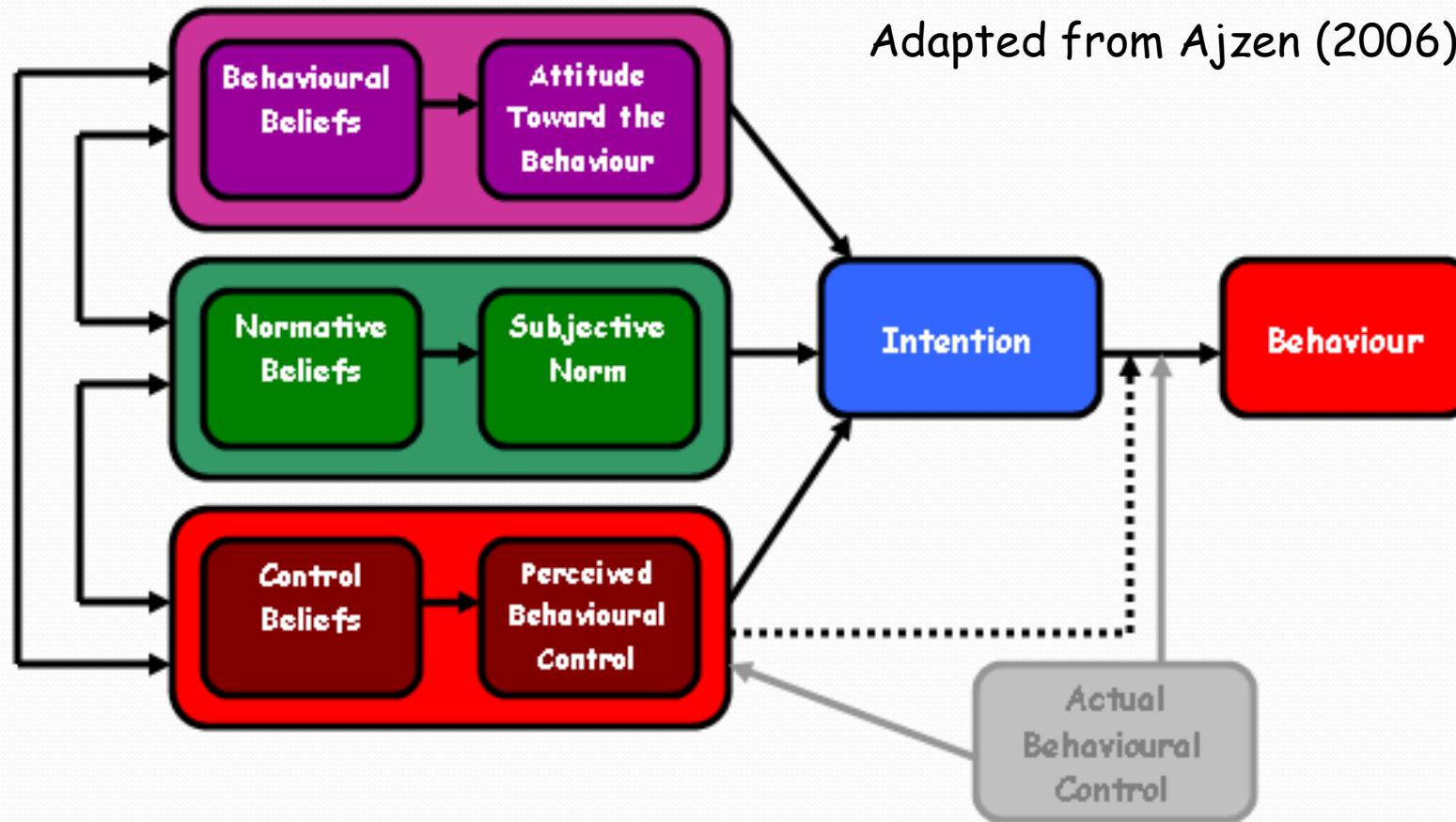
Readiness to Change (The Transtheoretical Model)

<u>Stages of Change</u>	<u>Processes of Change</u>
•Precontemplation •Contemplation •Preparation •Action •Maintenance	•Consciousness Raising •Emotional Arousal •Commitment •Reward •Environmental-Re-evaluation

(Prochaska & DiClemente, 1995)

Theory of Planned Behaviour

Adapted from Ajzen (2006)



Beliefs

● Beliefs are:

● Subjective

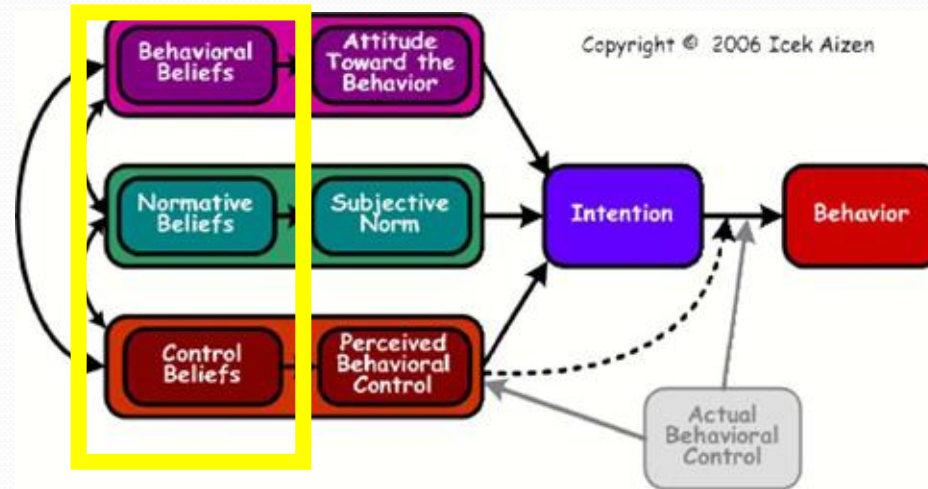
● Weighted

● 3 Kinds

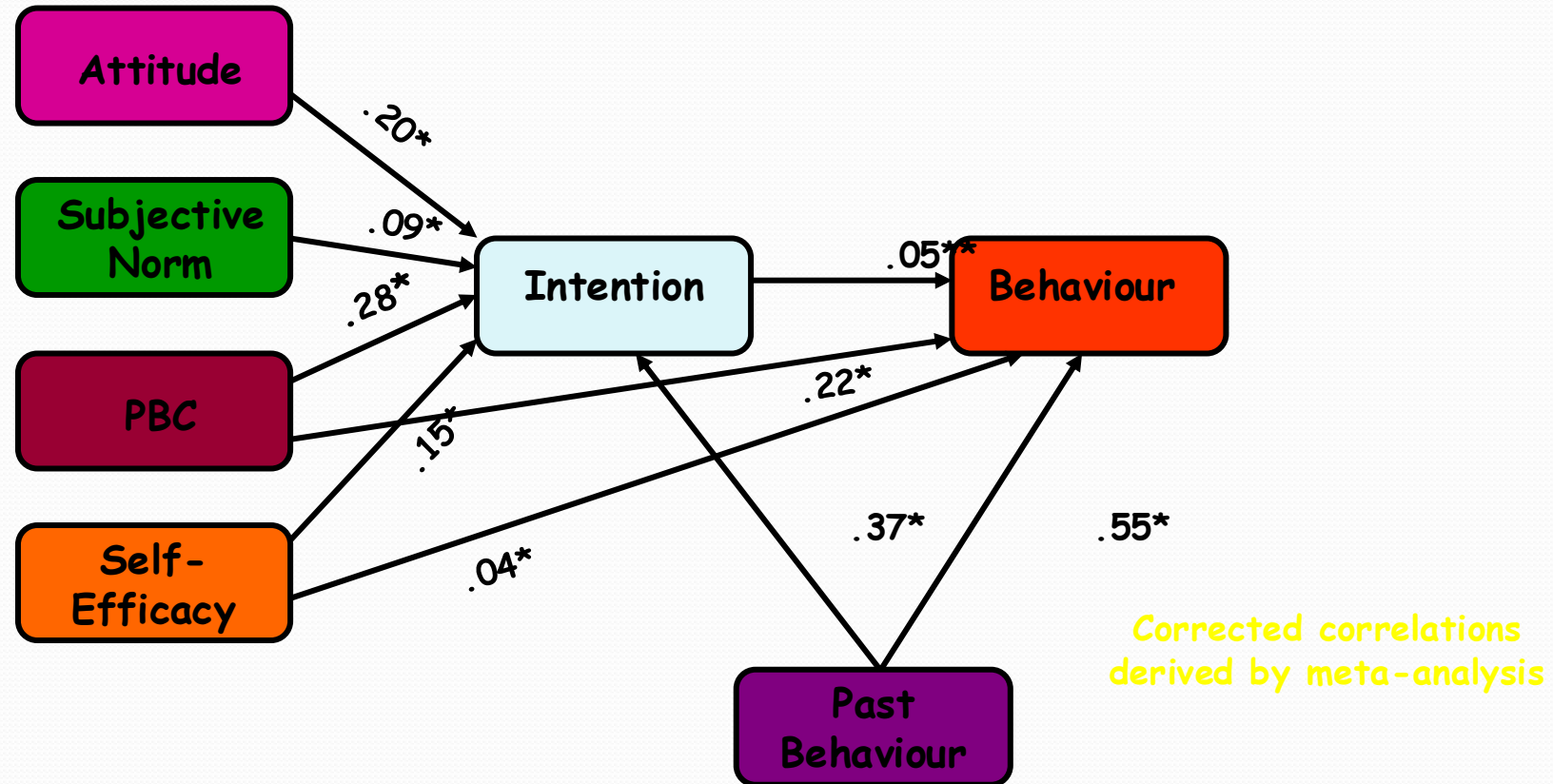
● Behavioral – Belief that behavior will produce wanted results.

● Normative – Perceived expectations of others, i.e. spouse or friends.

