Dealing with Complex Public Health Issues Using an Evidence-Informed Approach

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Governments must tackle complex public health problems.

e.g. health inequalities, obesity, climate change, bed bugs....
Understanding change processes*: where effectiveness meets evidence

- Focus on areas with high certainty and high agreement
- Understand and utilize effective change processes

Source: McQueen DV. (2006). From Bangkok to Vancouver through Budapest. IUHPE 7th European Conference on Health Promotion and Health Education. Budapest (adapted from Ralph D. Stacey).
A few assumptions about the world we live in...

1. We are facing complex public health problems and there is often no agreed upon definition of these problems

2. There is a lot of uncertainty about the most effective policy options to address these problems and their implications (e.g. unintended effects, feasibility, costs, acceptability, equity, etc.)

3. There is often disagreement about how we should address these problems
We need mechanisms...

1. To develop a shared understanding of these problems
2. To better understand what policy options work and in what context
3. To reach agreement and trigger action
A strategy to address complex public health problems
Objectives

• Provide an overview of the steps of evidence-informed public health.
• Explore the application of deliberative processes to assist with evidence-informed decision-making.
Who are we?

Two of six National Collaborating Centres for Public Health created by the Government of Canada to renew and strengthen public health.
National Collaborating Centres for Public Health

NCC Aboriginal Health
Prince George, BC

NCC Environmental Health
Vancouver, BC

NCC Infectious Diseases
Winnipeg, MB

NCC Methods and Tools
Hamilton, ON

NCC Determinants of Health
Antigonish, NS

NCC Healthy Public Policy
Montreal and Quebec City, QC
Aims of the National Collaborating Centres

- Increase awareness of new and existing knowledge.
- Identify and help address public health priorities.
- Collaborate with established public health networks.
- Identify gaps in knowledge and relevant applied research.
NCCHPP

- Support public health actors in their efforts to promote healthy public policies

Topics

- Deliberative processes
- Health impact assessment
- Strategies to influence policy making
- Knowledge translation methods
NCCMT
Methods and tools for sharing what works in public health

Goals

- Develop the organizational capacity and individual skills of those involved in public health to share what works in public health.
- Identify, develop and evaluate relevant methods and tools for knowledge translation
- Build active and sustainable networks that enable public health professionals, policy makers and researchers to share what works.
NCCMT Products and Services
What is Evidence-Informed Decision Making in Public Health?

In addition to the best available research evidence, evidence-informed decisions in public health consider valuable evidence from a variety of sources:

- community health issues and local context
- existing public health resources
- community and political climate
What is Evidence-Informed Decision Making in Public Health?

Decision makers must rely on their public health expertise to integrate all relevant factors into any conclusions or recommendations.
A Model for Evidence-Informed Decision-Making in Public Health

- Community Health Issues, Local Context
- Community and Political Preferences and Actions
- Public Health Expertise
- Research
- Public Health Resources
What is Evidence-Informed Public Health?

... the process of distilling and disseminating the best available evidence from research, context and experience, and using that evidence to inform and improve public health policy and practice.
What is Evidence-Informed Public Health?

Put simply, it means finding, using and sharing what works in public health.
Stages in the process of Evidence-Informed Public Health
Have you had an experience with trying to move research evidence into practice?
What is a “deliberative process”? 
Deliberation

1. thoughtful, careful, or lengthy consideration

2. formal discussion and debate, as of a committee, jury, etc

3. care, thoughtfulness, or absence of hurry, esp. in movement or speech
Abelson (2010) on ‘deliberative processes’

“Individuals with different backgrounds, interests, and values listen, learn, and potentially persuade and ultimately come to more reasoned, informed, and public spirited judgments”

Why deliberate?
1. Deliberation can help to develop a shared understanding of a problem.
2. By tapping into stakeholder’s knowledge, a deliberation helps to contextualize the literature and collect new evidence
3. Deliberation is a promising knowledge translation (KT) strategy to facilitate or trigger evidence-informed actions
Moving Forward on Both Systematic Reviews and Deliberative Processes

