Why did we develop PKT?

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Today's Roadmap

- Knowledge translation
  - Activity: Dissemination or Implementation
- Bringing research into practice
- Using evidence to get outcomes
- KT Theories and frameworks
- PKT Course
- Group discussion

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What is Knowledge Translation?

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What is Knowledge Translation?

Knowledge translation:

- dynamic and iterative process includes **synthesis**, **dissemination**, **exchange** and ethically sound **application of knowledge**

- improves health services and products, and strengthen the health care system

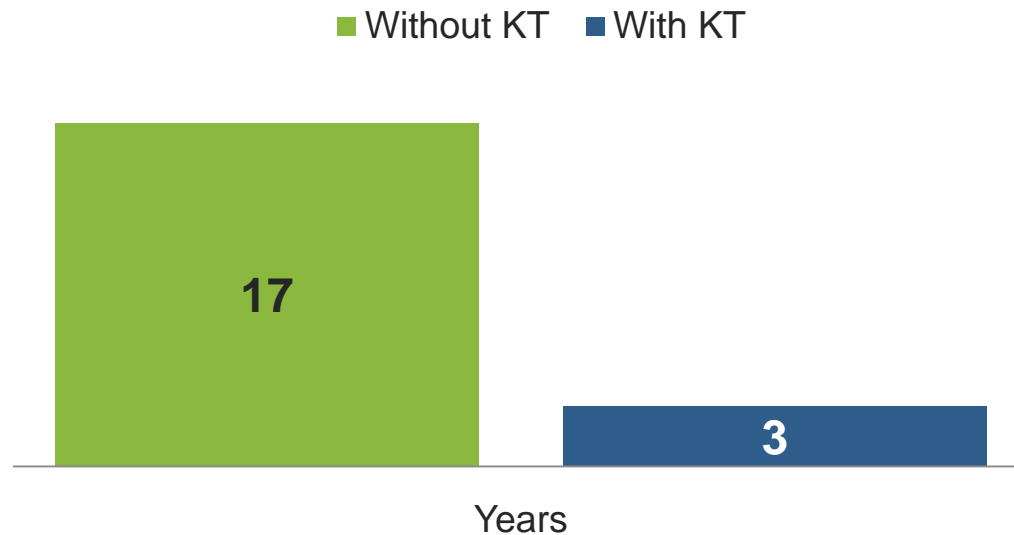- takes place within a **complex system of interaction**

CIHR definition (www.cihr-irsc.gc.ca/e/29418.html)

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Why does KT matter?

Major gaps between evidence and practice

■ Without KT ■ With KT

17 **3**

Years

Balas E, Boren S. Managing Clinical Knowledge for Health Care Improvement. In: van Bemmel JH, McCray AT, eds. Yearbook of Medical Informatics. Stuttgart: Schattauer Verlagsgesellschaft mbH, 2000:65–70

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Why does KT matter?

- It is estimated that approximately 85% of research resources are wasted
    - Low priority questions addressed

    - Important outcomes not assessed

    - For every 100 projects:
        - 50 not published
        - 25 not usable or replicable
        - 12.5 have serious design flaws
    - **= 87.5% wasted**

Sira Anamwong/freedigitalphotos

Chalmers & Glasziuo (2009) Avoidable waste in the production and reporting of research evidence.

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Different Terms for KT

Knowledge Transfer
Research Utilization Research Use
Knowledge Exchange Implementation Science
Knowledge Translation
Knowledge Mobilization Knowledge Uptake
Dissemination and Diffusion

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KT: Dissemination and Implementation

Knowledge Translation

	Dissemination	Implementation
Practice	**Dissemination Practice** Purposive distribution of information and intervention materials to a specific audience. The intent is to spread information. (NIH)	**Implementation Practice** The use of strategies to adopt and integrate evidence-based interventions and change practice within specific settings. (NIH)
Science	**Dissemination Science** The scientific study of processes and variables that determine and/or influence the spread/sharing of knowledge to various stakeholders. (NIH)	**Implementation Science** The scientific study of the methods to promote the uptake of research findings in clinical, organizational, or policy contexts. (Implementation Science journal)

Dissemination and Implementation Science. (n.d.). *National Institutes of Health.* Retrieved September 21, 2015, from https://www.nlm.nih.gov/hsrinfo/implementation_science.html; Implementation Science. Retrieved September 21, 2015, from http://www.springer.com/public+health/health+promotion+%26+disease+prevention/journal/13012

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Activity#1: Dissemination or Implementation

Read the following examples of projects and determine whether they constitute dissemination, implementation (i.e., KT practice), or dissemination science or implementation science (i.e., KT science).

