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Evidence-Informed Decision-Making in Community Health

June 2010

Donna Ciliska & Rebecca Ganann

Purpose

Describe the steps involved in evidence-informed community health, and apply this process to a community health issue.



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Public health is not a cult -we use evidence

David Butler-Jones

June 2010



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1. Introduce yourselves

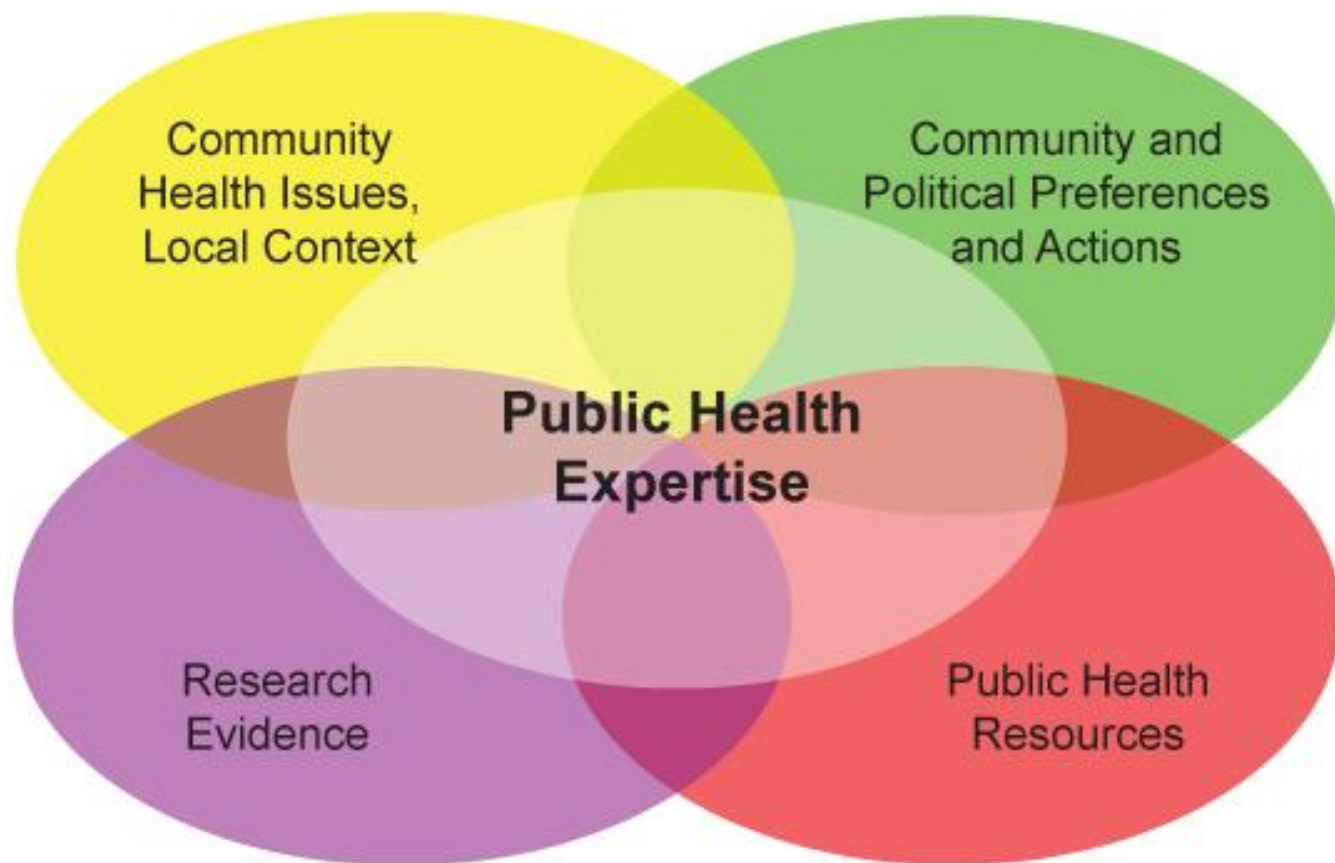
2. Any current practice questions?



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A Model for Evidence-Informed Decision-Making in Community Health



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Why implement Evidence-Informed Community Health?

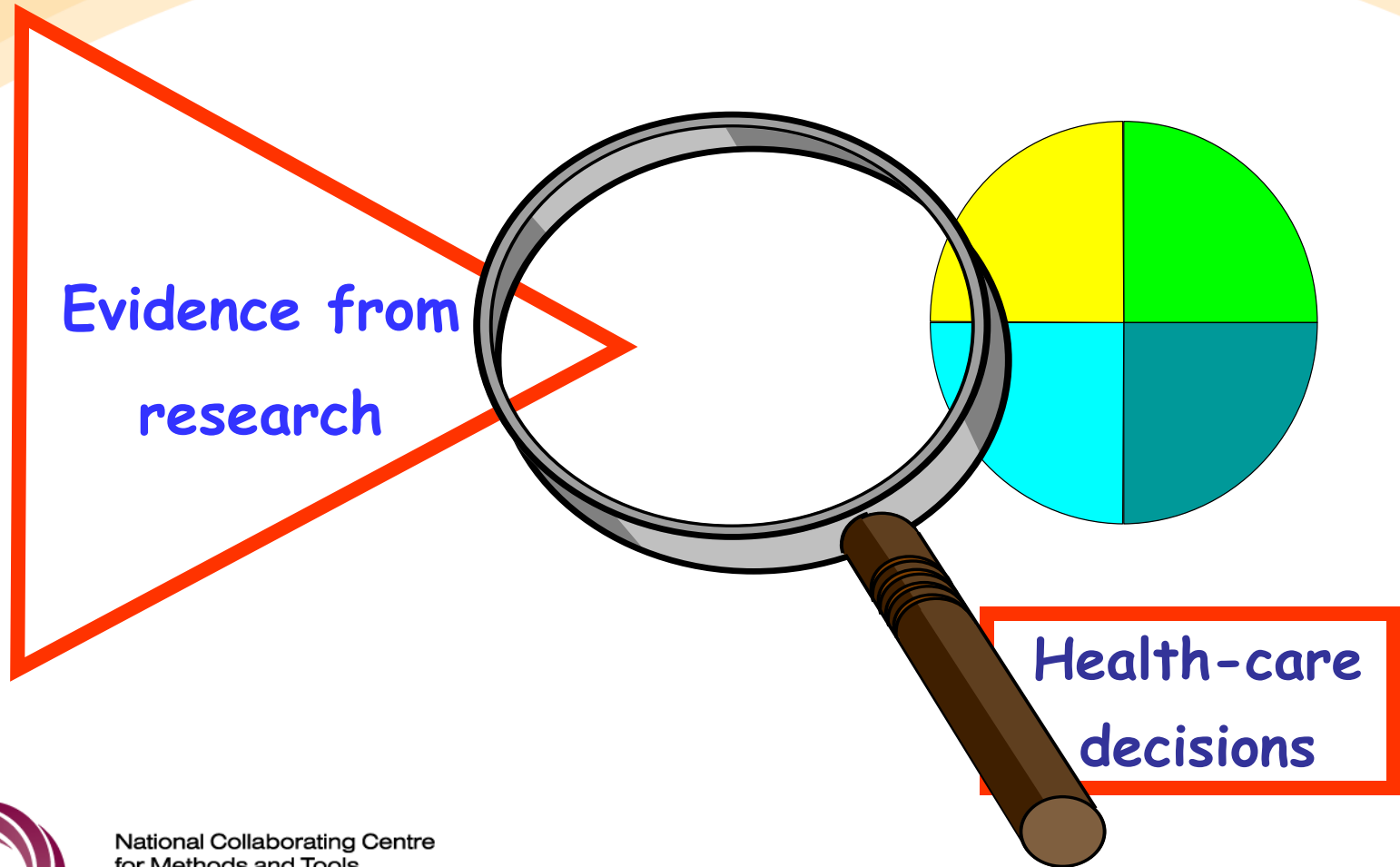
- Effectively transfer knowledge from both quantitative and qualitative research into practice and policy.