Aller de l'avant avec les examens systématiques et les processus de délibération

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Abstract

Systematic reviews are increasingly seen as helpful “knowledge support” for managers and policy makers, and deliberative processes are starting to be seen as promising locally contextualized “decision support.” Increases to the flow of systematic reviews should be complemented by efforts to facilitate the retrieval, and adapt the presentation, of the available stock of systematic reviews. Research and other evidence should be combined in transparent ways to facilitate cross-context learning. The challenge for managers and policy makers in moving forward will be to avoid the confusion that comes from the branding of both systematic reviews and deliberative processes.
CIHR’s ‘integrated KT’

• Stakeholders are engaged in the entire research process

• Researchers and stakeholders work together to shape the research process

• Produce research findings that are more likely be relevant to and used by the end users

Source: http://www.cihr-irsc.gc.ca/e/39033.html
Address some of the factors that have been identified as ways to support the translation of research evidence into action:

1. increase interaction among policy makers and researchers

2. respond in a timely way to a 'window of opportunity’

3. enable all participants to understand how existing research evidence does or does not align with the existing beliefs, values, interests or political goals of key stakeholders

Source: http://www.mcmasterhealthforum.ca/index.php/stakeholders/stakeholder-dialogues
When to deliberate?
Stages in the process of Evidence-Informed Public Health

- Define
- Search
- Appraise
- Synthesize
- Implement
- Evaluate
- Adapt
Our approach proposes to deliberate with stakeholders at two stages (define and adapt), but there is value in engaging stakeholders at other stages as well...

- CIHR’s integrated KT
- CIHR’s citizen engagement framework
- Cochrane Consumer Network
Who should deliberate?
Who should deliberate in the process of Evidence-Informed Public Health?

Only public health practitioners?
Who should deliberate in the process of Evidence-Informed Public Health?
Who should deliberate?

1. Those who are **affected** by the problem and the options

2. Those who can **facilitate or trigger action**

3. Those who are **knowledgeable** about the problem and the options
How many people should deliberate?
Smaller deliberation
(6 to 12)

Larger deliberation
(12+)

DEFINE

SEARCH

APPRAISE

SYNTHESIZE

ADAPT

IMPLEMENT

EVALUATE
What is their degree of influence?
What are the key procedural features of a deliberative process?
Procedural features

1. the **provision of information** to participants about the problems/options being discussed

2. the opportunity for **interactive discussion** among participants (with or without a facilitator)

3. an explicit process for **collecting individual and collective input** (e.g., observers, pre-post questionnaires, dialogue mapping)
Dialogue mapping (cognexus.org)
Have you been involved in a deliberative process before?
Stages in the process of Evidence-Informed Public Health
Stages in the process of Evidence-Informed Public Health

- Define

Clearly define the question or problem
Define the question

• Why does it matter?
Define the question

Population

Intervention

Comparison

Outcome
Scenario

• Public health manager
• Concerned about food security for families with young children.
• Survey of the region indicates newcomers to Canada living in low income neighbourhoods at highest risk.
Issue

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life....and requires an available and reliable food supply at all times”

A deliberation to define the problem

- You invite a small group of stakeholders (6-12) to help you define the problem (your new friends around the table!)

- You provide some background information to participants about the problem which will serve as a starting point to interactive discussion

- The group tries to achieve consensus over the definition of the problem and the scope of work necessary

- Individual and collective input are gathered using a computer assisted dialogue mapping exercise (how fancy!) or simply by having a note-taker (it’s good enough)
Small group work

Introduce yourselves in your small group.
Take 10 min to clearly define the question(s) your group may have from part 1 of the scenario using the PICO format.

P population
I intervention
C comparison
O outcome
Defining the question

An example:

**P**: School aged children (4-12 years old)

**I**: School nutrition/feeding programs

**C**: No intervention

**O**: self-reported hunger, consumption of fruits and vegetables, height and weight, academic performance.
Defining the question

An example:

**P:** Low income neighbourhoods

**I:** Interventions to improve retail access to low cost culturally acceptable healthy foods.

**C:** No intervention

**O:** Availability of affordable nutritious foods, food purchasing, or self-reported food consumption.
Small group work

Review part 2 of the scenario.

• Were your PICO questions similar or different from the two options that were identified?

• Who should be involved in a discussion to define the problem in this scenario and what implications will this have for the options that are considered?
What interventions would be most effective to improve food security among new immigrant families living in low income neighbourhoods?