Response options:
- **Dissemination Practice**;
- **Implementation Practice**;
- **Dissemination Science**;
- **Implementation Science**.

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1. A research network developed and distributed summaries of their research findings to policy makers and clinicians.

Knowledge Translation

Dissemination

Implementation

Practice

Science

Dissemination Practice
Purposive distribution of information and intervention materials to a specific audience. The intent is to spread information. (NIH)

Implementation Practice
The use of strategies to adopt and integrate evidence-based interventions and change practice within specific settings. (NIH)

Dissemination Science
The scientific study of processes and variables that determine and/or influence the spread/sharing of knowledge to various stakeholders.
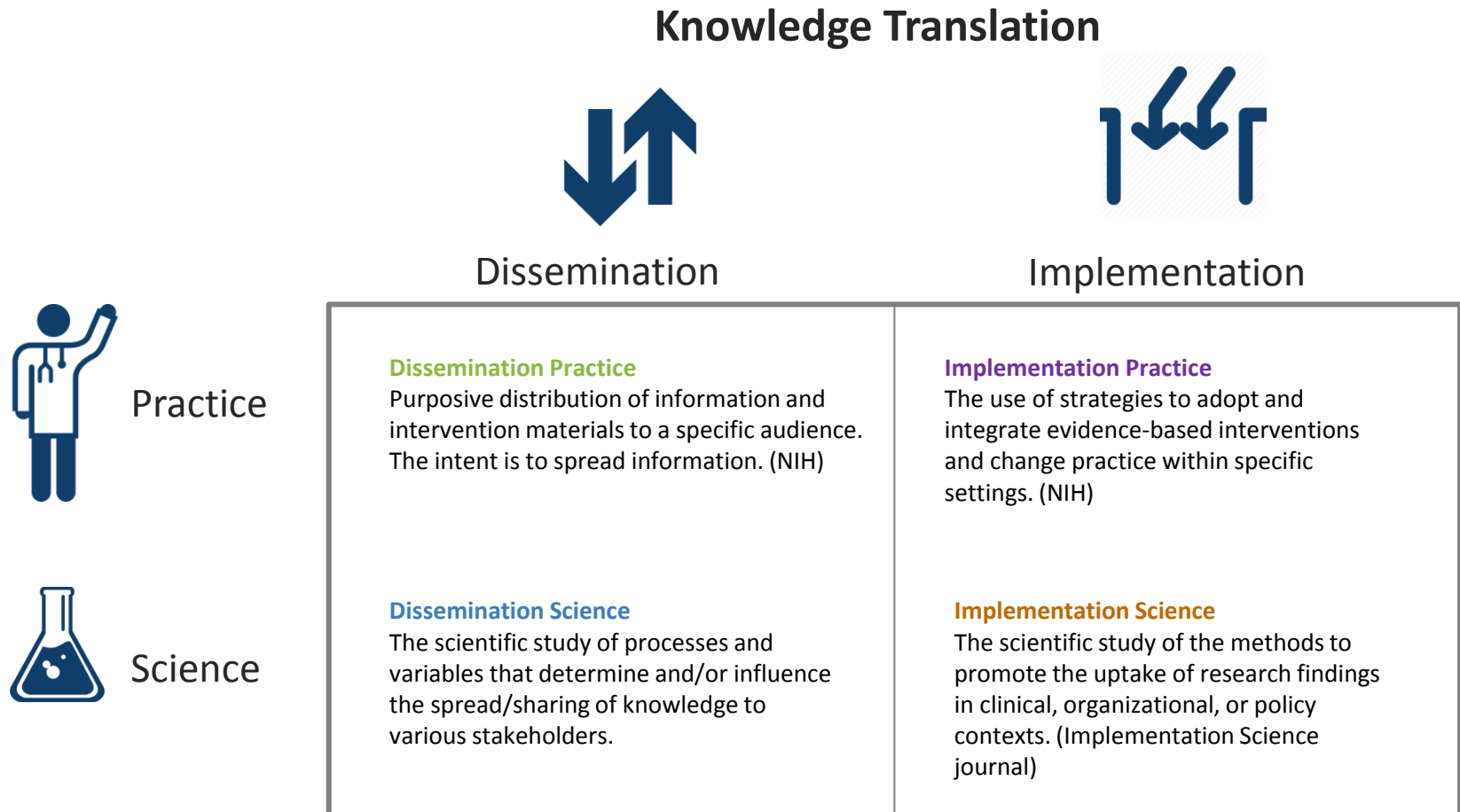
Implementation Science
The scientific study of the methods to promote the uptake of research findings in clinical, organizational, or policy contexts. (Implementation Science journal)

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2. A group evaluated whether leadership buy-in affects the sustainability of a program.