● Control – Perceived presence of influences that help or hinder outcomes.

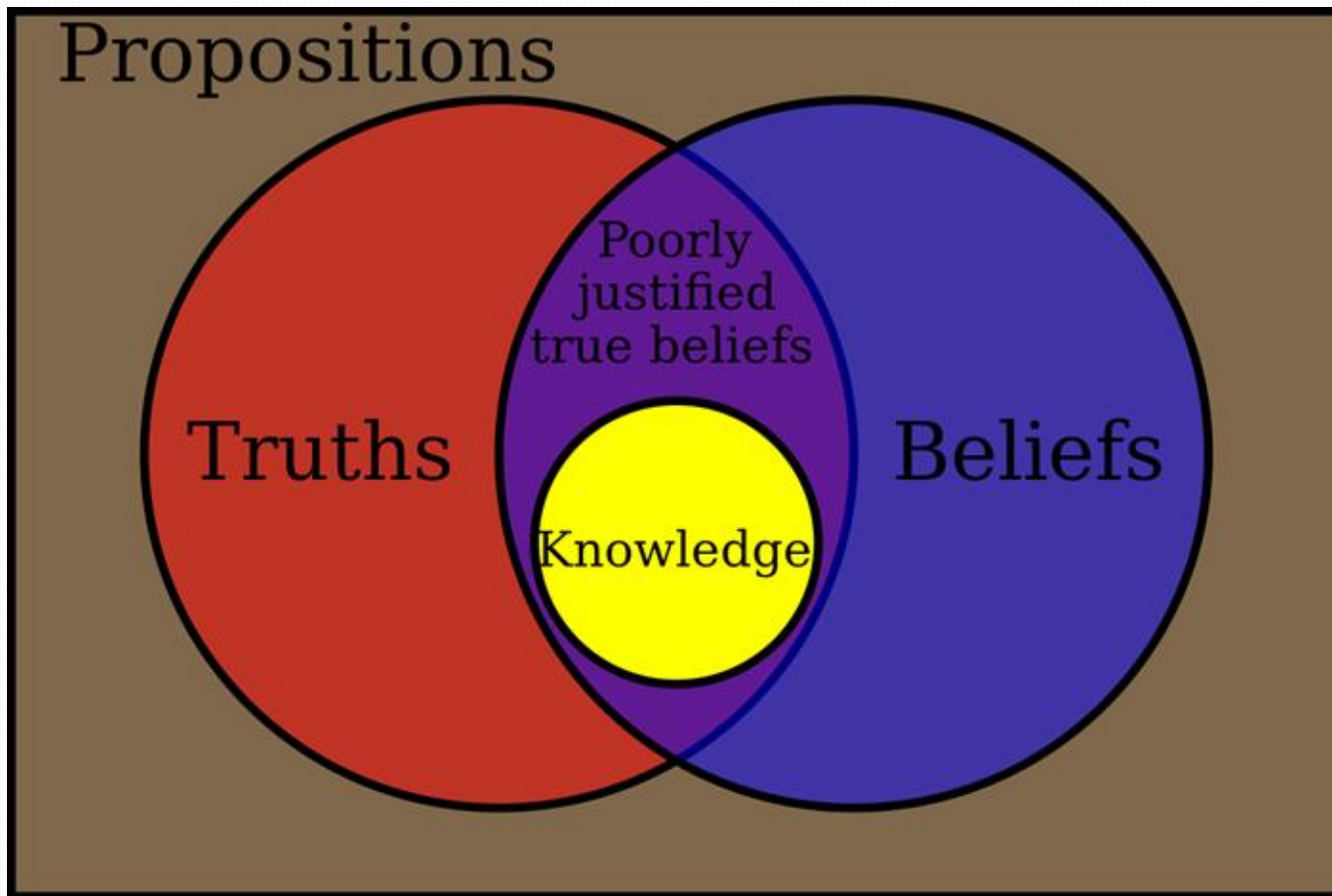


Path analysis diagram showing structural relationships between the TPB variables, self-efficacy and past behaviour



Adapted from Hagger, Chatzisarantis and Biddle (2002)

Identify a belief



PARiHS Framework

Promoting Action on Research Implementation in
Health Services (PARiHS)

Successful
implementation

$$= f(E, F, C)$$

E = evidence

F = facilitation

C = context

Evidence

- Research
- Clinical Experience
- Patient Experience
- Local Information

Facilitation

- Appropriate
- Purpose
- Role
- Skills

Context

- Culture
- Leadership
- Evaluation

Consolidated Framework Implementation Research

Strength



Weakness

What does it mean?



‘Everything but the kitchen sink’

a very large number of things,
whether needed or not.

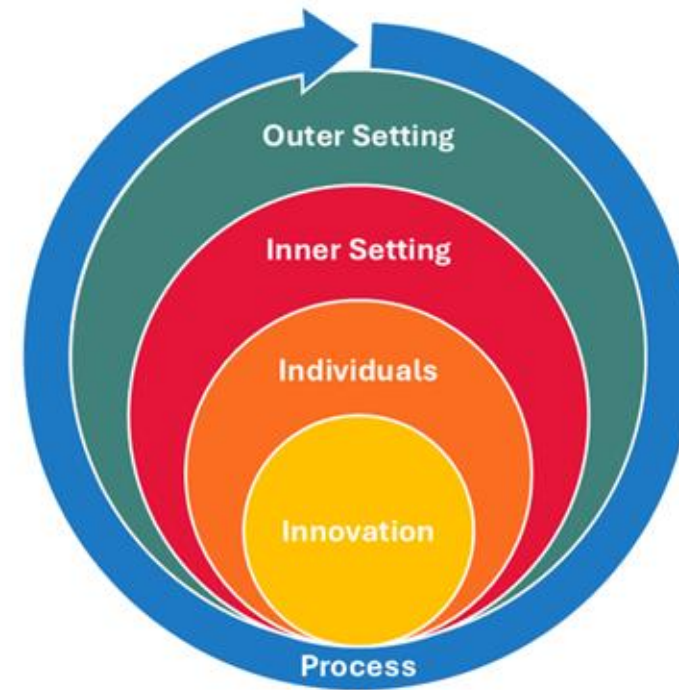
English Idioms: Learn and Play



What is CFIR?

What can I do with CFIR?

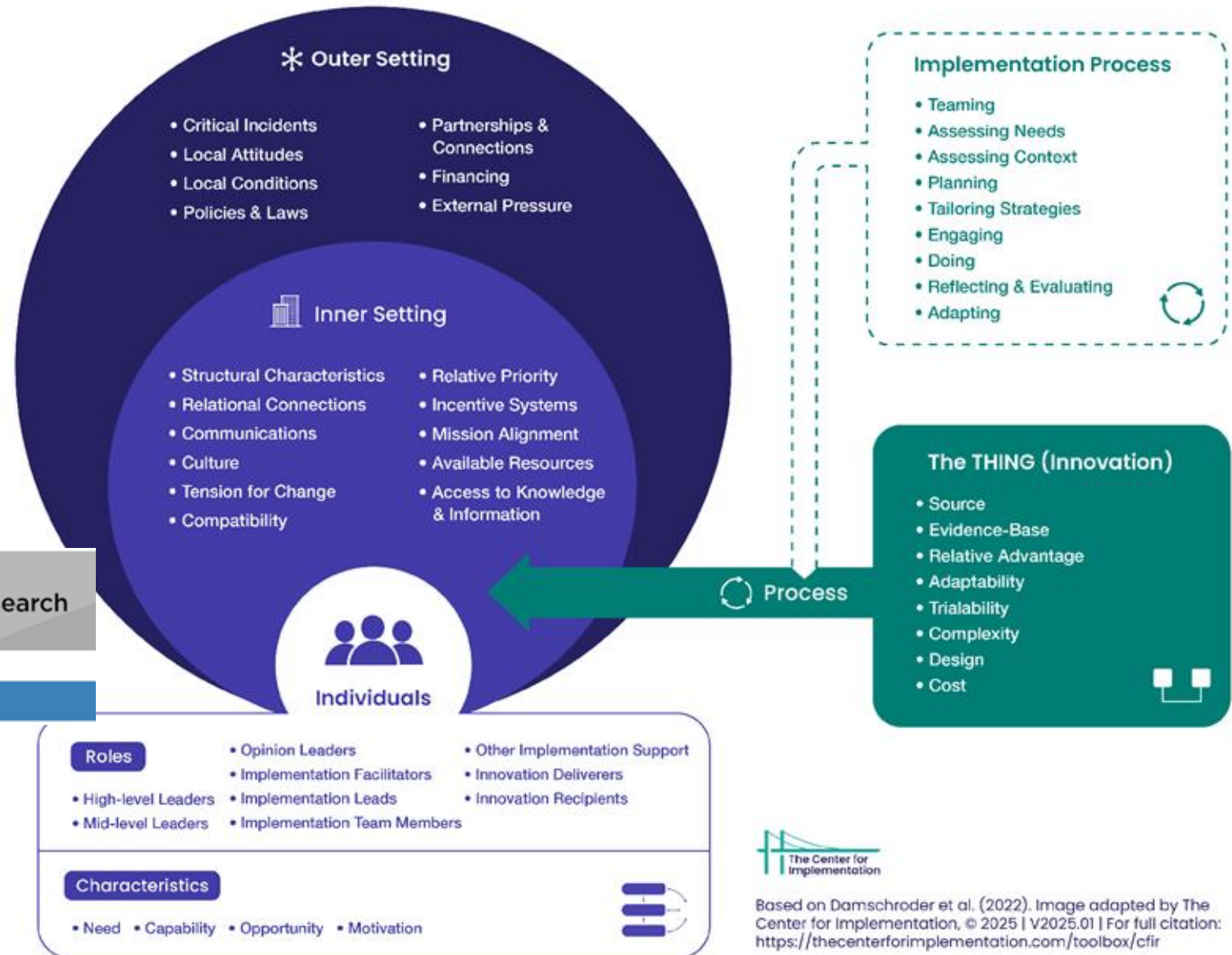
Where can I learn more
about CFIR?



