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Closing the Gap

Using the science of Knowledge Translation to move physical activity research into practice
Learning Objectives

01 Understand the distinction between KT science and practice

02 Identify differences between diffusion, dissemination and implementation

03 Become familiar with KT resources from NCCMT
Is evidence enough?

17 years for 14% of research findings to practice (Balas 2000)

Evidence-based guidelines are insufficient to change behaviour

Targeted KT strategies are needed
Knowledge Translation = dynamic and iterative process between researchers and knowledge users

- Includes:
  - Synthesis
  - Dissemination
  - Exchange
  - Ethically-sound application of knowledge

- Goal to improve health, provide more effective health services and products, and strengthen the health care system

- Process varies in intensity, complexity and level of engagement
  - Nature of findings
  - Needs of knowledge user

http://www.cihr-irsc.gc.ca/e/29418.html
Practice or Science

KT Practice = the act of sharing knowledge or moving knowledge into practice

KT Science = the scientific study of methods, processes or strategies to promote the sharing or uptake of knowledge into practice
Diffusion

Passive spread of knowledge to highly motivated recipients

Dissemination

The process of spreading knowledge to target audiences using planned strategies for integrating evidence-based interventions within a specific setting

Implementation

Making it happen

Helping it happen

planned strategies
<table>
<thead>
<tr>
<th>Dissemination</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Science</strong></td>
<td>The systematic study of how specific strategies are used to successfully integrate an evidence-based public health intervention within specific settings (e.g., primary care clinic, community center, school).</td>
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<tr>
<td><strong>Practice</strong></td>
<td>The use of strategies to adopt and integrate evidence-based health interventions and change practice patterns within specific settings.</td>
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<tr>
<td>The study of how the targeted distribution of information and intervention materials can be successfully executed so that spread of knowledge achieves greater use and impact of the intervention.</td>
<td></td>
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<tr>
<td>The targeted distribution of information and intervention materials to a specific public health or clinical practice audience.</td>
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Test your understanding
A social media campaign to promote uptake of children’s physical activity guidelines to parents of young children
A study evaluating whether adding a prompt to the electronic medical record increases referrals to a diabetes lifestyle management program
A study comparing two different website formats to find which patients find more usable
All schools within a board are provided with teacher training, tools and support to adopt a comprehensive program to promote daily physical activity.
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
Implementation Strategies

- Engage consumers
- Use evaluative and iterative strategies
- Change infrastructure
- Adapt & tailor to context
- Develop stakeholder initiatives
- Utilize financial strategies
- Support clinicians
- Provide interactive assistance
- Train & educate
Effective Implementation Strategies

- Tailored interventions
- Audit-Feedback
- Educational outreach
- Financial incentives
Advancing KT Science to Move Physical Activity Research into Practice
Implementation strategies:

- Educational materials
- Educational outreach
- Educational meetings

Trial heterogeneity

Lack of consistent terminology and description of implementation strategies

Limited evidence of effective implementation or changes in health behaviours
Just like we must describe the exercise prescription within the physical activity intervention, we must clearly specify the implementation strategies used.
Implementation Outcomes

Evidence-based intervention

EXERCISE

(Need to specify who delivers, when, where, how and to whom)

Implementation Strategies
(Potential examples)
- Education
- Referral support
- Financial support
- Etc.

Implementation Outcomes
- Feasibility
- Fidelity
- Penetration
- Acceptability
- Sustainability
- Uptake
- Costs

Service Outcomes
- Efficiency
- Safety
- Effectiveness
- Equity
- Patient-centeredness
- Timeliness

Client Outcomes
- Satisfaction
- Fatigue
- Quality of Life
- Physical function
- Anxiety
- Depression

Adapted from Proctor et al. Adm Policy Ment Health (2011) 38:65
A Quality Initiative of the Program in Evidence-Based Care (PEBC), Cancer Care Ontario (CCO)

Exercise for People with Cancer: Recommendations Summary
R. Segal, C. Zwaal, E. Green, J. Tomason, A. Loblaw, T. Petrella and the Exercise for People with Cancer Guideline Development Group
Report Date: June 30, 2015

Clinicians should advise their patients to engage in exercise consistent with the recommendations outlined by the Canadian Society of Exercise Physiology and the American College of Sports Medicine. The recommended duration, frequency, and/or intensity are the following:

- 150 minutes of moderate-intensity aerobic exercise spread over three to five days and resistance training at least two days per week;
- Resistance sessions should involve major muscle groups two to three days per week (eight to 10 muscle groups, eight to 10 repetitions, two sets); and
- Each session should include a warm up and cool down.
What are the barriers?

- 80% not aware of guidelines
- Safety
- Who/when/where to refer
- Responsible team member
Identifying KT strategies - Theoretical Domains Framework

Cane et al. Implementation Science 2012;7:37
Next steps…

- Modified Delphi with oncology care providers
- Consensus meeting
- Test and evaluate KT strategies
Tools to help you on your KT journey
The National Collaborating Centre for Methods and Tools (NCCMT)

- Support use of best available evidence in public health practice and policy
- Support public health practitioners in finding and using high-quality methods and tools for evidence-informed public health
Health Evidence™ Repository

• Almost 6000 quality-rated systematic reviews evaluating the effectiveness of public health interventions
Online Learning Modules

- Interactive, problem-based
- Free to access
Registry of Methods and Tools

• Searchable database of KT resources
• Summaries and links 200+ resources
• Categorized by:
  • Method/tool
  • KT and related activity
  • Evidence-Informed Public Health step
Currently there are 143 methods and 138 tools in the Registry.

**National Registry of Evidence-based Programs and Practices De-Implementation Checklist**

The de-implementation checklist helps decision-makers answer the question: Do we need to de-implement an existing program? Programs are generally concluded for one of the following reasons: The program is too costly. The program is ineffective. The program poses an undue burden on staff capacity. The program has lost support from the community. The program is unable to secure financial support to continue. The checklist is organized into three broad categories that relate to these five reasons: (1) community and program context; (2) financial solvency; and (3) assessing underperformance.

**Using Surveillance Data as Evidence webinar**

This presentation outlines (1) the principles of public health surveillance; (2) the strengths and challenges of surveillance and (3) the nature of public health surveillance systems. It provides an overview of surveillance activities at the City of Hamilton, as well as the strengths and challenges of using surveillance data for decision-making. Examples are provided to highlight how surveillance data is used as evidence within local public health practice at the City of Hamilton.

**Partnership evaluation: The Partnership Self-Assessment Tool**

The Partnership Self-Assessment Tool is a questionnaire that various partners can complete to examine the strengths and weaknesses of the partnership. Answers can help guide organizations and individuals to make the partnership (proactively) successful. The tool measures a key indicator of a successful collaborative approach.
Example:

Registered Nurses’ Association of ONtario Toolkit

Questions?

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