Knowledge Translation

Dissemination

Implementation

Practice

Science

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3. A journal is comparing two different guideline formats to determine which format clinicians find more helpful.

Knowledge Translation

Dissemination

Implementation

Practice

Science

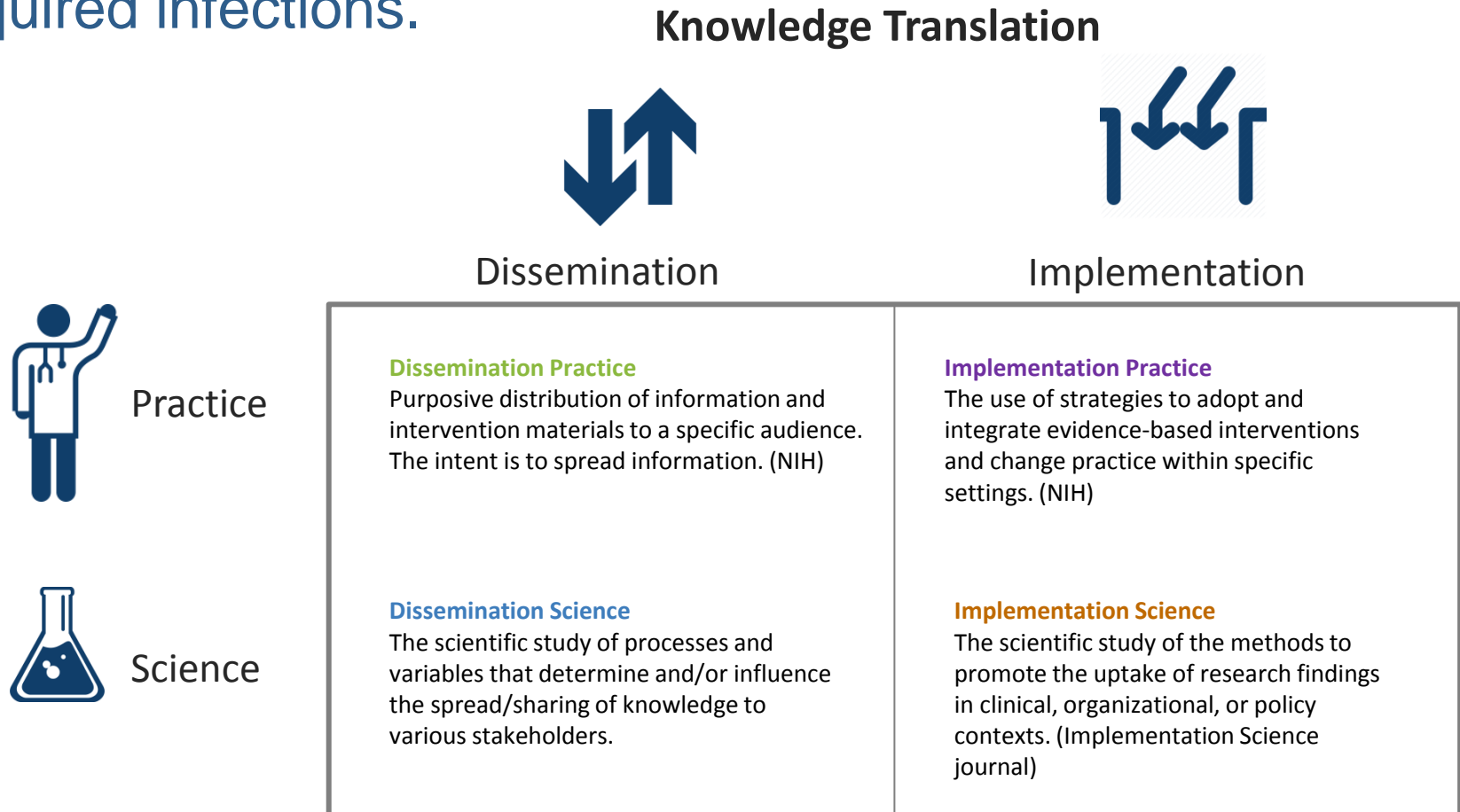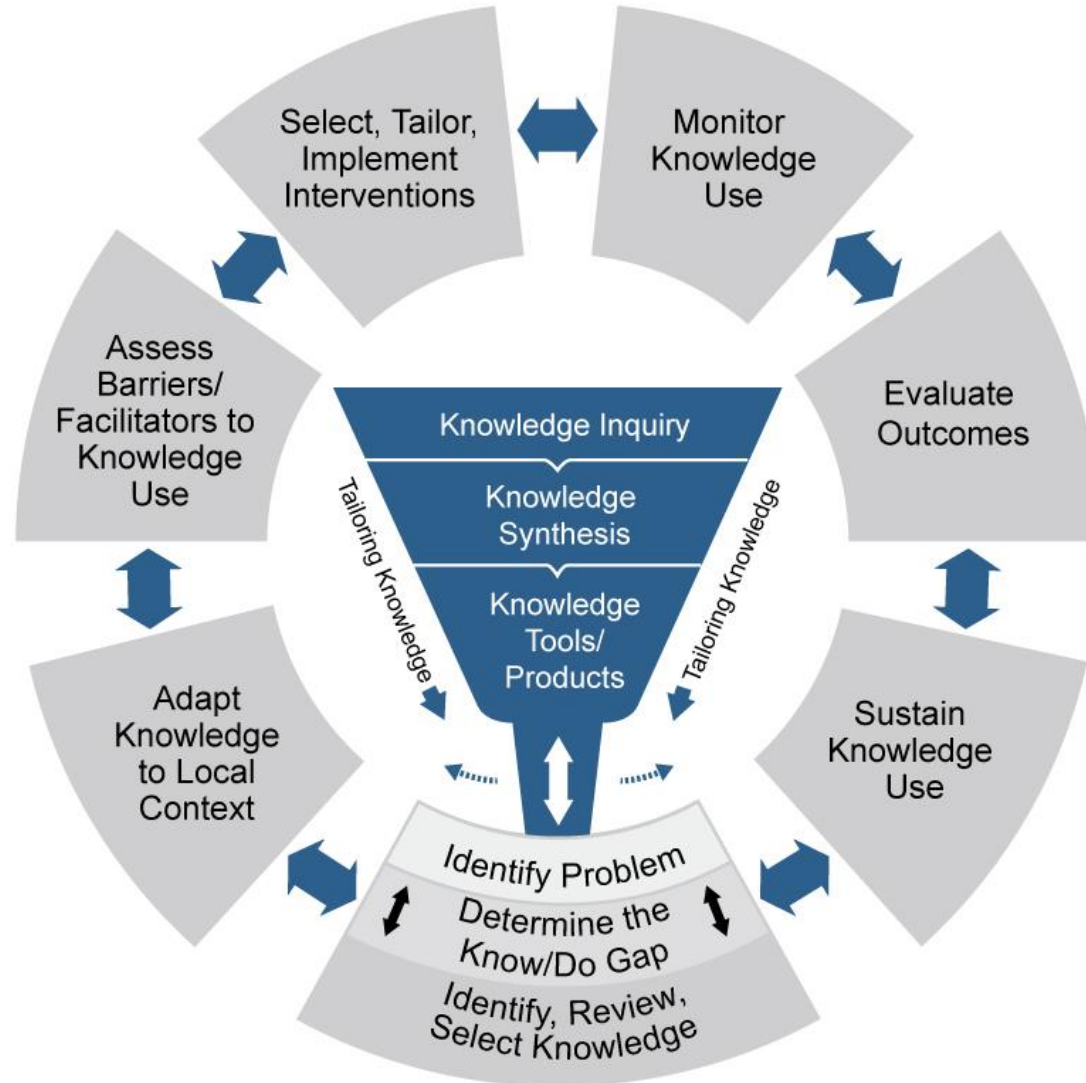|	Dissemination	Implementation
Practice	**Dissemination Practice** Purposive distribution of information and intervention materials to a specific audience. The intent is to spread information. (NIH)	**Implementation Practice** The use of strategies to adopt and integrate evidence-based interventions and change practice within specific settings. (NIH)
Science	**Dissemination Science** The scientific study of processes and variables that determine and/or influence the spread/sharing of knowledge to various stakeholders.	**Implementation Science** The scientific study of the methods to promote the uptake of research findings in clinical, organizational, or policy contexts. (Implementation Science journal)

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4. Health facilities received tools, training and support to decrease staff practices that were associated with hospital-acquired infections.