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Evidence Transfer Gap



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Evidence of Gap in Acute and Primary Care

- Consistent evidence of failure to translate research findings into practice
- 30-40% patients do not get treatments of proven effectiveness
- 20-25% patients get care that is not needed or potentially harmful

Schuster, McGlynn, Brook (1998). *Milbank Memorial Quarterly*

Grol R (2001). *Med Care*

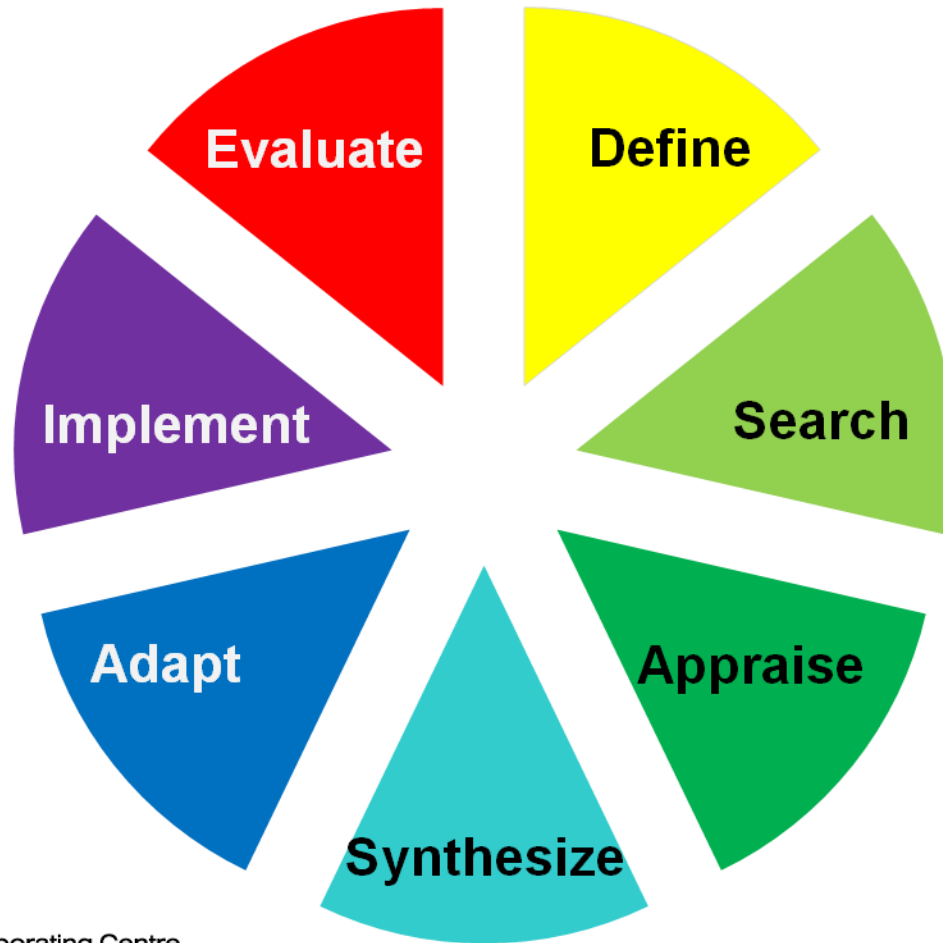


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Stages in the process of

Evidence-Informed Community Health

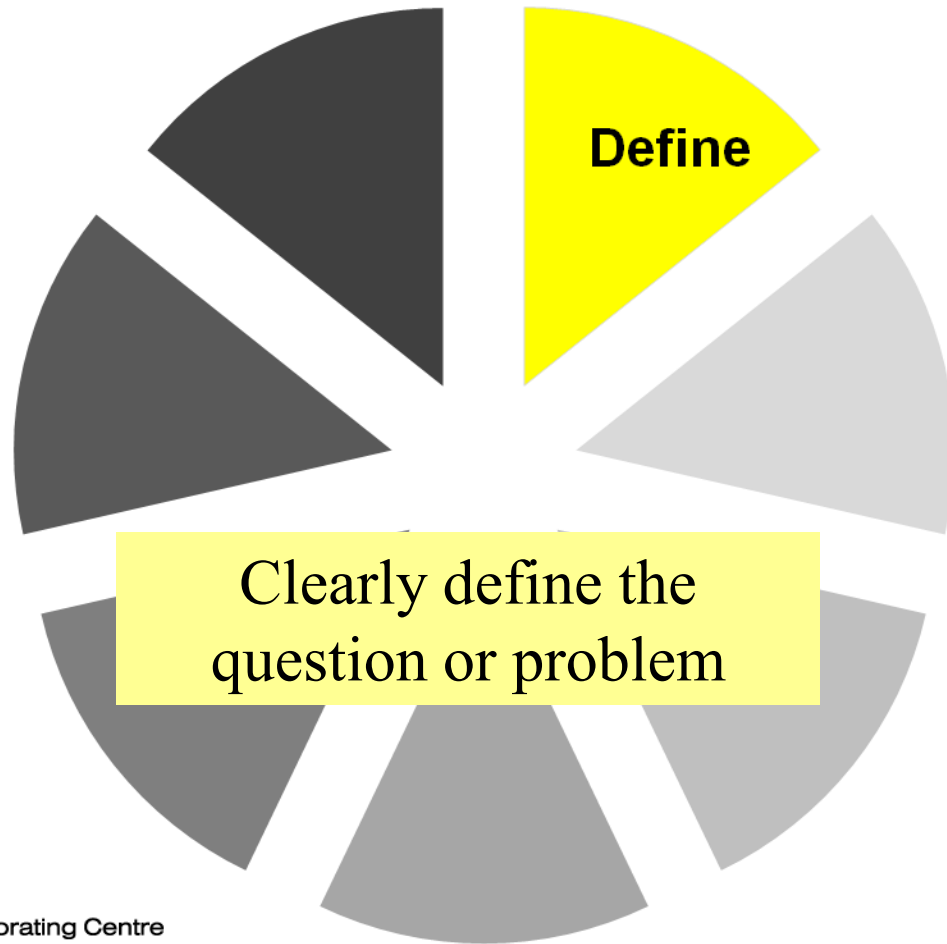


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Scenario

AN EXAMPLE!

- H1N1
- What interventions help to prevent or reduce the transmission of respiratory viruses?



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Define the question

P opulation

I ntervention

C omparison

O utcome



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Define the question

P general public

I handwashing, sanitizers, masks

C usual routine

O respiratory viruses



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Where would you go to look for the research evidence?

1.

2.

