

TOOLS FOR KNOWLEDGE TRANSLATION (KT)

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Disclosure

NCCMT

- Public Health Agency of Canada

McMaster Evidence Review and Synthesis Centre

- Canadian Institutes of Health Research

Health Evidence

- Canadian Institutes of Health Research
- Public Health Agency of Canada & National Collaborating Centres, including NCCMT
- City of Hamilton
- Region of Peel

KT and Scurvy: 1601-1945

1601: Lancaster
gives sailors
lemon juice

1747: James Lind a
surgeon on the
HMS Salisbury



Study Design

Controlled trial: all shared living conditions, physical labor, and diet: water gruel with sugar in the morning; fresh mutton broth or boiled biscuit for dinner, and barley and raisins, rice and currants sago and wine (Lind, 1753:145).

12 sick
sailors

2 sailors: 1 qt apple cider/day

2 sailors: 25 drops sulfuric acid

2 sailors: 2 tsp vinegar 3x/day

2 sailors: daily sea water

2 sailors: nutmeg

2 sailors: 2 oranges + 1 lemon/day



Interpreting the results...

- 1753:** Treatise on Scurvy proposes a delivery method for Lind's intervention - "rob"
- 1763:** of 184,893 sailors, 133,708 died of "disease and missing" with only 1,512 "killed in engagements and by accidents" (*The Annual Register, or a View of the History, Politics, and Literature, For the Year 1763*, 1790:50)
- 1778:** James Cook – no deaths from scurvy

Even more interpretations...

1781: G. Blane joins the navy as Physician to the Fleet

1793: Blane conducts a new study (lemon juice + grog)

1795: Board of Sick & Wounded sailors RDA $\frac{3}{4}$ ounce of lemon juice/day

The solution

1937: Albert Szent-Geörgyi awarded Nobel prize for isolating Vitamin C

1939-1945: WWII navy men given vitamin C tablets



What's wrong with this story?

1601-1939



Why do KT?

- Best outcomes - Best quality health care
- Ethical imperative to tax payers who pay for health services AND research
- We know interventions are given for which there is good evidence that they **do not** work

AND

Interventions are not offered for which there is good evidence that they **do** work.

What do we already know?

- **Active interventions are more effective** than passive, but can cost more
- **Single interventions are less effective than multifaceted** interventions **BUT** difficult to tell which components work best and why. There was no evidence of a dose-response curve in the number of components in multifaceted interventions.
- **Reminders, educational outreach, & audit and feedback** have shown some significant behaviour change (Grimshaw et al., 2006)

What works/doesn't work cont.

- **Integrated versus end of grant** – engages users as partners in KT as opposed to researchers developing and implementing a KT plan
- **Background skill development** required of person doing the KT and of practitioners who will use it



Problem Solving

What can we do to revisit and improve on KT strategies?



KT Tools

○ NCCMT

- CHSRF – *Is Research Working For You?*
- *Compendium of Critical Appraisal Tools*
- *Can I use this evidence in program decision-making? Applicability and Transferability Tool*