<https://cfirguide.org/>

<https://cfirguide.org/>

Consolidated Framework for Implementation Research (CFIR)



Based on Damschroder et al. (2022). Image adapted by The Center for Implementation, © 2025 | V2025.01 | For full citation: <https://thecenterforimplementation.com/toolbox/cfir>

Systematic review | [Open Access](#) | [Published: 17 May 2016](#)

A systematic review of the use of the Consolidated Framework for Implementation Research

[M. Alexis Kirk](#) , [Caitlin Kelley](#), [Nicholas Yankey](#), [Sarah A. Birken](#), [Brenton Abadie](#) & [Laura Damschroder](#)

[Implementation Science](#) **11**, Article number: 72 (2015) | [Cite this article](#)

50k Accesses | **533** Citations | **45** Altmetric | [Metrics](#)

Recommendations

<https://implementationscience.biomedcentral.com/articles/10.1186/s13012-016-0437-z/tables/4>

1. Consider how to most meaningfully use the CFIR across different phases of implementation (pre-, during, or post-implementation).
2. Report how CFIR constructs were selected for assessment.
3. Increase use of CFIR to investigate outcomes
4. Integrate the CFIR more holistically into the research process.

Debate | [Open Access](#) | [Published: 22 January 2022](#)

Conceptualizing outcomes for use with the Consolidated Framework for Implementation Research (CFIR): the CFIR Outcomes Addendum

[Laura J. Damschroder](#) , [Caitlin M. Reardon](#), [Marilla A. Opra Widerquist](#) & [Julie Lowery](#)

[Implementation Science](#) **17**, Article number: 7 (2022) | [Cite this article](#)

32k Accesses | **77** Citations | **36** Altmetric | [Metrics](#)

CFIR Implementation Determinants

Innovation Determinants

Antecedent Assessments

Acceptability, Appropriateness, Feasibility
Implementation Climate, Implementation Readiness

Implementation Outcomes

Anticipated Implementation Outcomes

Indicators of anticipated
implementation success or failure

- Adoptability
- Implementability
- Sustainability

Actual Implementation Outcomes

Indicators of actual
implementation success or failure

- Adoption
- Implementation
- Sustainment

Innovation Outcomes

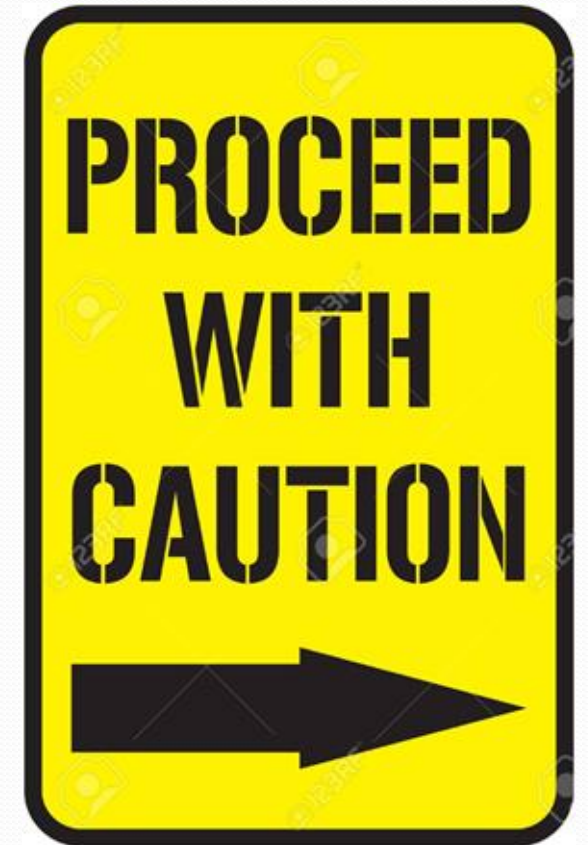
Innovation Outcomes

Indicators of innovation success or failure:
innovation impact on key constituents



Summary

- CFIR provides a conceptual framework, operational definitions, language and guidance to support rigour and clarity in implementation science
- CFIR is comprehensive in a beneficial and yet potentially overwhelming way and selection of the foci within the framework is essential to feasibility, rigour, and communication.



Research proposals/grants - categories of KT

End of grant KT

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

Integrated KT

The researcher engages potential knowledge users as partners in the research process.

This requires a collaborative or participatory approach to research that is action oriented and is solutions and **impact** focused.

http://www.melaniebarwick.com/KTTemplateFillable_dl.php

Knowledge Translation Planning Template©



Scientist
Knowledge
Translation
Training™



Knowledge
Translation
Professional
Certificate™

INSTRUCTIONS: This template was designed to assist with the development of Knowledge Translation (KT) plans for research but can be used to plan for non-research projects. The Knowledge Translation Planning Template is universally applicable to areas beyond health. Begin with box #1 and work through to box #13 to address the essential components of the KT planning process.

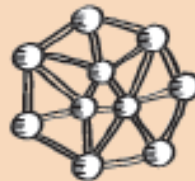
(1) Project Partners



- ☐ researchers
- ☐ consumers - patients/families
- ☐ the public
- ☐ decision makers
- ☐ private sector/industry
- ☐ research funding body
- ☐ volunteer health sector/NGO
- ☐ practioners
- ☐ other



(2) Degree of Partner Engagement



- ☐ from idea formulation straight through
- ☐ after idea formulation & straight through
- ☐ at point of dissemination & project end
- ☐ beyond the project

Consider: Not all partners will be engaged at the same point in time. Some will be collaborators, end users or audiences, or people hired to do specific activities.

(3) Partner(s) Roles



(1) What do the partner(s) bring to the project?

(2) How will partner(s) assist with developing, implementing or evaluating the KT plan?

Action: Capture their specific roles in letters of support to funders, if requested.



(4) KT Expertise on Team



- ☐ scientist(s) with KT expertise
- ☐ consultant with KT expertise
- ☐ knowledge broker/specialist
- ☐ KT supports within the organization(s)
- ☐ KT supports within partner organization(s)
- ☐ KT supports hired for specific task(s)

TARGET AUDIENCES (Knowledge Users)

[illegible]

Integrated KT-working with stakeholders to solve their issues and share implementation

- Firefighters performed tasks **in full bunker gear (23 kg./50 lbs) including SCBA (18 kg. / 40 lbs)**
- Lift Nozzle (6 kg./13 lbs) and drag hose (18 m) to pylon (barrier)



KT INTERVENTION TAXONOMY in PSP SECTOR

TARGET AUDIENCE (Knowledge User)

[illegible]

Real world research solutions

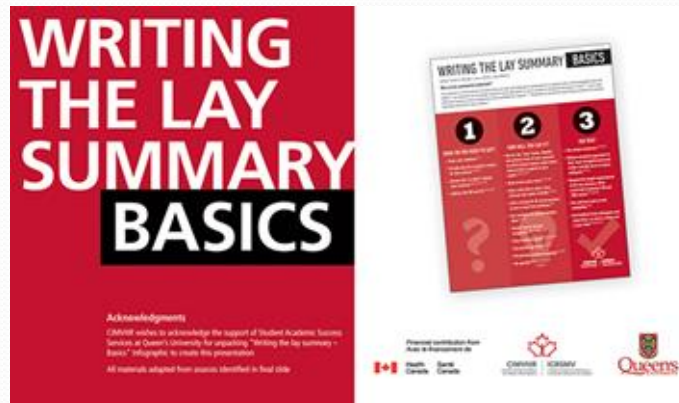


<https://firewell.ca/>



Lay Summaries

- Use grade 8 language
- Avoid technical terms
- Do not overstate



The effects of age and gender on Canadian firefighters' fitness levels

Summary by FIREWELL

We wanted to know if Canadian firefighters' fitness levels are affected by age and gender.



Download PDF

What is the problem?

Firefighting is a physically demanding profession so firefighters are believed to be fitter than the healthy population. Physical fitness can be measured by the maximum amount of oxygen that our body uses during exercise (aerobic capacity) and muscle strength levels. Previous research found that the firefighters' aerobic capacities decrease with age, but their strength levels remain unchanged. We wanted to know if Canadian firefighters' fitness levels are affected by age and gender.

How did the team study the problem?

A group of 49 firefighters and 40 healthy participants who were matched by age underwent the Modified Canadian Aerobic Fitness Test. The results of the fitness test was used to calculate the participants' aerobic capacities. The firefighters' upper and lower body strength levels were measured by grip strength test and static floor lifting test, respectively. We used statistical analyses to compare the aerobic capacities of the firefighters and healthy participants. We also used a different statistical technique to see if relationships existed between firefighters' aerobic capacities and upper and lower body strength levels.

What did the team find?

The FIREWELL team found that the aerobic levels among firefighters were similar to other healthy people. In both groups, age had an impact on aerobic levels. The firefighters' aerobic capacities decreased with age, while upper and lower body strength levels remain unaffected. Gender affected the firefighters' strength levels, but not their aerobic capacity.

How can this research be used?

The study results could potentially be used by fire services to develop a minimal aerobic capacity and



FIREWELL

Research Summary

The effects of age and gender on Canadian firefighters' fitness levels

We wanted to know if Canadian firefighters' fitness levels are affected by age and gender.



What is the problem?

Firefighting is a physically demanding profession so firefighters are believed to be fitter than the healthy population. Physical fitness can be measured by the maximum amount of oxygen that our body uses during exercise (aerobic capacity) and muscle strength levels. Previous research found that the firefighters' aerobic capacities decrease with age, but their strength levels remain unchanged. We wanted to know if Canadian firefighters' fitness levels are affected by age and gender.

How did the team study the problem?