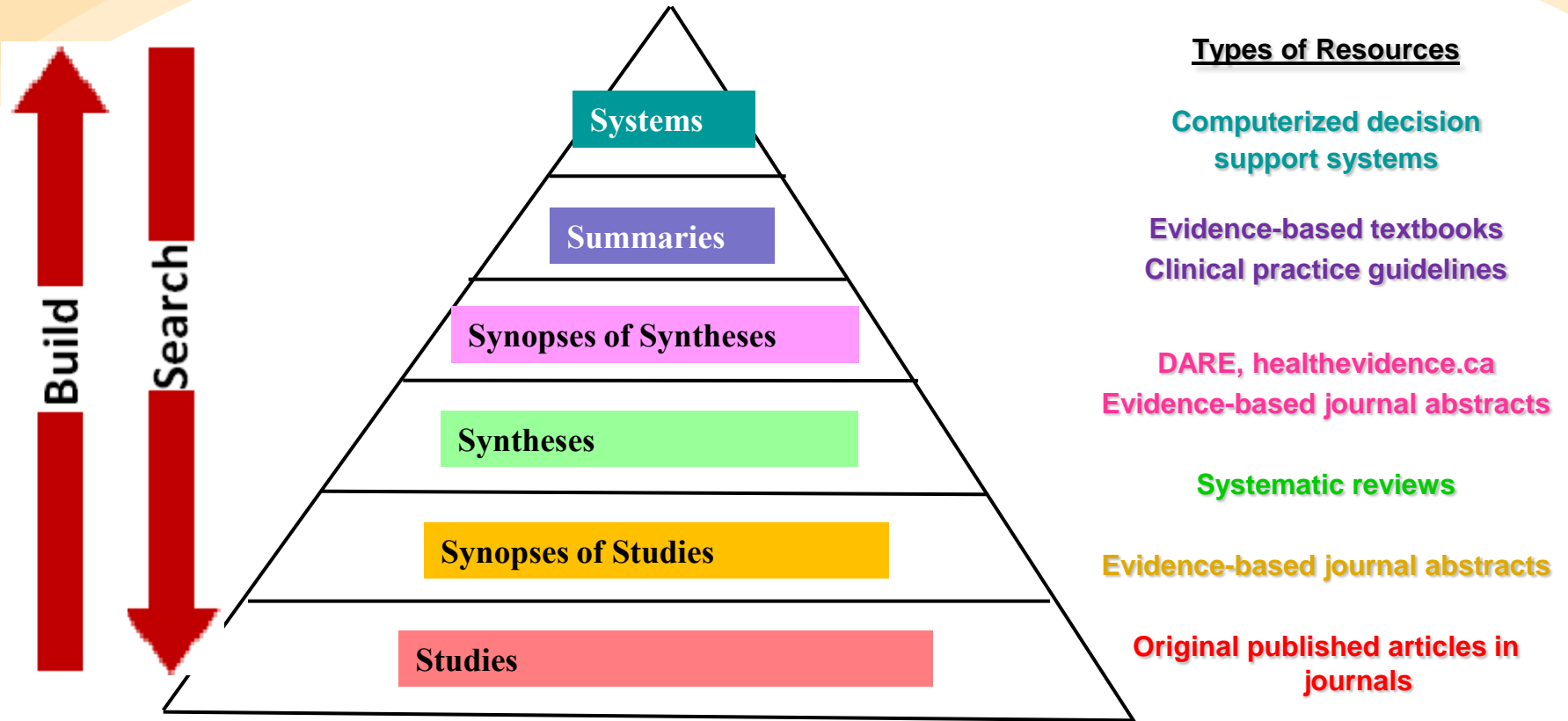
3.



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Hierarchy of Pre-appraised Evidence

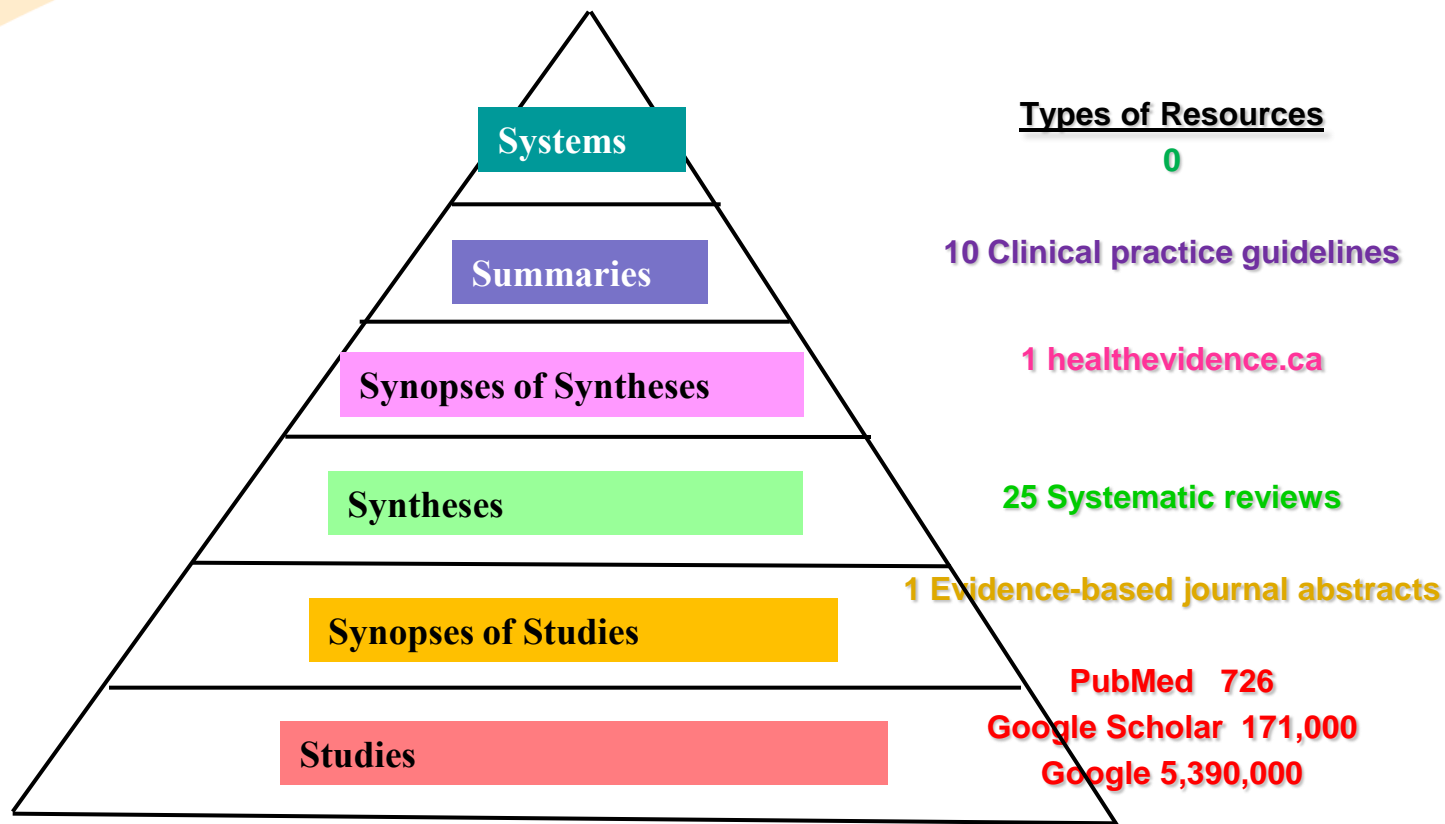


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Adapted from DiCenso, Bayle and Haynes (2009). Accessing pre-appraised evidence: Fine-tuning the 5S model into a 6S model. *Annals of Internal Medicine*, 151(6):JC3-2, JC3-3 OR *Evidence-Based Nursing*, 12,99-101

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Search: prevent AND respiratory virus