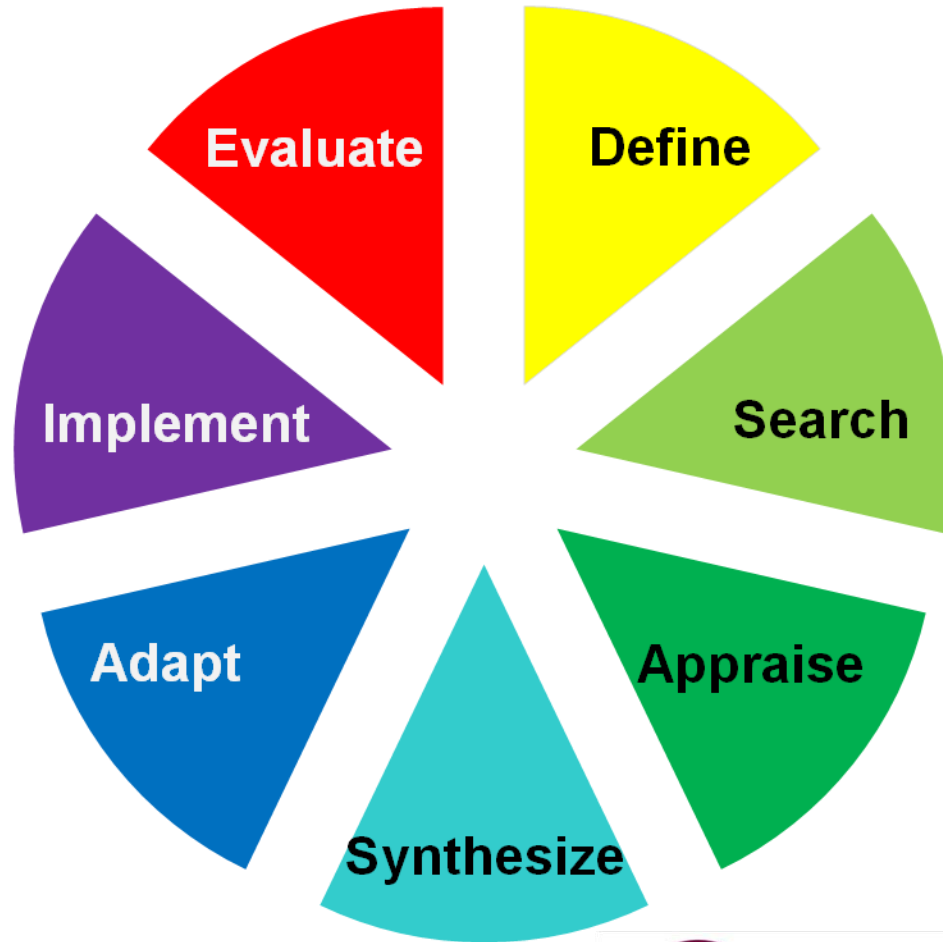
○ HE

- *EIDM Checklist*
- *Briefing Note*
- *Improving Future Decisions*



Stages in the process of

Evidence-Informed Decision Making



CHSRF Tool – Is Research Working for you?

- Acquire
- Assess
- Adapt
- Apply

<http://www.chsrf.ca/PublicationsAndResources/ResourcesForResearchers/SelfAssessmentTool.aspx>

- Focus on the organizational level
- Evaluation: Kothari, A., Edwards, N., Hamel, N., Judd, M. Is research working for you? (2009). Validating a tool to examine the capacity of health organizations to use research. *Implementation Science*, 4:46.1-9.



PUBLICATIONS & RESOURCES
BY TOPIC

MYTHBUSTERS

PASS IT ON

RESEARCH REPORTS

EVENT PRESENTATIONS &
REPORTSRESOURCES FOR
RESEARCHERS

KEYS

Knowledge Exchange and the
Production of Research

CHSRF'S SELF-ASSESSMENT TOOL

IS RESEARCH WORKING FOR YOU?

THE SELF-ASSESSMENT ASKS ABOUT THE ORGANIZATION'S ABILITY TO ACQUIRE, ASSESS, ADAPT AND APPLY RESEARCH

After an [evaluation process](#), involving focus groups, CHSRF's Self-Assessment Tool has been re-launched and is ready to be used by decision-making organizations who want to generate an internal discussion about how well they use research and where there is potential for improvement.

HOW CAN A SELF-ASSESSMENT TOOL HELP?