Knowledge Translation

Dissemination	Implementation
Dissemination Practice Purposive distribution of information and intervention materials to a specific audience. The intent is to spread information. (NIH)	**Implementation Practice** The use of strategies to adopt and integrate evidence-based interventions and change practice within specific settings. (NIH)
Dissemination Science The scientific study of processes and variables that determine and/or influence the spread/sharing of knowledge to various stakeholders.	**Implementation Science** The scientific study of the methods to promote the uptake of research findings in clinical, organizational, or policy contexts. (Implementation Science journal)

Practice

Science

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How do we bring research to practice?

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The Knowledge to Action Model

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

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Knowledge Creation Funnel

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)

- **Knowledge Tools/Products:**
  Refined knowledge for decision-making (e.g., guidelines, decision aids, algorithms)

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

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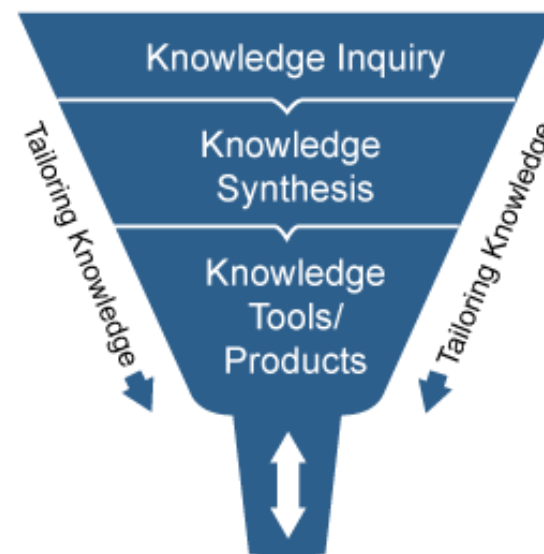
The Action Cycle

The **action cycle** emphasizes the **dynamic action steps** needed to apply the knowledge created (in any sequence).
It is intended to **deliberately** cause change.

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

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The Knowledge to Action Model

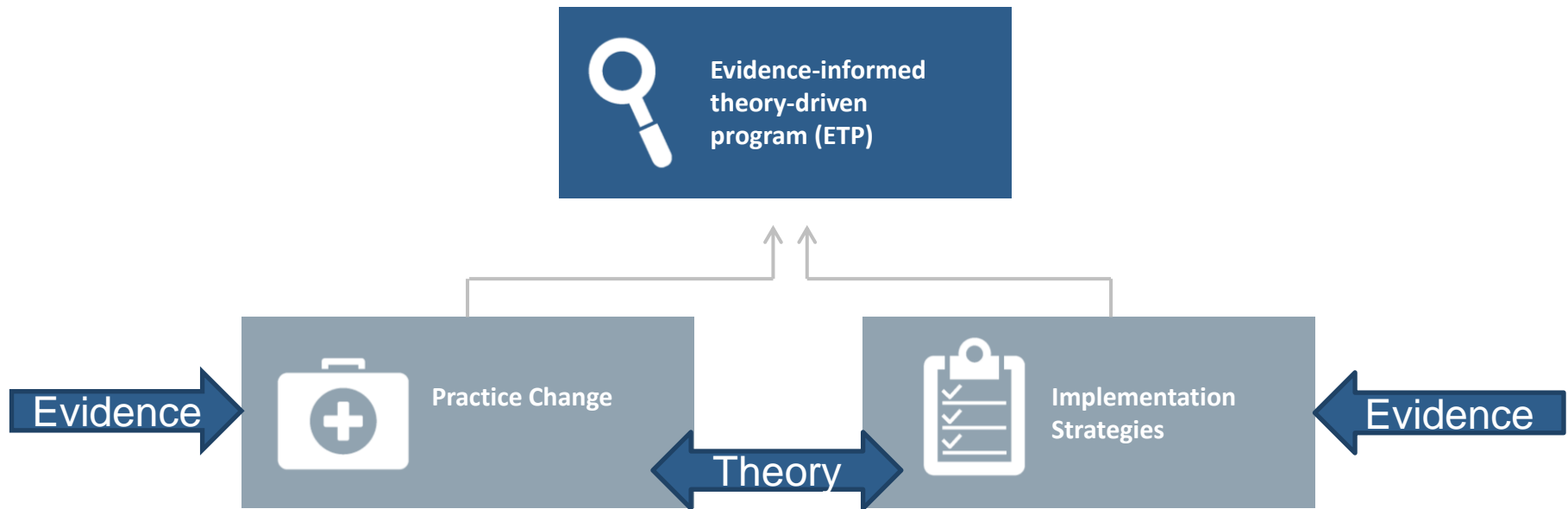Knowledge creation, distillation and dissemination are not sufficient to ensure behaviour change…

We need to effectively implement!