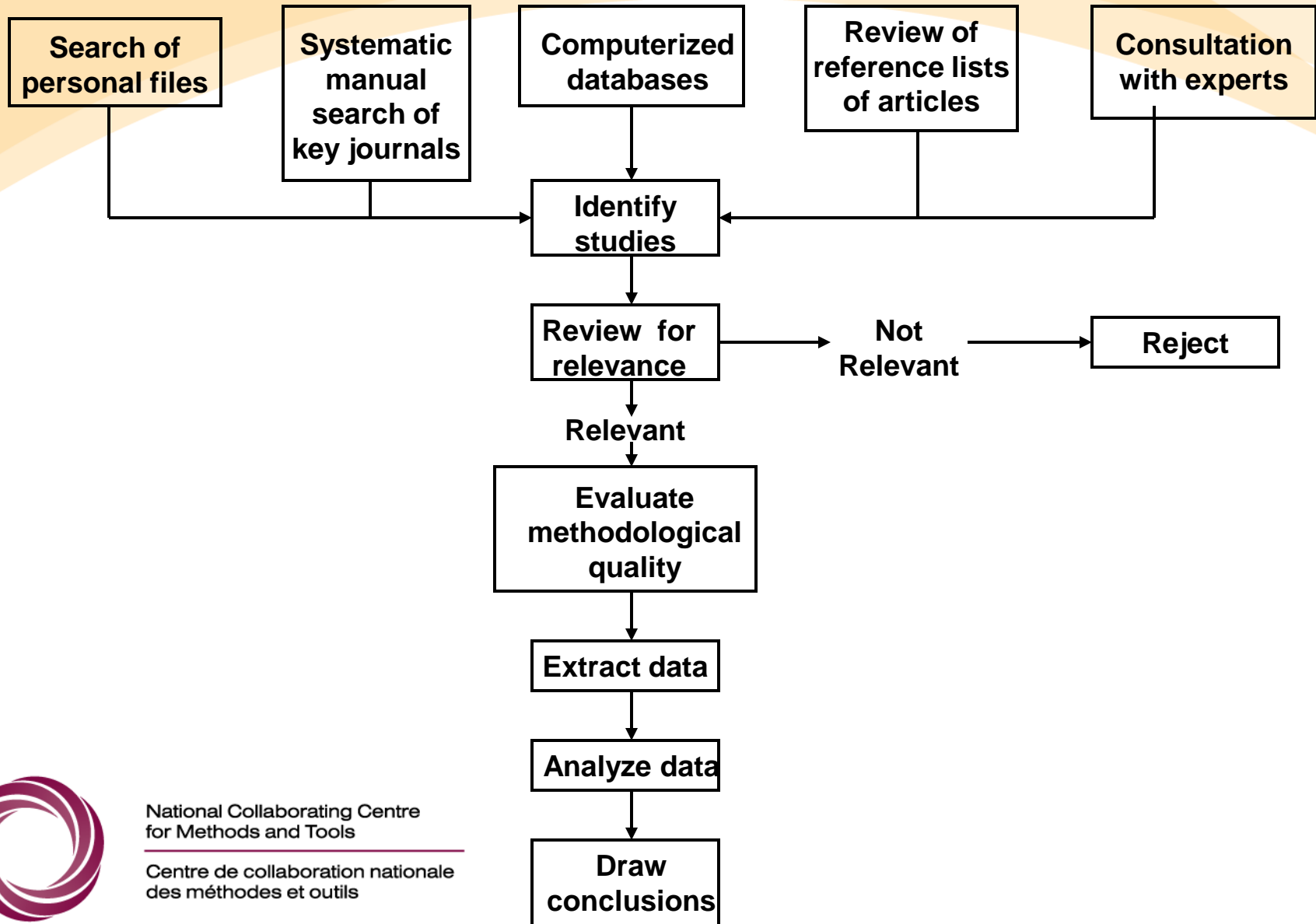
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Adapted from LiCense, Bayley and Haynes (2009). Accessing pre-appraised evidence: Fine-tuning the 5S model into a 6S model. *Annals of Internal Medicine*, 151(6):JC3-2, JC3-3 OR *Evidence-Based Nursing*, 12,99-101

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Steps of a Systematic Overview

Define question



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Risk Communication – Systematic Review

Initial search	16620 “hits”
Title and abstract screen	↓
	272
Full text relevance review	↓
Included studies	24
(21 quantitative/ 3 qualitative or mixed methods)	



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health-evidence.ca

- Online registry of systematic reviews evaluating the effectiveness of public health or health promotion interventions.
- Provides abstract and quality assessment rating for each review.
- Summary statements are available for some high quality reviews. These include:
 - PICO and main findings of the study
 - Methodological strengths and weaknesses
 - Implications for policy/practice



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For articles containing...

prevent respiratory virus

Search

Article Rating...

All

Clear Search

Articles added to the registry since...

All

Results per page...

10

Only articles with summary statements



Focus of Review

- [Addiction/Substance Use](#)
- [Adolescent Health](#)
- [Adult Health](#)
- [Child Health](#)
- [Chronic Diseases](#)
- [Communicable Disease/Infection](#)
- [Dental Health](#)
- [Environmental Health](#)
- [Food Safety & Inspection](#)
- [Healthy Communities](#)

Review Type

- [meta-analysis](#)
- [narrative](#)
- [systematic](#)

Population Characteristics

- [Age Groups](#)
- [Cultural Group](#)
- [Family](#)
- [First Nations, Inuit and Aboriginal](#)
- [Gender](#)
- [General Public/All age groups](#)
- [High Risk Group](#)
- [Low socioeconomic status](#)

[Print Search](#) | [Back to Search](#)

► **Options** - Click here to refine your search

Current Results

To sort click a column heading

<u>Article</u>	<u>Authors</u>	<u>Date</u>	<u>F</u>
<u>Physical interventions to interrupt or reduce the spread of respiratory viruses</u>	Jefferson, T. et al.	2010	7
<u>Physical interventions to interrupt or reduce the spread of respiratory viruses: Systematic review</u>	Jefferson, T. et al.	2009	7

 denotes articles with summary statements.

1 | [Back to Search](#)

? Having trouble with your search? [Please click here to view some useful search hints.](#)

Search: PubMed
Advanced search Help
Search Clear



- ### Using PubMed
- PubMed Quick Start
 - New and Noteworthy
 - PubMed Tutorials
 - Full Text Articles
 - PubMed FAQs

- ### PubMed Tools
- Single Citation Matcher
 - Batch Citation Matcher
 - Clinical Queries
 - Topic-Specific Queries

- ### More Resources
- MeSH Database
 - Journals Database
 - Clinical Trials
 - E-Utilities
 - LinkOut

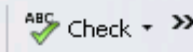
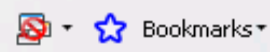
NLM/NCBI H1N1 Flu Resources:

- Newest H1N1 influenza sequences
- Submit flu sequences to GenBank
- Latest H1N1 citations in PubMed
- MedlinePlus (consumer health information)
- Enviro-Health links

FLU.GOV
Know what to do about the flu.
VISIT FLU.GOV
SHARE THIS WIDGET



prevent respiratory virus



PubMed Clinical Queries



- My NCBI
- Related Resources**
- Order Documents
- NLM Mobile
- NLM Gateway
- TOXNET
- Consumer Health
- Clinical Alerts
- ClinicalTrials.gov
- PubMed Central
- Privacy Policy

Category	Scope
<input type="radio"/> etiology	<input checked="" type="radio"/> narrow, specific search
<input type="radio"/> diagnosis	<input type="radio"/> broad, sensitive search
<input checked="" type="radio"/> therapy	
<input type="radio"/> prognosis	
<input type="radio"/> clinical prediction guides	

Find Systematic Reviews

For your topic(s) of interest, this search finds citations for systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines.