A group of 49 firefighters and 40 healthy participants who were matched by age underwent the Modified Canadian Aerobic Fitness Test. The results of the fitness test was used to calculate the participants' aerobic capacities. The firefighters' upper and lower body strength levels were measured by grip strength test and static floor lifting test, respectively. We used statistical analyses to compare the aerobic capacities of the firefighters and healthy participants. We also used a different statistical technique to see if relationships existed between firefighters' aerobic capacities and upper and lower body strength levels.

What did the team find?

The FIREWELL team found that the aerobic levels among firefighters were similar to other healthy people. In both groups, age had an impact on aerobic levels. The firefighters' aerobic capacities decreased with age, while upper and lower body strength levels remain unaffected. Gender affected the firefighters' strength levels, but not their aerobic capacity.

How can this research be used?

The study results could potentially be used by fire services to develop a minimal aerobic capacity and body strength level requirements for firefighting recruits. They can also use these results to develop suitable conditioning programmes to that will help improve the fitness levels of Canadian firefighters.

Cautions

This study only investigated the fitness levels of Hamilton firefighters who may perform different duties than other fire services. In addition, it is important to note that our male to female ratio was 15:1 so our findings about females are unstable until we test more women.

Reference: Nazari G, MacDermid JC, Sinden K, Overend T. Comparison of Canadian firefighters and normal controls based on the submaximal fitness testing and strength considering age and sex. *Int J Occup Saf Ergon*. 2017 Sep 7:1-29. [Epub ahead of print].

Funding Sources: Ministry of Labor FRN #13-R-027

www.firewell.ca

Format

- What is the problem?
- How did the team study the problem?
- What did the team find?
- How can this research be used?
- Cautions
- Reference
- Website and logo

My experience

- KT research requires PI to be actively engaged (Time consuming)
- Knowledge users engagement and sustained relationships that build TRUST
 - Meet regularly – even if there is no grant
 - Priorities set by stakeholders-key
 - Knowledge users make key decisions about research conduct and sharing
 - Clarify expectations on deliverables in KT plan
- Don't expect knowledge users to understand academic agenda/timelines
- Not easy to write simply and have clear messages
- Have integrated, documented and flexible KT plan
- May need to wait for opportunities to knock
- Repeat, repeat, repeat
- Very rewarding work

Dealing with media

- Get media training
- Be careful watch you say-Prepare
- If able- review product
- Have a professional picture ready
- Practice presentation style
- Be prepared for responses



What gets picked up?

Prevalence and distribution of musculoskeletal disorders in firefighters are influenced by age and length of service

Publication FIREWELL

A study on the high prevalence of painful sites and burden of musculoskeletal disorders in Hamilton firefighters.

Negm A, MacDermid JC, Sinden K, D'Amico R, Lomotan M, MacIntyre NJ. **Prevalence and distribution of musculoskeletal disorders in firefighters are influenced by age and length of service.** *Journal of Military, Veteran and Family Health*, 2017;3(2).

To read the full scientific paper (free to download): click [here](#).

Media Articles (click on link to read)

[Western University's media release](#)

[Western News](#)

[Fire Rescue 1](#)

[London Free Press](#)

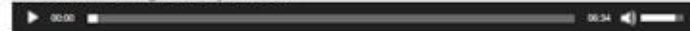
[The Hamilton Spectator](#)

[Radio Canada International](#)

[Global News](#)

Listen to Radio Interviews with Dr. Joy MacDermid

CBC London Morning (February 13, 2018)



[CBC Radio London Morning Interview Transcript](#)

AM980 CFPL Radio (February 16, 2018)



- A Hook
- Timely
 - In news
 - Tied to an event/occasion
- Accessible

Dealing with Responses

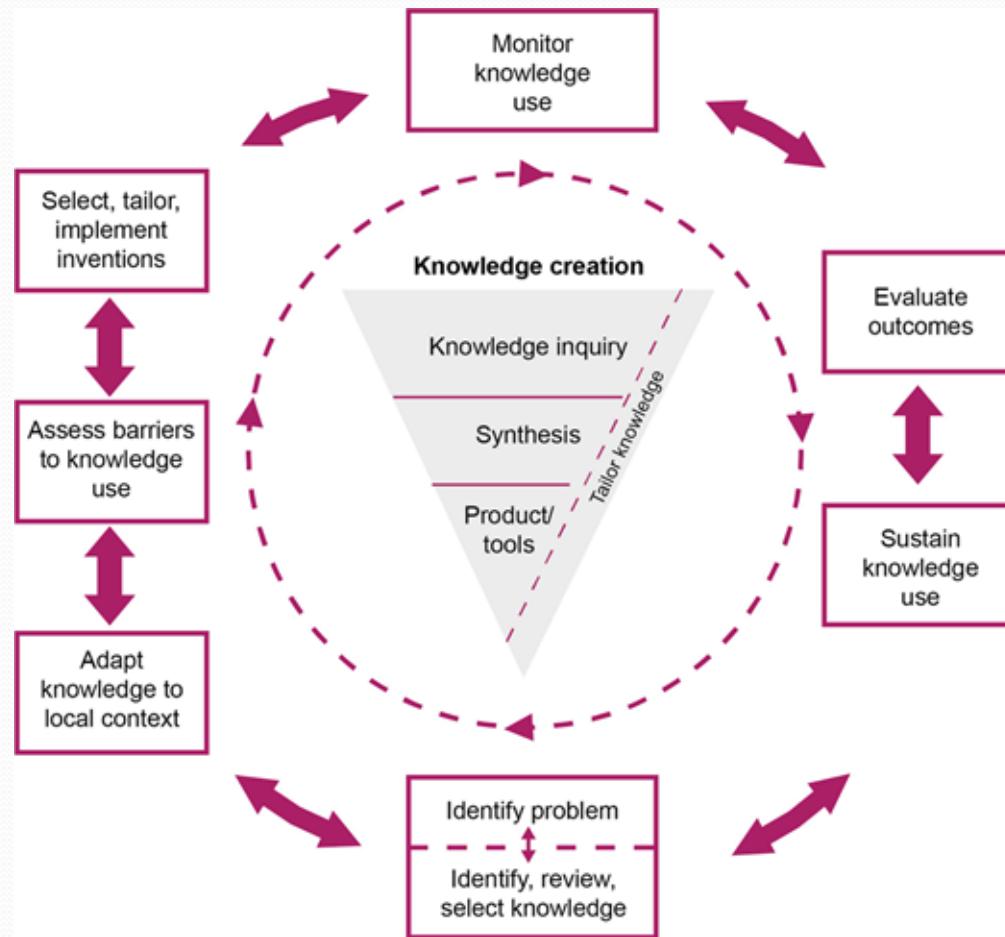
- Want more info....
- Need help
- Want to help
- Think you need to know something
- Have an issue



HOW DO YOU DEAL WITH YOUR NEGATIVE SOCIAL MEDIA FEEDBACK



KT case examples



Example 1 . Pick up

Research Article

Distribution of Number, Location of Pain and Comorbidities, and Determinants of Work Limitations among Firefighters

Goris Nazari ^{1,2} Temitope A. Osifeso,³ and Joy C. MacDermid^{1,2,3,4}

¹School of Physical Therapy, Faculty of Health Science, Western University, London, ON, Canada

²Collaborative Program in Musculoskeletal Health Research, Bone and Joint Institute, Western University, London, ON, Canada

³School of Rehabilitation Science, McMaster University, Hamilton, ON, Canada

⁴Roth McFarlane Hand and Upper Limb Centre, St. Joseph's Hospital, London, ON, Canada

- Picked up first by western news
- Then local radio channel-London
- Then radio close by
- Went away 2 days... all interview requests stopped...

Dr. MacDermid.

I just read an article in the London Free Press about the research you are doing regarding firefighter injuries and the study you did with Hamilton firefighters. I wish to share with you a couple of observations, should you be interested in hearing them.

1. Although the general public at large is generally unfamiliar, there is a significant distinction in North America and in many other locations around the world between full time Firefighters and Volunteer Firefighters. In fact, in Ontario there are over 19 000 Volunteer Firefighters compared with only 11 000 full time firefighters. I suspect that your study was done only with full time firefighters at Hamilton. I believe it is important you clarify this when sharing your research.
2. Many full time firefighters in Ontario work 24 hour shifts and as a result many have a second job, often with full time hours and that are also physically demanding in such roles as Paramedics and construction workers. Your study has no mention of this and I suspect it could have a significant impact on the results of your study.
3. Based on the information in item 1 above, it would be interesting to see some research done regarding Volunteer Firefighters, especially the impact that firefighting does to their money-earning career. Volunteer Firefighters, as you may know, carry a pager and have no regular working hours per se and providing this service to the community can happen at any time, whether that be through the night (missing sleep before arriving at their paid job in the morning) or interrupting their normal day job (with the gracious permission of their employer). It would be interesting to see if your observations are similar for these types of firefighters, especially at the busier Volunteer fire halls.

Thank you for your work in understanding the affects of working conditions of Firefighters in Ontario.

Len Wiltenburg
Blenheim



I'm glad you were able to see our work. This is one of a number of studies that I am working on with firefighters. Like you, I think firefighters health issues are very important.

We are aware that firefighters do very different types of tasks depending on whether they are full-time or volunteer, rural or urban, wildfire or city etc. in fact, we have been in touch with the group in Newfoundland that primarily work on oil rigs.

I'm very happy to be able to assist firefighters in recognizing health issues that might arise associated with their work, and hopefully eventually come up with solutions that work for many different types of firefighters.

We are aware that in some places firefighters are volunteer, some work 12 hour shifts and summer 24 hour shifts. You are right that our study did not control for other types of activity in second jobs or recreation that might have influenced the amount of musculoskeletal problems they have. However since these rates are higher than other high demand jobs it is an important issue for us to explore further. I would say that it is also important to explore other high demand jobs like paramedics and construction worker who also have high rates of injury.... but it might be for different reasons.

It might interest you to know that I am actually originally from Eastern Canada where the majority of firefighters are volunteer firefighters. We are collaborating with the group in Prince Edward Island looking at a mental health program for volunteer firefighters.