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How do we use evidence to get outcomes?

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What are we going to implement?

- Practice change must have high-quality research evidence of effectiveness that it can achieve desired outcomes

- Implementation strategies must be supported by implementation research evidence

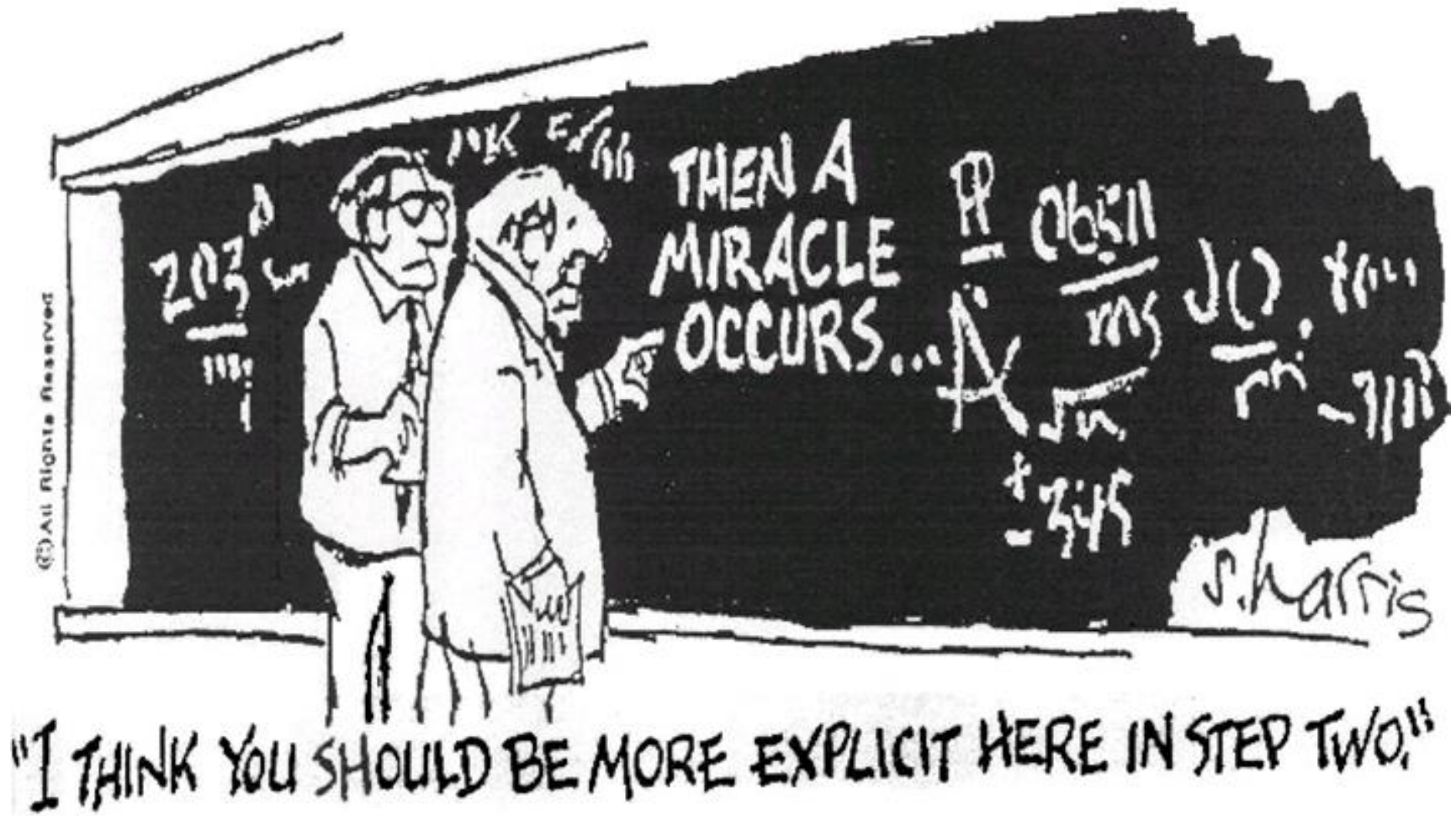- Implementation strategies must be linked to practice change through behaviour change theory
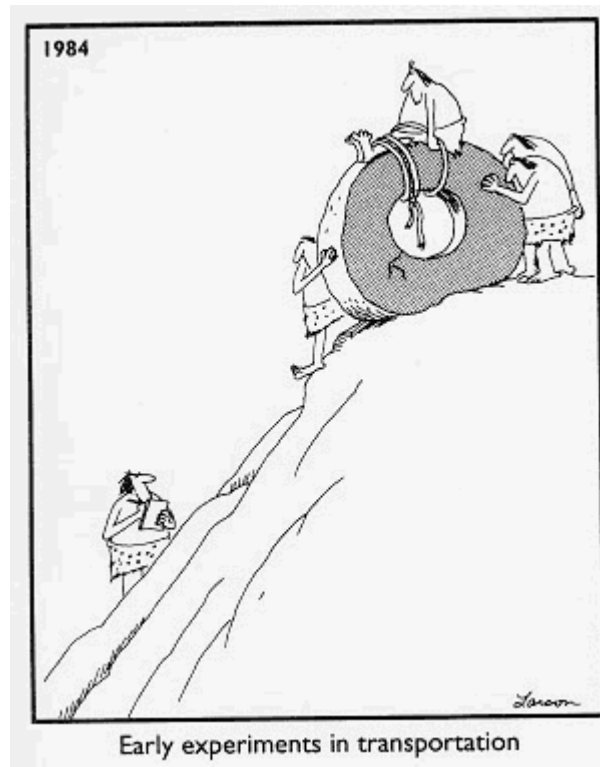
Operationalizing the KTA: Developing an ETP