Many organizations would like to make better use of research, but aren't sure where to start. Others feel they're doing well, but



NCCMT Tools

- Compendium of Critical Appraisal Tools

- http://www.nccmt.ca/pubs/2008_07_CompndiumToolENG.pdf





<i>Type of Research</i>	<i>Website (Link)</i>	<i>Type of Study - Link to Tools</i>
<p>Quantitative</p> <p><i>What is the effectiveness of....?</i></p> <p><i>What is the result of exposure to...?</i> (causation or harm)</p> <p><i>Guidelines for...?</i></p>	<p>Critical Appraisal Skills Programme (CASP) (UK):</p> <p>http://www.phru.nhs.uk/Pages/PHD/resources.htm</p> <p>Recommended</p>	<p>randomized control trials:</p> <p>http://www.phru.nhs.uk/Doc_Links/rct%20appraisal%20tool.pdf</p> <p>cohort studies:</p> <p>http://www.phru.nhs.uk/Doc_Links/cohort%2012%20questions.pdf</p> <p>case control studies:</p> <p>http://www.phru.nhs.uk/Doc_Links/Case%20Control%2011%20Questions.pdf</p>

Can I use this evidence in program decision-making?

Applicability and Transferability Tool

http://www.nccmt.ca/pubs/2007_12_AT_tool_v_nov2007_ENG.pdf

-considers issues of political, social acceptability, resource availability, applicability

A Model for **Evidence-Informed Decision-Making** in Public Health



Health-Evidence database

- 2100+ reviews
- Comprehensive & transparent process
- Quality appraised
- Evidence-summaries (80 strong reviews)



Health Evidence – engagement

- 40, 000 visitors annually (~110/day)
- ~4,900 registered users
- Tailoring options
- Feedback and user queries
- Knowledge brokers
- HE-CBPP simultaneous searches
- Social media strategy in development
 - YouTube
 - Twitter



Health Evidence Tools

- **EIDM Checklist** – tracks progress through the EIDM process
 - Links to tools and resources at each stage
 - Documents links within the organization (intranet, shared folders and drives) for sharing in the future
- **Briefing Note: Decisions, Rationale and Key Findings Summary** – documents what is learned from research evidence that contributes to decisions:
 - a description of the issue(s) that indicated need (change in practice, program, or policy)
 - the types and nature of the evidence (research and practice-based)
 - options considered and their rationale
 - recommendations made and their rationale
- **Improving Future Decisions: Optimizing the Decision Process** - Highlights positive aspects of the decision process and the decision itself
 - Documents barriers and facilitators to effective decision making in this particular case
 - Captures lessons learned about the process
 - Documents practical suggestions for improving future decision making



when
completed

Evidence-Informed Decision Making (EIDM) Phases & Steps

File Path / Link to
Saved Location on
(insert name of
your network here)

 1

Define question Was a clear answerable search question developed?

What was the question?

P

I

C

O

 2

Search for relevant evidence Was a comprehensive search strategy employed to find the best available evidence to address this question?

PICO search terms table (See: [Developing an Efficient Search Strategy](#))

Years searched

Pyramid results (See: [Levels & Sources of Public Health Evidence](#))

Search results (See: [Keeping Track of Search Results: A Flowchart](#))

References saved in reference management software database (e.g., *Reference Manager* or *RefWorks*)

What relevance criteria were used to determine evidence for quality assessment:

Primary – titles and abstracts as found in reference management database (Save as separate reference management database)

Secondary – Relevance assessment of full document versions (Save as separate reference management database)

How many papers remained following relevance assessment(s)?
(See Flowchart)

 3

Appraise Was quality assessment conducted on relevant evidence?

How many papers remained after quality assessment? (See Flowchart)

 4

Synthesize What were the results of the review of the evidence?

What were the actionable messages from the evidence?

 5

Implement

 6

Evaluate

Briefing Note: Decisions, Rationale and Key Findings Summary

(insert briefing note number or other identifier here) (insert date here)

Issue:

Explain in one or two lines why the briefing note matters to the reader.

Sets out, in the form of a question or statement, what the rest of the note is about.

Background:

Gives a brief summary of the history of the topic and other background information and provides details the reader needs in order to understand what follows

- How a situation arose
- Previous decisions/problems
- Actions leading up to the current situation

What led up to this problem or issue? How has it evolved?

Do not repeat information that you're including in the Current Status section.

Current Status:

Describes only the current situation, who is involved, what is happening now, the current state of the matter, issue, situation, etc.

What are we currently doing on this topic?