**Focused questions**

- Do school meal programs have an impact on hunger, nutritional status, height and weight gain or academic performance among disadvantaged students?
- What is the effect of monetary incentives for disadvantaged households on food purchases or consumption of nutritious foods?
- Does modifying the food environment to increase availability of healthy affordable food at stores in low income neighbourhoods impact food purchasing or consumption of healthy foods among high risk families?
- Among disadvantaged families, can community gardens improve access to healthy culturally appropriate foods, engage community members in food production and impact consumption of healthy foods?
• Will the answer to one of these clearly defined questions actually make a difference to the problem described in the scenario?

• Are we too focused?
Stages in the process of Evidence-Informed Public Health

- Search
  - Efficiently search for research evidence
Stages in the process of Evidence-Informed Public Health

Critically and efficiently appraise the research methods
Stages in the process of Evidence-Informed Public Health

Interpret information; understand how to prioritize conflicting results

Synthesize
Some evidence relevant to the scenario

• In developed countries, school feeding programs may lead to a small increase in weight gain among disadvantaged students but have no clear effect on school attendance or academic performance.

• Conflicting evidence from studies about the relationship between retail access to nutritious low cost food and household food security.
Some evidence relevant to the scenario

• Cochrane systematic review in progress about the effectiveness of community level interventions to improve food security in developed countries.

• CIHR funded project underway to identify attributes of effective policy interventions to address household food security in Canada.
Stages in the process of Evidence-Informed Public Health

Adapt the information to the local community
You have FINALLY completed the search, appraisal, and synthesis of the literature...

But you are still concerned about certain things...
You are concerned about...

Robustness of the evidence
The « evidence » is limited or is not robust.

Issues are not well-documented
There are perhaps certain issues that are not identified or addressed in the literature.

Applicability and transferability
You do not know if the knowledge from the literature is applicable to your own context.
A deliberative process can enrich and contextualize your research synthesis
A Model for Evidence-Informed Decision-Making in Public Health
A deliberation to define the problem

- This time, you invite a larger group of stakeholders (20-25), people who are affected by the problem and the option, as well as people who are knowledgeable and could fill the gaps from the literature

- You provide the research synthesis to participants (at least 2 weeks in advance), that will be the starting point to interactive discussion

- The group critically examine the problem and whether the research evidence is applicable and transferable

- Individual and collective input are gathered
Publications

Can I Use This Evidence in My Program Decision? Assessing Applicability and Transferability of Evidence (A & T tool)

Type: Paper

Year: 2007

This paper contains a summary of the current literature, including a process to help you evaluate the feasibility and generalizability of evidence to your public health practice. The associated tool (included in paper) or the revised (2011) tool (available separately below) help you make decisions about program priorities in your own community. Also refer to as A&T / A+T Tool.

How to cite this paper:

How to cite the revised tool:


Paper
Tool: A starting an intervention
Tool: B stopping an existing program or intervention
Small group work

Take 5 minutes to review the tool for assessing the Applicability and Transferability of evidence.

Discuss:

• How could this tool be useful to the situation described in the scenario?
• How could this tool be incorporated into a deliberative process?
• Who should be around the table?
Stages in the process of Evidence-Informed Public Health

- Decide whether (and plan how) to implement the change in practice or policy
Assess the effectiveness of the change in practice or policy.
Registry of Methods and Tools

A free, searchable online collection of knowledge translation methods and tools for public health

The Registry contains summaries of, references for, and web-links (where available) to methods and tools.

Find resources to assist you with implementation and evaluation
Wrap up
Stages in the process of Evidence-Informed Public Health
Step ‘0’
Reflecting on areas of uncertainty

• Examine your work critically.

• Acknowledge uncertainty.

• Formulate questions and seek and use research evidence in decision making.
Deliberation is really promising, but it’s no panacea...
Evaluating the ‘quality’ of deliberation
[De Vries et al., 2010]

- Equal participation by all participants
- Respect for the opinion of others
- Reasoned justification of one’s position
- Willingness to adopt a societal perspective

From your perspective, what are the benefits and limitations of using this combined approach in your work?
What **support, resources, and access to expertise** would you need to move forward?
Feedback

• Your input is needed to determine whether this workshop was effective in meeting your learning needs.

• Please take a minute to complete the evaluation form in your packages and provide your comments or suggestions.
For more information, or to access our selection of Policy documents and Tools, see our website: www.ncchpp.ca (English) or www.ccnpps.ca (French)