LEGEND

A — Identify knowledge to action gaps
1. Describe your program's long-term goal
2. Identify and consult with key stakeholders for your program
3. Define the practice change
4. Define the gap

B — Adapt knowledge to local context
5. Adapt the practice change

C — Assess barriers and facilitators to knowledge use
6. Identify barriers and facilitators
7. Organize barriers and facilitators to select individual barriers to the practice change
8. Map barriers and facilitators to a behaviour change framework

D — Select, tailor, implement interventions
9. Map barriers and facilitators to a behaviour change theory and implementation strategy
10. Select implementation strategies
11. Identify relevant barriers and facilitators for each implementation strategy
12. Develop key messages/actions for each selected strategy considering the relevant barriers and facilitators
13. Describe implementation strategy elements
14. Operationalize each implementation strategy

E — Bringing it all together
15. Develop a logic model

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KT is the key to the black box of "what happened"

"ISLAGIATT" principle

1984

Early experiments in transportation

"The Far Side" by Gary Larson.

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Consider the evidence for implementation strategies

Ineffective
"This program has been evaluated and shown to have no positive or negative effect"

Current Practices
"We've done it and we like it"

Evidence-informed theory-driven
"This program is based on sound theory informed by research"

Very Confident

Very Confident

HARMFUL — Ineffective — unknown — Promising — EFFECTIVE

Iatrogenic (Harmful)
"This program has been rigorously evaluated and shown to be harmful"

Promising Approaches
"We really think this will work, but we need time to prove it"

Evidence-based
"This program has been rigorously evaluated and shown to work"

How confident are we that this activity is a good use of our resources AND improves outcomes?

Bumbarger & Rhoades, 2012

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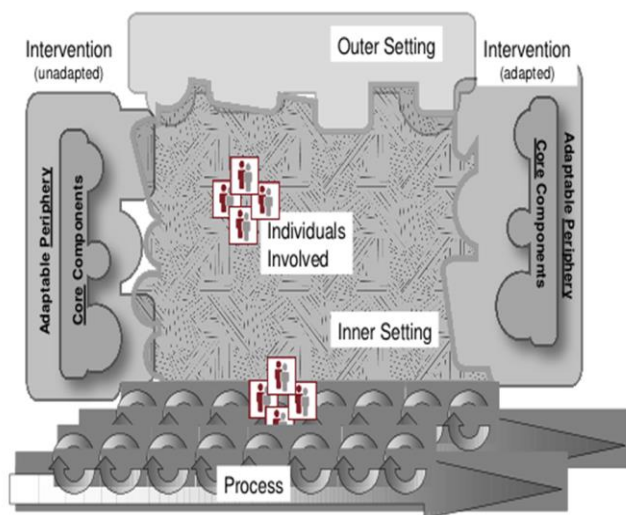Inspired Care. Inspiring Science.

What are KT frameworks & theories and how do we use them?