For more information, see [Help](#). See also [related sources](#) for systematic review searching.

Search

Medical Genetics Searches

This search finds citations and abstracts related to various topics in medical genetics. See the [filter table](#) for details.

Search

Category

PubMed Clinical Queries

This page provides the following specialized PubMed searches for clinicians:

- o [Search by Clinical Study Category](#)
- o [Find Systematic Reviews](#)
- o [Medical Genetics Searches](#)

Results of searches on these pages are limited to specific clinical research areas. For comprehensive searches, use [PubMed](#) directly.

Search by Clinical Study Category

This search finds citations that correspond to a specific clinical study category. The search may be either broad and sensitive or narrow and specific. The search filters are based on the work [table](#) for details.

Search

Category	Scope
<input type="radio"/> etiology	<input checked="" type="radio"/> narrow, specific search
<input type="radio"/> diagnosis	<input type="radio"/> broad, sensitive search
<input checked="" type="radio"/> therapy	
<input type="radio"/> prognosis	
<input type="radio"/> clinical prediction guides	

Find Systematic Reviews

For your topic(s) of interest, this search finds citations for systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines.

For more information, see [Help](#). See also [related sources](#) for systematic review searching.

Search

Medical Genetics Searches

This search finds citations and abstracts related to various topics in medical genetics. See the [filter table](#) for details.

- CBPI**
- [Home](#)
 - [Interventions-at-a-Glance](#)
 - [Population Health Approach: the Organizing Framework](#)
 - [Access Training and Consultation Services](#)
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 - [Nominate Resources and Interventions](#)

+/- TEXT PRINT

THE CANADIAN BEST PRACTICES PORTAL FOR HEALTH PROMOTION AND CHRONIC DISEASE PREVENTION

Welcome to the Canadian Best Practices Portal. The purpose of the Portal is to improve policy and program decision-making by enabling access to the best available evidence on chronic disease prevention and health promotion.

[Look at all the Interventions-At-A-Glance](#)

Click here to go to Interventions-at-a-Glance

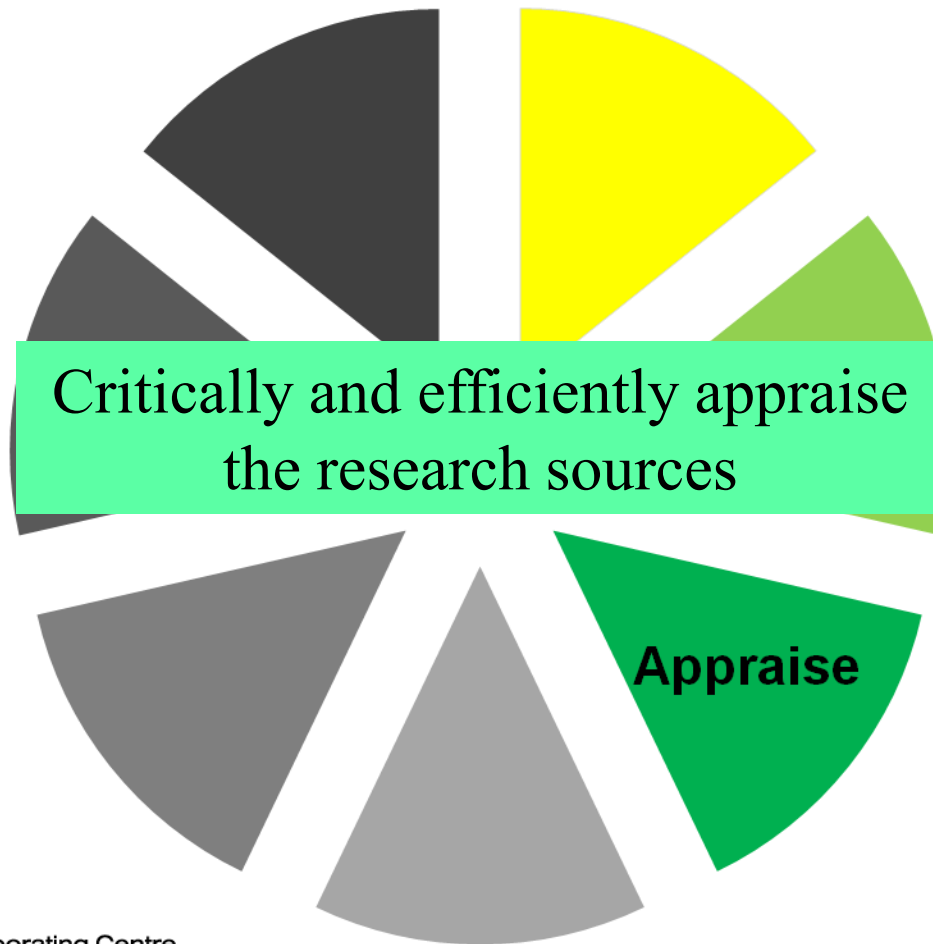
Nobody's Perfect		Analytic obs., Descriptive obs., Case study, Narrative
Quality Daily Physical Education (QDPE)		Descriptive obs., Phenomenological
Friendship Enrichment Program		Quasi-exp., Narrative



The *Peer Nutrition Program* provides culturally and linguistically appropriate nutrition education to parents, grandparents and caregivers of children aged six months to six years in over 100 diverse locations

Stages in the process of

Evidence-Informed Community Health



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An Introduction to Evidence-Informed Public Health and

A Compendium of Critical Appraisal Tools for Public Health Practice

Donna Ciliska • Helen Thomas • Cathy Buffett

February 2008

Abstract

- What does it tell you?
- Is it useful?
- What more do you need?

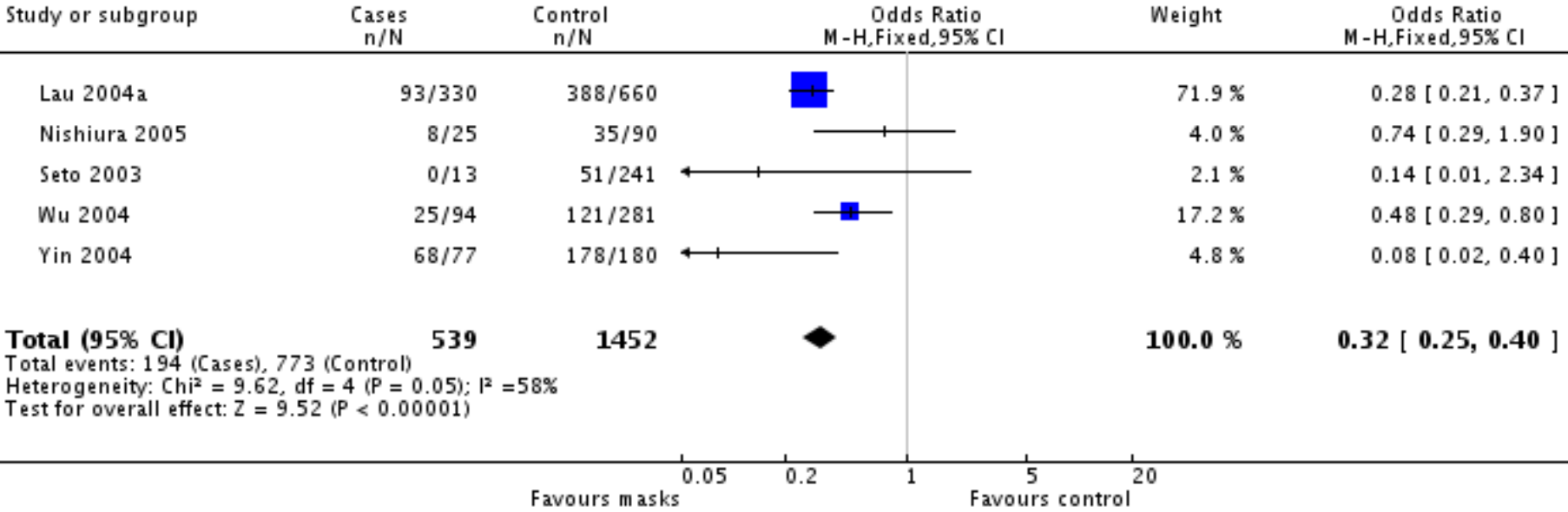


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Jefferson T, Del Mar C., Dooley, L. et al (2010). Interventions for the interruption or reduction of the spread of respiratory viruses. *Cochrane Database of Systematic Reviews.*