If you would like to see more about our work I welcome you to visit our website to see more about our collaborations and research. He also try to highlight the research done by other people that would be relevant firefighters. It is often difficult when you have a few minutes to speak about a single study to give the audience an impression about the details of a problem which can be quite complex.

Research is a slow and rigourous process, that happens in steps; but we hope to continue to study in questions that might be of value to firefighters

<https://firewell.ca/>

Thanks for your interest in our work



From: Anthony Van Eyk [<mailto:tonyvaneyk@yahoo.com>]

Sent: February 17, 2018 6:56 PM

To: Joy Christine Macdermid <jmacderm@uwo.ca>

Subject: Persistent firefighters' injuries make them 'working wounded'

Dear Joy,

What kind of academic fucking lunacy is it when one bureaucracy serves the needs of another while ignoring the needs of the taxpayers who enable this self serving bs at out expense? Why do you feed the narrative "firefighting it tough?" You phat bitch, surely you realize that the RICO unionistas' will use this at MY expense?

Instead of serving the taxpayer, why do you incessantly serve another bureaucracy? You need to climb out of that ivory tower of yours and get real.

I have family who is a firefighter. Can you say "the squeaky wheel gets the grease?" And here you are, an overpaid cloistered bureaucracy feeding this narrative. You dumb fuck. A firefighter RARELY lifts more than 20Kg. A firefighter RARELY actually works or does anything. Can you say OVERPAID and UNDER WORKED? Though that might be a reflection of what you do, it absolutely applies to them.

Why don't you bookish nerds study that? Else stfu.

I'm getting tired seeing 42% of my earning going to pay for you phat assed goofs.

That is all.

Sent from [Mail](#) for Windows 10

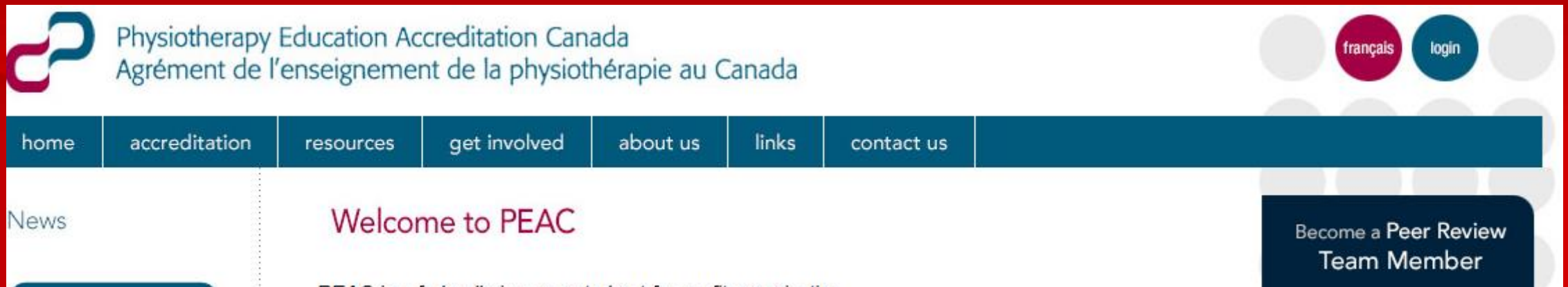


When policy is a hot potato: A case
example of
licensure in PT

Joy C MacDermid PT PhD

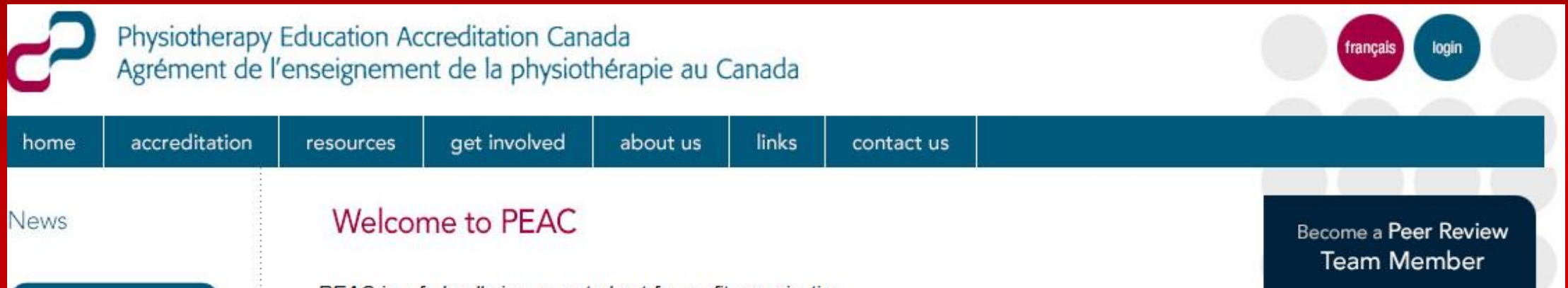
Context

- PTs MSc professional training program
 - After relevant undergrad + prerequisites
- 2 years of course work and clinical placements
- Programs are accredited by PEAC



Context

- After completion of programs requirements, all nationally trained PT residents write a written exam and complete a objective structure clinical examination (OSCE)





Policy failure

- Since pandemic CAPR has failed to license PTs
 - Delayed and Failed online exam
- Results
 - Many PT resident have lost jobs, money on failed exams
 - Loss of confident in CAPR
 - People in limbo for 2 years
 - Loss to other professions
 - ? Enrollment
 - Public confidence ???

Our bright idea...

PLOS ONE

PUBLISH ABOUT BROWSE

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

A systematic review and meta-analysis of measurement properties of objective structured clinical examinations used in physical therapy licensure and a structured review of licensure practices in countries with well-developed regulation systems

Pavlos Bobos, Dimitra V. Pouliopoulou, Alexandra Harriss, Jackie Sadi, Alison Rushton, Joy C. MacDermid