Key Considerations

The subsections below provide a summary of important facts, considerations, developments—everything that needs to be considered now. While you will have to decide what to include and what to leave out, this section should be as unbiased as possible. Your aim is to present all the details required for the reader to be informed or to make an informed decision. Keep the reader's needs uppermost in your mind when selecting and presenting the facts.

The Evidence:

Research evidence:

- Indicate the results of a literature search that was conducted based on the 6-step pyramid in [Levels & Sources of Public Health Evidence](#). See [Evidence-Informed Decision Making \(EIDM\) Checklist](#)
 - What do we know from the evidence about the issue
 - o What works to address the issue
 - o What does not work
 - o What factors are associated (e.g., barriers and facilitators)
 - What don't we know?

Organizational evidence:

- Information about organization's capacity to complete the task, e.g., availability of
 - Human resources
 - Managerial expertise
 - Funds - reality of limited budgets
 - Opportunities to draw from other areas of the organization

Colloquial Evidence:

- Environmental scan evidence (evidence from other health units)
 - What are other health units doing?
 - Results of outcome and/or process evaluations
 - Expertise, views and realities of stakeholders
 - Partner or other in-kind resources
- Expert (practice or research) consultation evidence

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- Political evidence:
 - Public attitudes towards proposed policies, media reaction
 - Legislation or Ministry Guidelines
 - Community Values
- Community evidence
 - Habits and traditions
 - Lobbyists and pressure groups
- Pragmatics and contingencies of situation

Options:

Provide observations about the key considerations, what they mean, and a concise description of:

- The options
Options may include for example: maintaining current status; changing practice/policy; reorganizing human resources; training key personnel; submitting a funding proposal;
- Their pros and cons
 - Impact on organization
 - o Supports (or not) for strategic priorities or other organizational initiatives
 - Which ones?
 - How?
 - o Human resources
 - Numbers
 - Knowledge/ skills
 - o Budget implications
 - o Potential to impact other roles/teams/divisions
 - Which ones?
 - How?
 - Potential or actual contentious issues
 - o Community
 - Preferences
 - Societal/population/community impact
 - o Political issues
- What will happen next

Conclusion and/or Recommended Response/Action:

Conclusions summarize what you want your reader to infer from the briefing note. What's the take home message?

When identifying recommendations, offer the best and most sound advice you can offer. Make sure the recommendation is clear, direct and substantiated by the facts you have put forward. Many readers jump immediately to this section, so be sure it covers the points you most want your reader to be clear about.

Do not introduce any new information or evidence in the Conclusion section.

Submitted by:

Name and contact information

Submitted to:

Name and contact information

Date:

Improving Future Decisions: Optimizing the Decision Process from Lessons Learned

(insert number of and/or link to briefing note or other decision identifier here) (insert date here)

Issue:

Provide a brief description of the issue

Decision:

Identify the final decision

Decision process:

Breakdown the process into discrete activities then determine, upon reflection on the process,

- *What was supposed to happen?*
- *What actually happened?*
 - *Why?*
- *What's the difference?*
 - *Why?*
- *What worked well that we'd want to ensure we incorporate into future decision making?*
 - *Why?*
- *What did not work that we definitely don't want to do in the future?*
 - *Why not?*
- *What did not work that we want to ensure that we do differently?*
 - *Why?*
- *What, in your opinion, would be the ideal process?*

Lessons Learned

- *Highlight successes*
 - *How to sustain or expand upon them*
- *Identify things that did not go as well as planned*
 - *Ways to modify or improve performance*

Recommendations for future decision making

What, if any changes, to process or direction should be made? Identify crisp and clear, achievable and future-oriented recommendations.

Put in place action plans, with assigned responsibilities and timelines, to sustain the successes and to improve upon the shortfalls.

Submitted by:

Name and contact information

Submitted to:

Name and contact information

Date:

Questions/Issues for discussion

- How would you see this tool being used in your organization
- Useful?
- Adapt?
- Use?
- Barriers to use?



Road ahead

- Individual skills
- Organizational capacity, leadership resources and culture



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