Review: Physical interventions to interrupt or reduce the spread of respiratory viruses
 Comparison: 1 Case control studies
 Outcome: 3 Wearing mask



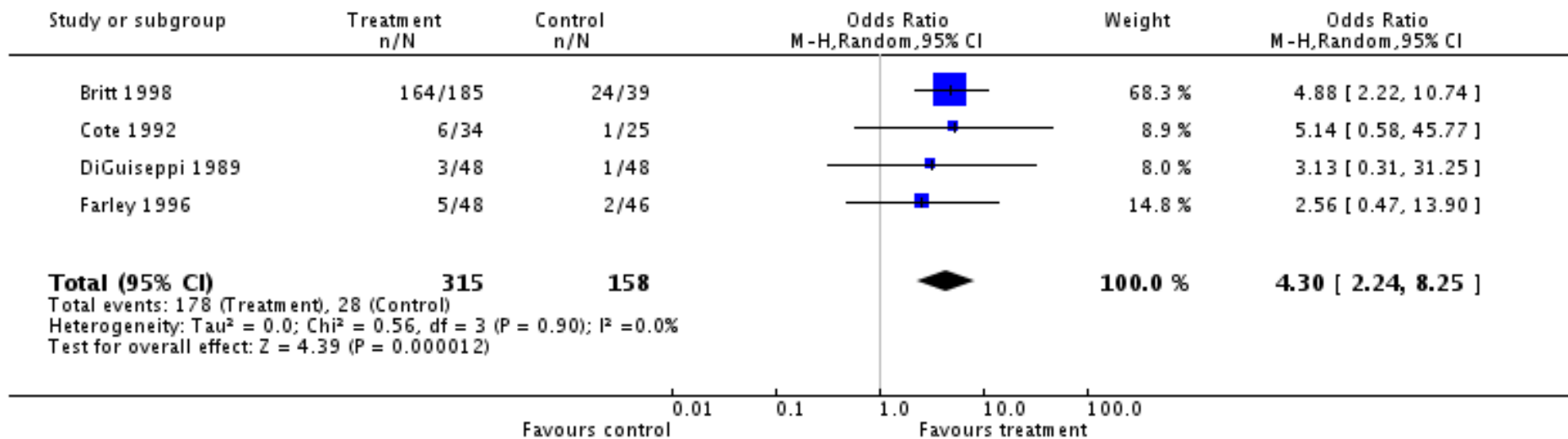


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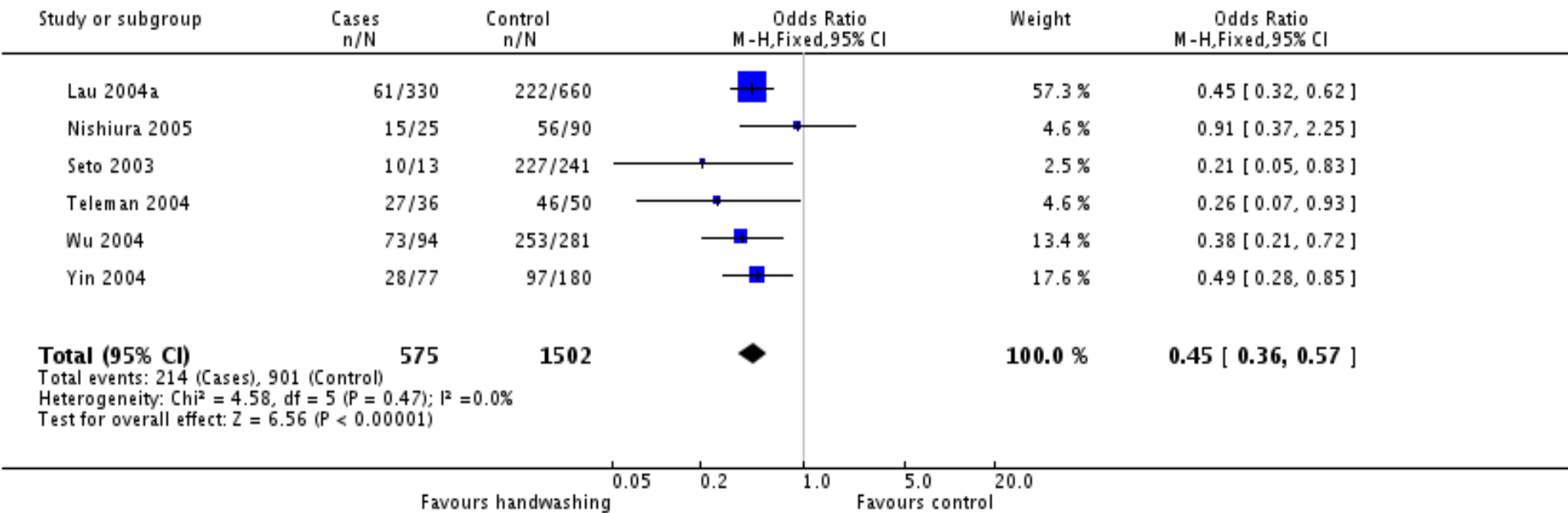
Royal S, Kendrick D, Coleman T. Non-legislative interventions for the promotion of cycle helmet wearing by children. *Cochrane Database of Systematic Reviews* 2005, Issue 2

Review: Non-legislative interventions for the promotion of cycle helmet wearing by children
 Comparison: 3 Non-legislative interventions vs control (community-based interventions)
 Outcome: 1 Observed helmet wearing