Published: August 3, 2021 • <https://doi.org/10.1371/journal.pone.0255696>

Article

Authors

Metrics

Comments

Media Coverage

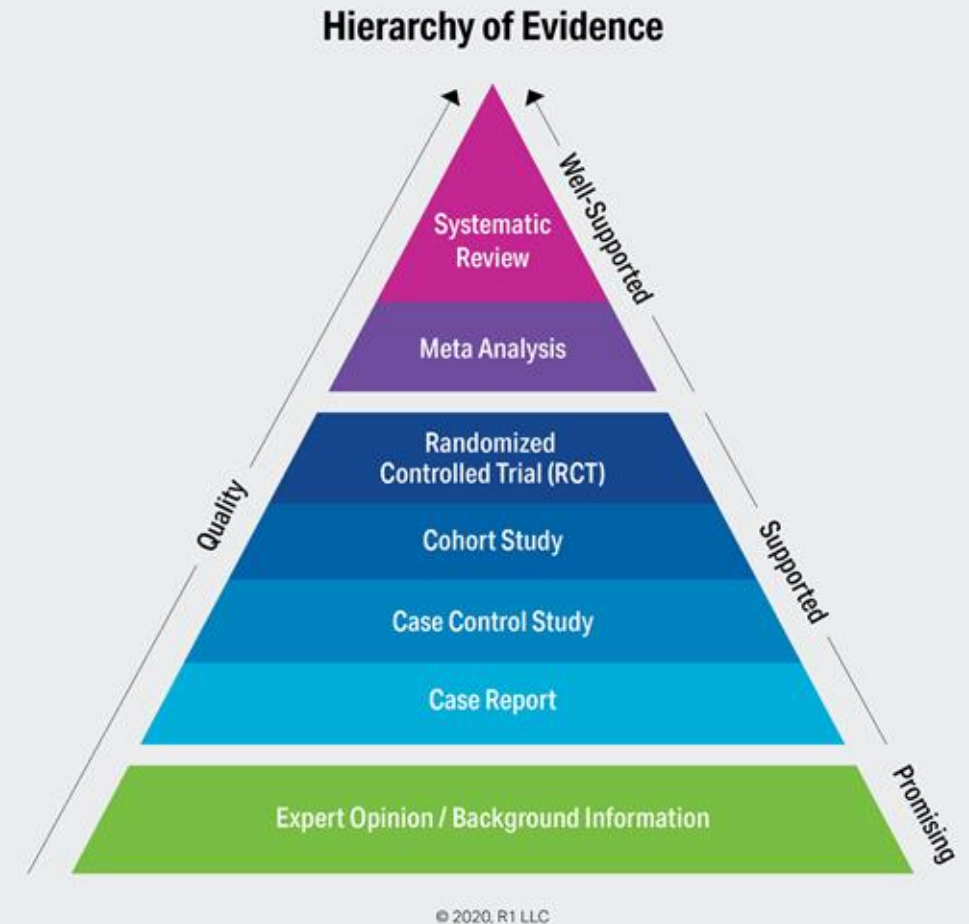


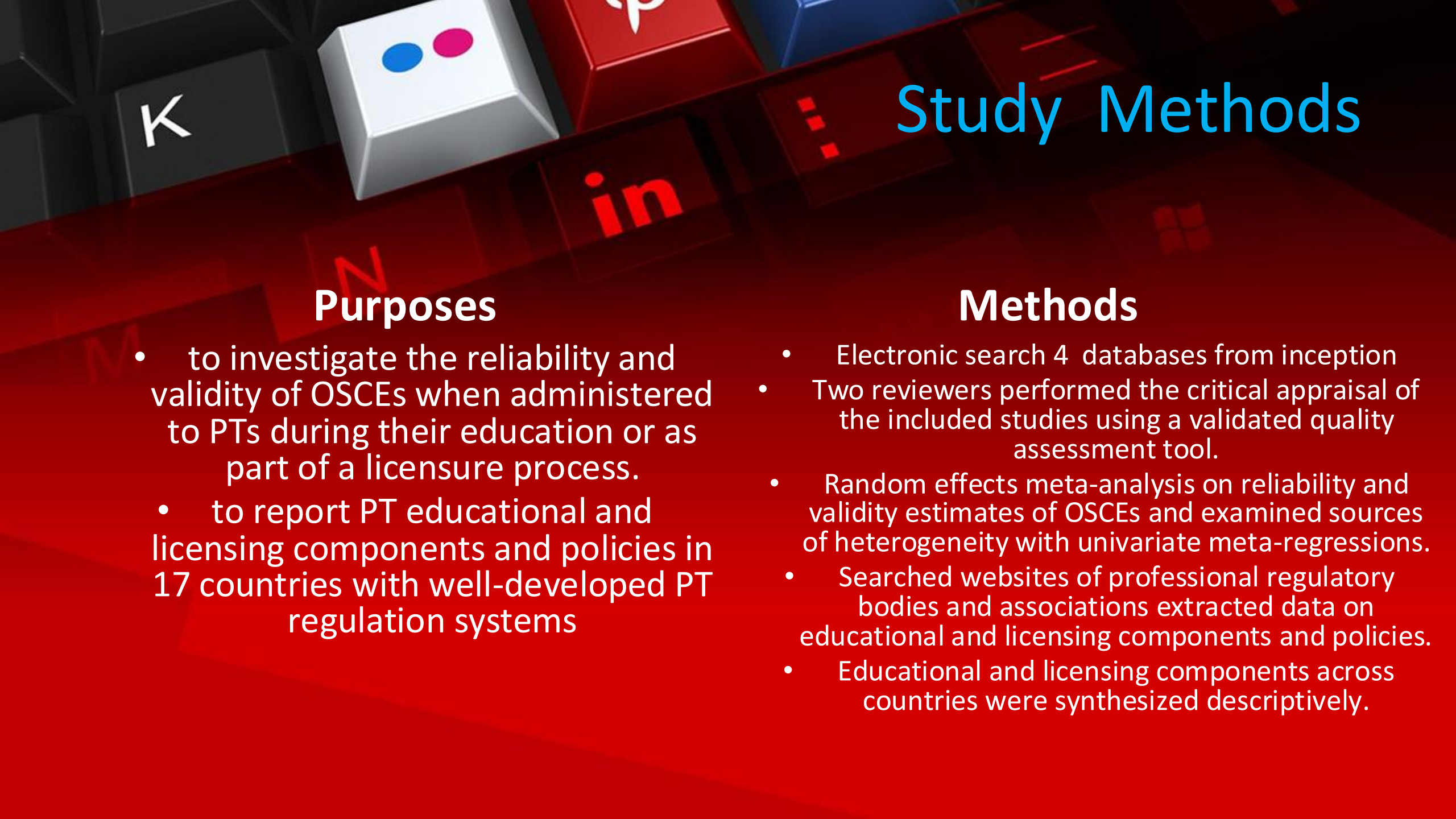
Abstract

Abstract

1. Introduction

Background





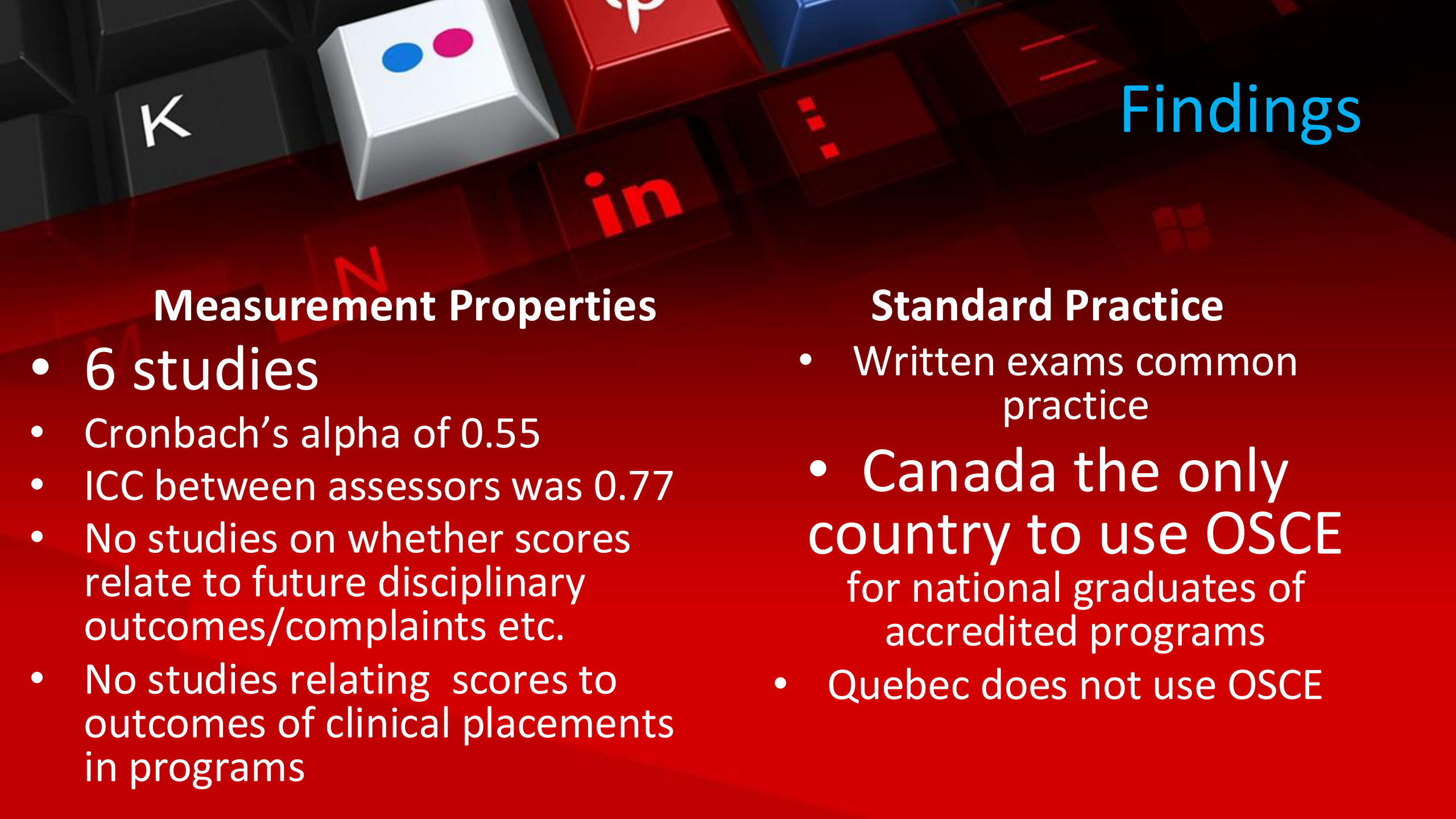
Study Methods

Purposes

- to investigate the reliability and validity of OSCEs when administered to PTs during their education or as part of a licensure process.
- to report PT educational and licensing components and policies in 17 countries with well-developed PT regulation systems

Methods

- Electronic search 4 databases from inception
- Two reviewers performed the critical appraisal of the included studies using a validated quality assessment tool.
- Random effects meta-analysis on reliability and validity estimates of OSCEs and examined sources of heterogeneity with univariate meta-regressions.
- Searched websites of professional regulatory bodies and associations extracted data on educational and licensing components and policies.
- Educational and licensing components across countries were synthesized descriptively.



Findings

Measurement Properties

- 6 studies
- Cronbach's alpha of 0.55
- ICC between assessors was 0.77
- No studies on whether scores relate to future disciplinary outcomes/complaints etc.
- No studies relating scores to outcomes of clinical placements in programs

Standard Practice

- Written exams common practice
- Canada the only country to use OSCE for national graduates of accredited programs
- Quebec does not use OSCE

Clear Message –

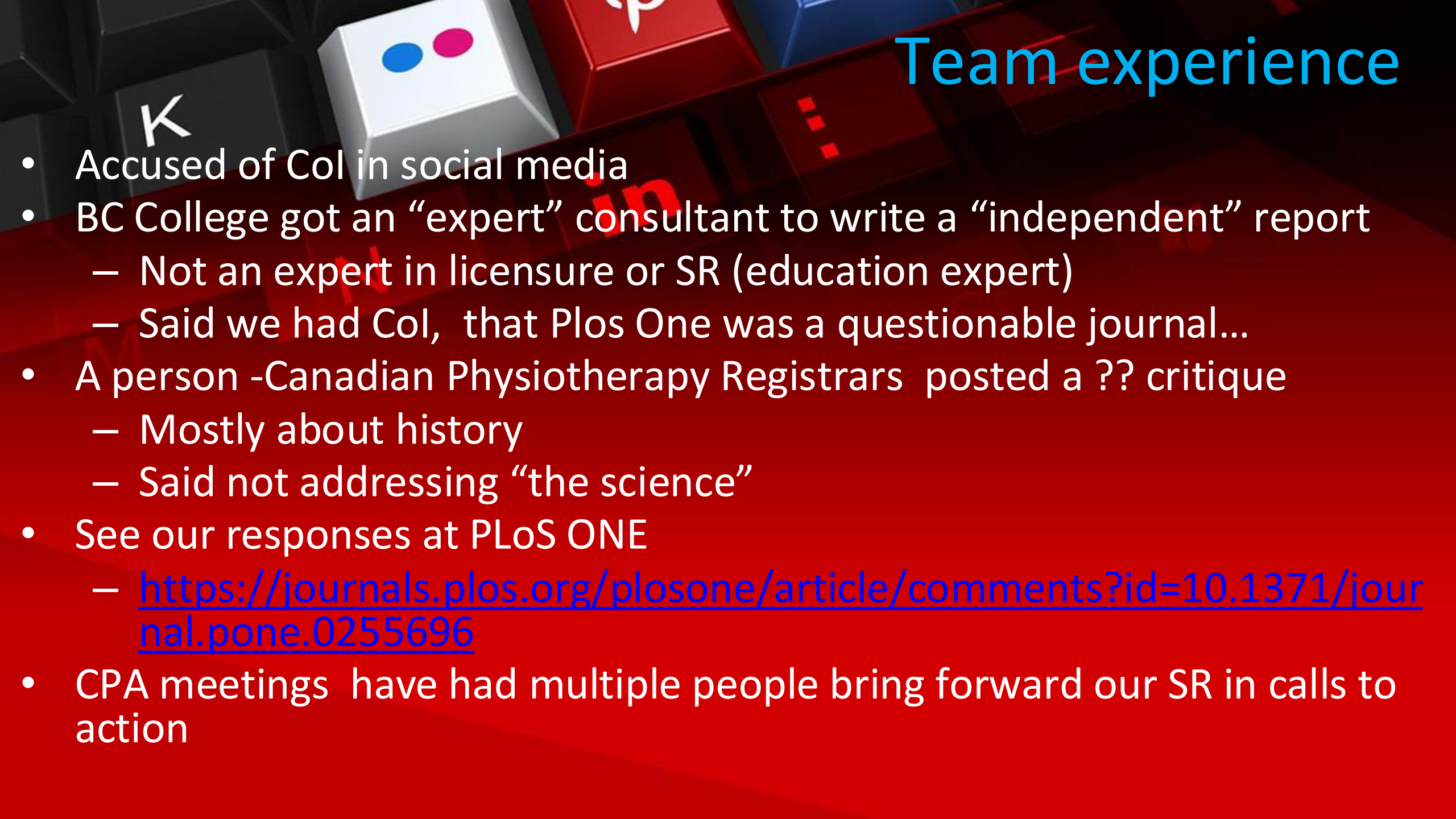
- Limited evidence of reliability
- No evidence OSCE fulfills a licensure purpose
- Not standard practice