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Frameworks

To understand and/or explain influences on implementation and outcomes

Consolidated Framework for Implementation Research (CFIR)

Damschroder et al. (2009). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science.Implement Sci.;4:50.

Theoretical Domains Framework

Michie et al 2005 *Qual Saf* Health Care
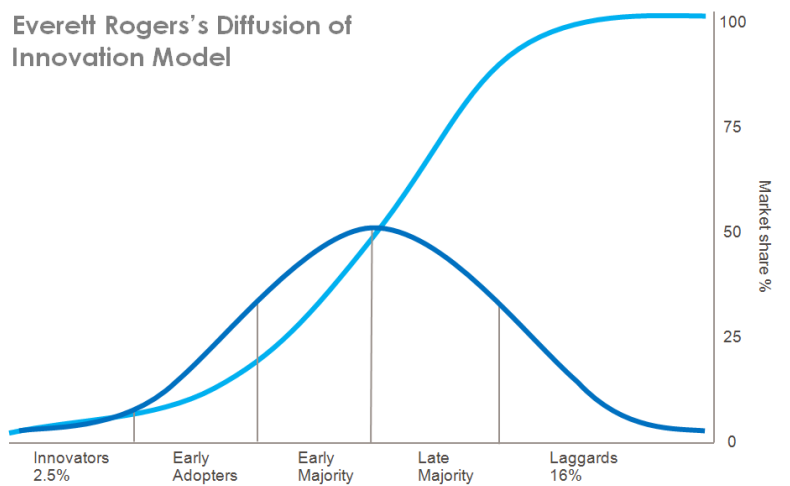Cane, O'Connor, Michie, 2012 *Implementation Science*

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Theories

Prediction and causal mechanisms

Diffusion of Innovations

Figure 1

Everett Rogers's Diffusion of Innovation Model

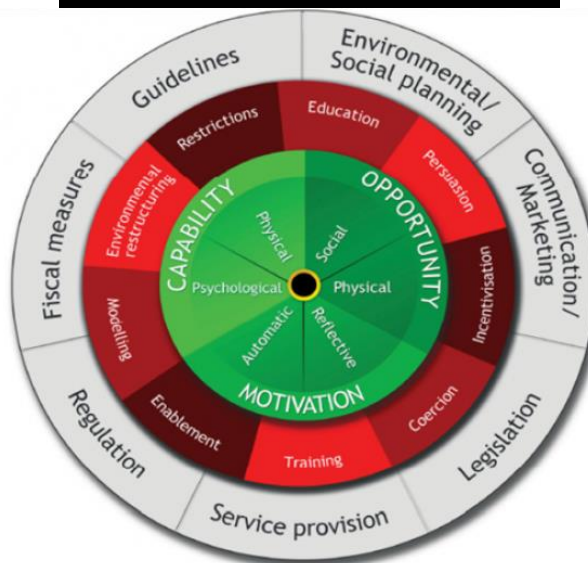| Innovators 2.5% | Early Adopters 13.5% | Early Majority 34% | Late Majority 34% | Laggards 16% |

Source: Prochaska, J. O. & Di Clemente, C. C., (1982). Transtheoretical therapy: Toward a more integrative model of change. *Psychotherapy: Theory, Research and Practice, 19*(3), 276-288.

Behaviour Change Wheel

Source: Michie *et al. Implementation Science* 2011 **6**:42 doi:10.1186/1748-5908-6-42

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PKT Course

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PKT Course Components

Readings
Participants complete assigned readings on specific topic areas before each session, and may bring notes (e.g., observations, thoughts, questions) to each session.

Workshop
Participants will take part in a 3-day in-person workshop which will cover the core modules of the course in detail.

Webinars
Participants will receive continued KT skill-building learning opportunities as they present their KT projects and receive feedback.

Activities
Participants will take part in interactive activities and contribute to group discussions. (e.g. group assignments, case examples, mock scenarios).

Coaching
Participants receive 3 hours of coaching support to discuss their project and get feedback from instructor .

Resources
Participants will receive take-home resources to facilitate KT capacity building at their home organizations.

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Questions

1. Is KT relevant to your work? If so, how?

2. Is your organization interested in building KT capacity?

3. Are you familiar with any KT frameworks or theories? If so what?

4. Is the PKT course something that could assist you in your work? Could it assist projects that your colleagues are working on?

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Today's Roadmap Recap

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For more information about PKT

http://knowledgetranslation.net/capacity-building/our-courses/pkt

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