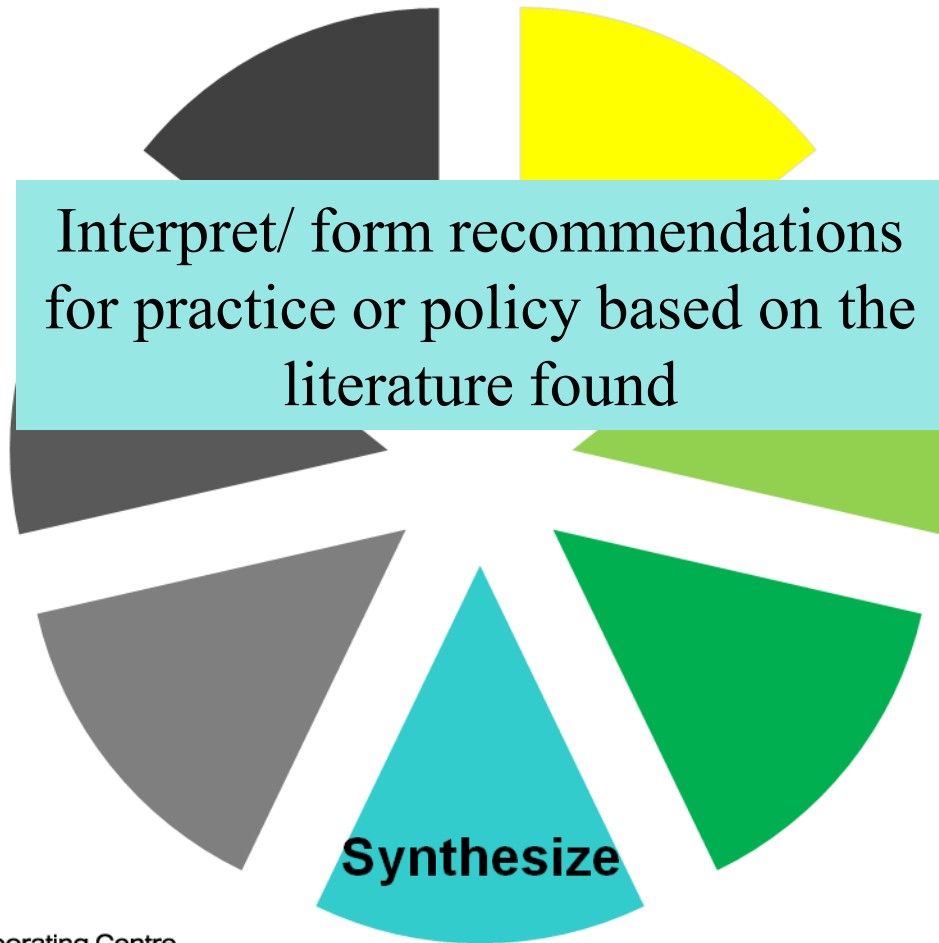
Jefferson T, Del Mar C., Dooley, L. et al (2010). Interventions for the interruption or reduction of the spread of respiratory viruses.
Cochrane Database of Systematic Reviews.

Review: Interventions for the interruption or reduction of the spread of respiratory viruses
 Comparison: 1 Case control studies
 Outcome: 2 Frequent handwashing



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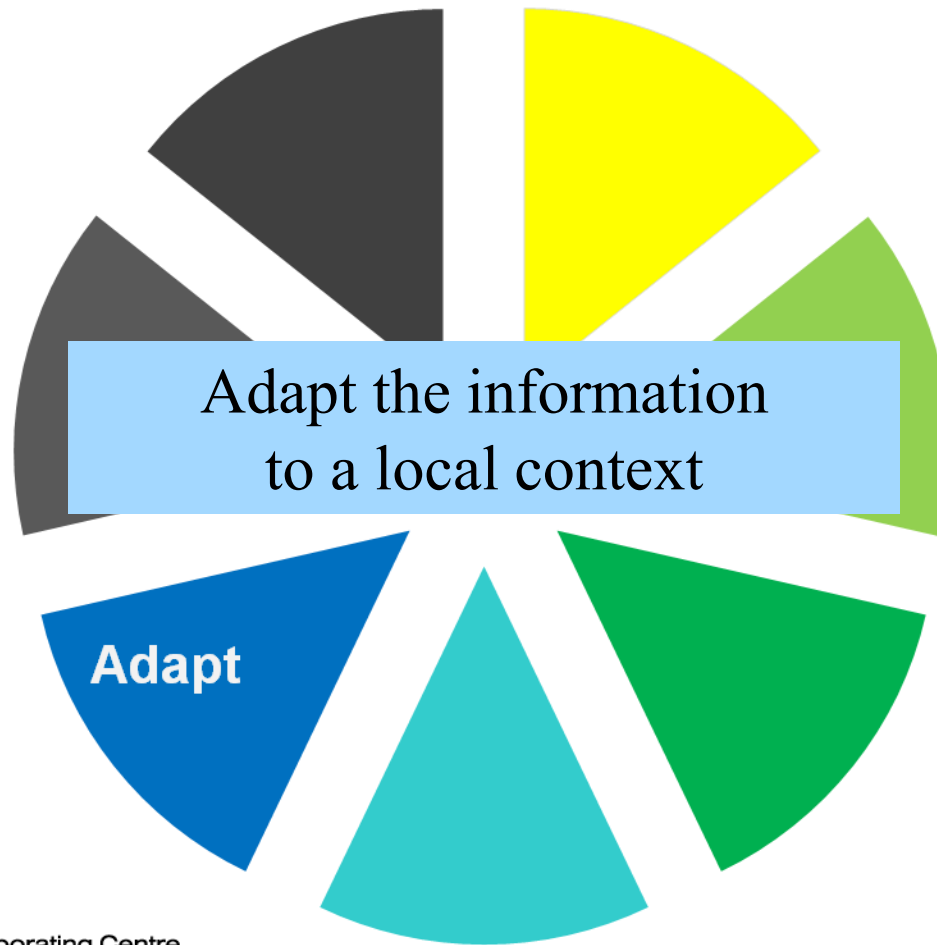
How do you decide which evidence you consider?



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**Can I Use This Evidence in my Program Decision?
Assessing Applicability and Transferability of Evidence**

November 2007

Prepared by C. Buffett, D. Ciliska, H. Thomas
for the National Collaborating Centre for Methods and Tools



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Assessment of Applicability & Transferability

Construct	Factors	Questions to Ask
Applicability (feasibility)	Political acceptability or leverage	<ul style="list-style-type: none"> ▪ Will the intervention be allowed or supported in current political climate? ▪ Will there be public relations benefit for local government? ▪ Will this program enhance the stature of the organization? ▪ Will the public and target groups accept and support the intervention in its current format?
	Social acceptability	<ul style="list-style-type: none"> ▪ Will the target population be interested in the intervention? Is it ethical?
	Available essential resources (personnel and financial)	<ul style="list-style-type: none"> ▪ Who/what is available/essential for the local implementation? ▪ Are they adequately trained? If not, is training available and affordable? ▪ What is needed to tailor the intervention locally? ▪ What are the full costs (supplies, systems, space requirements for staff, training, technology/administrative supports) per unit of expected outcome? ▪ Are the incremental health benefits worth the costs of the intervention?
	Organizational expertise and capacity	<ul style="list-style-type: none"> ▪ Is the current strategic plan/operational plan in alignment with the intervention to be offered?

	Organizational expertise and capacity	<ul style="list-style-type: none"> ▪ Is the current strategic plan/operational plan in alignment with the intervention to be offered? ▪ Does this intervention fit with its mission and priorities? ▪ Does it conform to existing legislation or regulations (either local or provincial?) Does it overlap with existing programs or is it symbiotic? ▪ Any organizational barriers/structural issues or approval processes to be addressed? ▪ Is the organization motivated (learning organization)?
Transferability (generalizability)	Magnitude of health issue in local setting	<ul style="list-style-type: none"> ▪ Does the need exist? ▪ What is the baseline prevalence of the health issue locally? ▪ What is the difference in prevalence of the health issue (risk status) between study and local settings?
	Magnitude of the "reach" and cost effectiveness of the intervention above	<ul style="list-style-type: none"> ▪ Will the intervention broadly "cover" the target population?
	Target population characteristics	<ul style="list-style-type: none"> ▪ Are they comparable to the study population? ▪ Will any difference in characteristics (ethnicity, socio-demographic variables, number of persons affected) impact intervention effectiveness locally?