Issues

- What happens when your message is not popular?
- Discussion Points
 - What are best practices/standards for intellectual discourse on social media
 - Engaging decision-makers when they are reluctant to accept need for change
 - The scientific literacy of the population



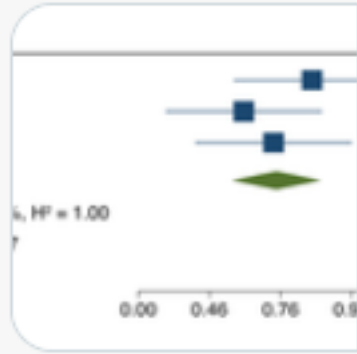
Team experience

- Accused of Col in social media
- BC College got an “expert” consultant to write a “independent” report
 - Not an expert in licensure or SR (education expert)
 - Said we had Col, that Plos One was a questionable journal...
- A person -Canadian Physiotherapy Registrars posted a ?? critique
 - Mostly about history
 - Said not addressing “the science”
- See our responses at PLoS ONE
 - <https://journals.plos.org/plosone/article/comments?id=10.1371/journal.pone.0255696>
- CPA meetings have had multiple people bring forward our SR in calls to action



Denis Pelletier @OPPQPRESIDENT · Sep 17

OSCE in physiotherapy : don't jump to conclusion too quickly.



journals.plos.org

A systematic review and meta-analysis of measure...

Background The Objective Structured Clinical Examination (OSCE) is a commonly used tool ...



7



Responses

Published: August 3, 2021

<https://doi.org/10.1371/journal.pone.0255696>



Denis Pelletier @OPPQPRESIDENT · Sep 3

Start reading carefully the systematic review by Bobos et al.

journals.plos.org/plosone/article... First page Competing interest none. Really?



journals.plos.org

A systematic review and meta-analysis of measure...

Background The Objective Structured Clinical Examination (OSCE) is a commonly used tool ...



3



2



4



Posted report- not
response



CPTBC News

November 19, 2021

[Update on Alternate Evaluation for Interim Registrants](#)

On November 11th interim registrants were informed about the opportunity to complete an alternate evaluation administered by the University of British Columbia and are now registering. Read more about it, including the FAQs.

[Read More »](#)

October 29, 2021

[An Independent Review of the paper by Bobos et al. \(2021\)](#)

The College is sharing the result of an independent review of the paper by Bobos et al. (2021) titled: A systematic review and meta-analysis of measurement properties of objective structured clinical examinations used in physical therapy licensure and a structured review of licensure practices in countries with well-developed regulation systems. The review was completed by [...]

[Read More »](#)

September 30, 2021

[CPTBC Observes National Day for Truth and Reconciliation](#)

Our office is closed in observation of National Day for Truth and Reconciliation. On this day, staff will gather together to learn more about the tragic and painful history of residential schools and their ongoing impacts.

[Read More »](#)



Kate Roddy @kate_6ixphysio · Nov 18

Can you IMAGINE...the arrogance of @CollegeofPTs to demand a virtual exam, approve of the one being delivered, have candidates actually complete it, and then stall for 9 weeks TO DELIBERATE ON WHETHER TO ACCEPT THESE RESULTS?!? and therefore not grant licensure?!?



1



1



5



Cassandra Lyall and 3 others liked a Tweet you were mentioned in

Well well well @PTCollegeBC, the irony of you suggesting @joymacdermid et al read this consensus statement & recs is pretty rich. Why the irony you ask? Allow me to explain.



Kate Roddy @kate_6ixphysio · Nov 25

Replying to @joymacdermid and @PTCollegeBC

When the 27796 citations hits you like...



Kate Roddy @kate_6ixphysio · Nov 17

@CollegeofPTs @PTCollegeBC @PTAlberta pls publish the authors response on your websites so you don't appear biased to the one "expert" you paid.

🇨🇦 PTs deserve to read all accounts. You wanted discussion, @joymacdermid provided. Give a morsel of respect by posting it.



joy macdermid @joymacdermid · Nov 12

Replying to @PTCollegeBC @OPPQPRESIDENT and @paviosbob

The authors have responded where the report was posted. We encourage broad discussion with all stakeholders.[journals.plos.org/plosone/article/...](https://journals.plos.org/plosone/article/)



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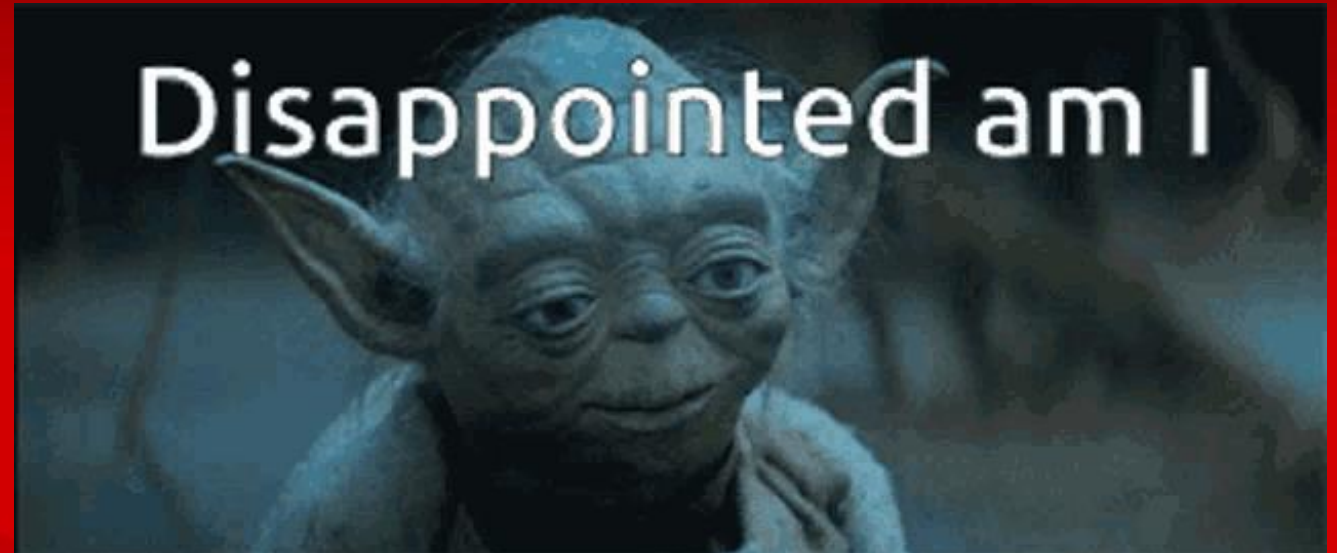
7



GIF

Disappointments

- Attack on junior trainees from within their profession
- People with a mission on social media that twist messages, focus on their agendas
- Lack of value given to evidence in policy
 - Resistance to change



Maybe evidence did work.....

Kate Roddy @kate_6ixphysio · Nov 9

7/ Have you read The Saskatchewan College of PT 64-page report on May 20, 2021 which had this as one conclusion?:

Although the PCE-CC's reliability scores are on par with other exams of this type, information from several authors in our literature review cast doubt upon whether the reliability scores are sufficiently high for a high-stakes, gatekeeping exam. The concurrent validity of the PCE-CC (and other OSCEs reviewed in the literature) is underwhelming, with only low to moderate correlation to relatively few other measures of performance. The predictive validity of OSCEs, including the PCE-CC, is also not definitively demonstrated. Although CAPR does not believe the exam should predict future competence, our literature review suggested that predictive validity is critical if OSCEs are to be used for high-stakes decisions. From a Saskatchewan context, it should be noted that USask graduate first time failure rates are not consistent with (and are poorer than) employer direct supervisor and one-year post-graduation evaluations of entry-level competence. Given these concerns with the PCE-CC's reliability, concurrent validity, and predictive validity, we believe that it should not be used as a gatekeeper to full licensure if a reasonable alternative exists; for Canadian graduates we believe the accredited MPT programs represent a reasonable alternative.



1



8



**Everything is proceeding
exactly as I have foreseen.**

FINALLY!!!!

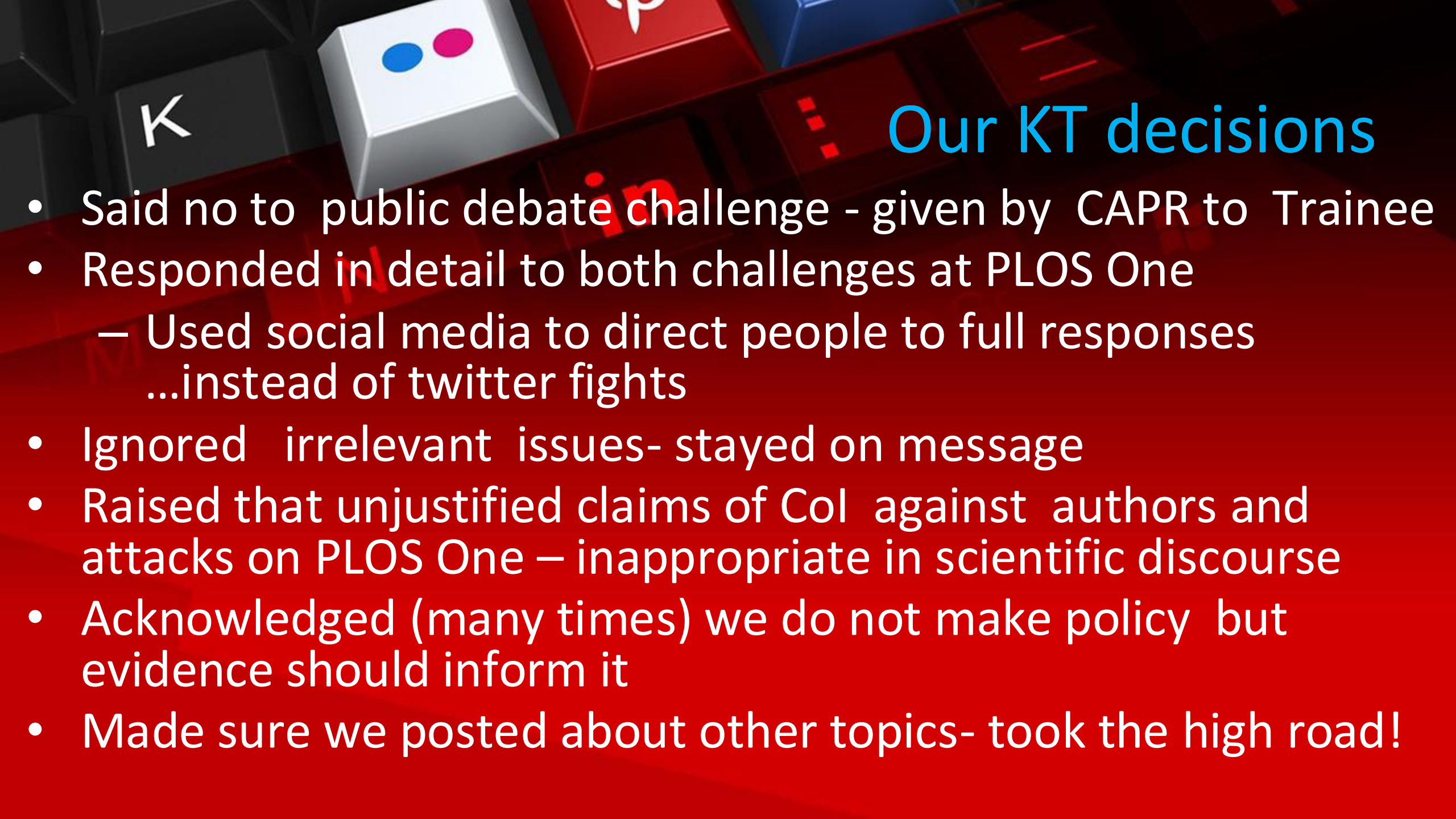
See the full announcement by the CPO below 

 **College of PTs** @CollegeofPTs · 5h

On December 7, the Registration Committee approved a policy that will allow some individuals with Provisional Practice to apply for Independent Practice. Applicants must meet certain eligibility criteria.

Read the full update: bit.ly/3Gp9QnD

-Theresa Stevens, President



Our KT decisions

- Said no to public debate challenge - given by CAPR to Trainee
- Responded in detail to both challenges at PLOS One
 - Used social media to direct people to full responses ...instead of twitter fights
- Ignored irrelevant issues- stayed on message
- Raised that unjustified claims of Col against authors and attacks on PLOS One – inappropriate in scientific discourse
- Acknowledged (many times) we do not make policy but evidence should inform it
- Made sure we posted about other topics- took the high road!

Sustainability the big challenge in KM/KT

REHAB⁺ PREMIUM
LITERATURE
SERVICES



Canadian MSK Rehab
Research Network

McMaster
PLUS

Welcome to **REHAB⁺** - "one-stop" access to pre-appraised evidence to support your clinical decisions.

REHAB⁺ provides a new path to address the key question in this era of evidence-based health care: **what is the current best evidence available to support clinical decisions?**

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Access the content professionals trust. [REGISTER TODAY](#)

Hit Parade: See what others are reading

These articles are the most often read articles in all specialties, in the past 30 days

Comprehensive supervised heavy training program versus home training regimen in patients with subacromial impingement syndrome: a randomized trial.

★★★★★

[Free full-text available](#)

BMC Musculoskelet Disord. 2022 Jan 15;23(1):52. doi: 10.1186/s12891-021-04969-0. (Original study)

Cost-effectiveness of Physical Therapy vs Intra-articular Glucocorticoid Injection for Knee Osteoarthritis: A Secondary Analysis From a Randomized Clinical Trial.

★★★★★

[Free full-text available](#)

JAMA Netw Open. 2022 Jan 4;5(1):e2142709. doi: 10.1001/jamanetworkopen.2021.42709. (Original study)

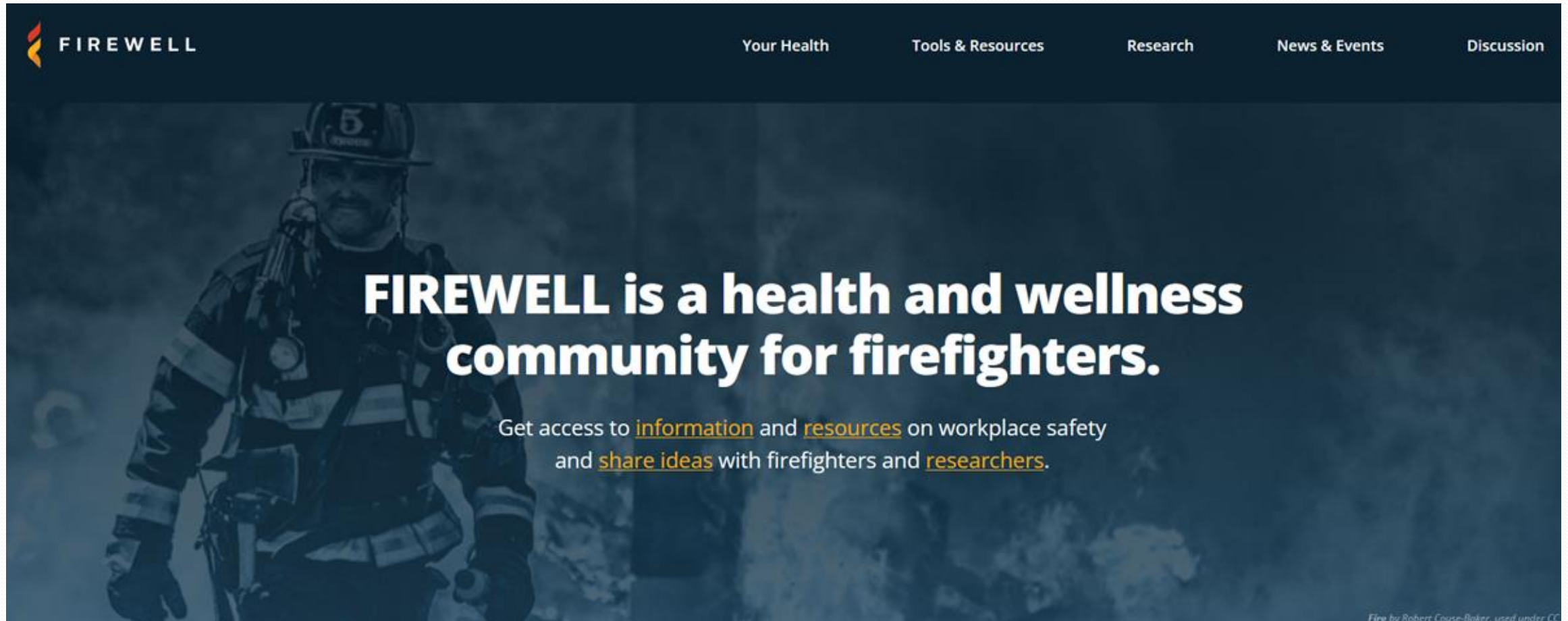
Does aerobic exercise effect pain sensitisation in individuals with musculoskeletal pain? A systematic review.

★★★★★

[Free full-text available](#)

BMC Musculoskelet Disord. 2022 Feb 3;23(1):113. doi: 10.1186/s12891-022-05047-9. (Systematic review)

Creating value - <https://firewell.ca/>



Key Points

- KT is reducing the knowledge to action gap
- Requires theory and evidence
 - complex multi-level factors
- A wide range of strategies could be selected
- The evidence (SR) shows that KT is effective
 - Changes are small to moderate usually
- Researchers are now expected to understand KT and build into their research programs
- Not everything works...need ongoing effort and multiple strategies

Discussion

A still from Star Wars: The Force Awakens showing Han Solo and Chewbacca. Han is on the left, looking towards the right. Chewbacca is in the center, looking forward. The background is dark and industrial.

What do you think?



Thanks for your attention!