Consider the Jefferson abstract -

Use the applicability and transferability tool to decide if you could use this review



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Evidence-Informed Practice



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Guideline Dissemination & Uptake

Grimshaw et al., 2006

- 309 comparisons from 235 studies
- 86% found improvements in care, median absolute improvement in performance:
 - 14% when reminders used
 - 8% when educational materials disseminated
 - 7% when audit and feedback used
 - 6% multifaceted interventions



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Implementation Toolkit

- DiCenso A et al. A toolkit to facilitate the implementation of clinical practice guidelines in healthcare settings. *Hospital Quarterly* 2002;5(3):55-60.
- Dobbins M et al. Changing Nursing Practice: Evaluating the Usefulness of a Best-Practice Guideline Implementation Toolkit. *Nursing Leadership* 2005;18(1):34-45.



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Implementation

- What is the message?
- To whom (audience)?
- By whom (messenger)?
- How (transfer method)?
- With what expected impact (evaluation)?

(Institute of Work & Health with J. Lavis, 2006.
www.iwh.on.ca)



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Develop a plan for your agency

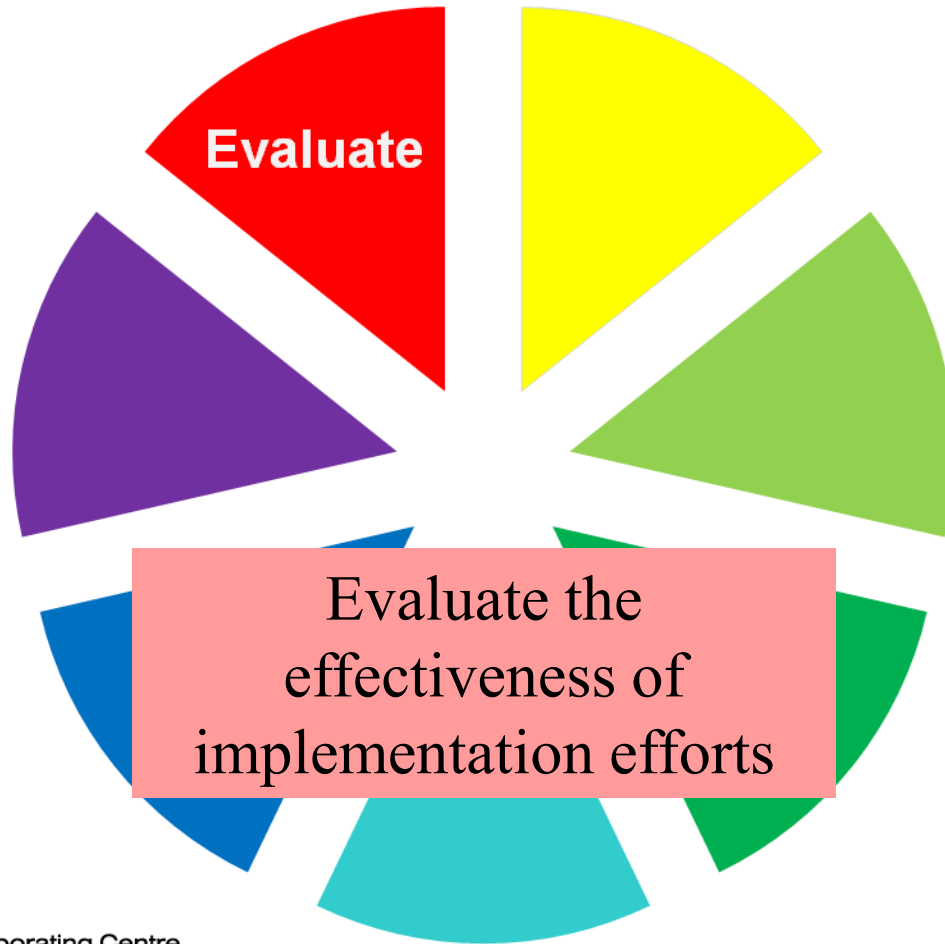


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Evaluation

- What outcomes can be used to evaluate the effectiveness of implementing this intervention?
- Need to gather baseline data about these outcomes in the target population prior to implementing the intervention.

(Dobbins et al. 2005; Fineout-Overholt & Johnston, 2006)

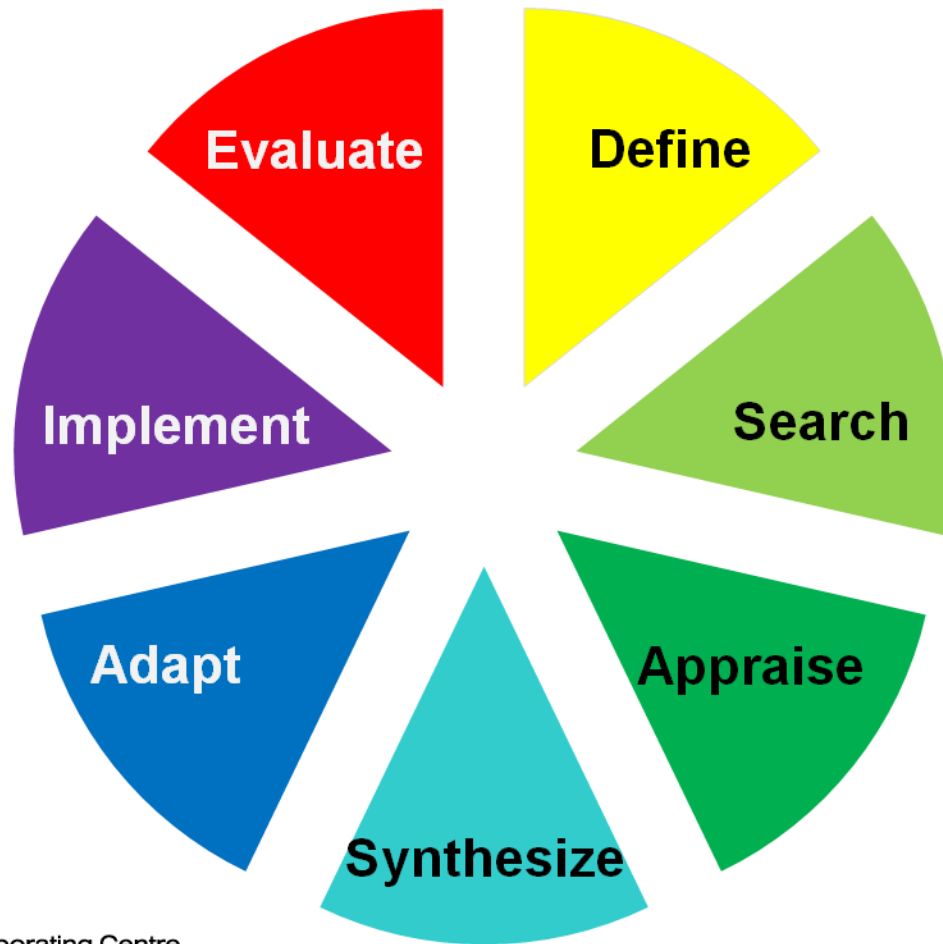


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What do you do if there is NO research evidence?



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A Model for Evidence-Informed Decision-Making in Community Health



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Step '0'

Reflecting on areas of uncertainty

- Examine practice critically.
- Acknowledge uncertainty in your practice.
- Formulate a focused clinical questions through the process of reflective practice.
- Will contribute to professional practice requirements.

(Johnston & Fineout-Overholt, 2005; Witmer & Cullum, 1999)



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Public Health+



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Other Resources

- Dialogue ph
 - Discussion group re EIPH



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Online Health Program Planner

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THE HEALTH COMMUNICATION UNIT
THCU
at the Centre for Health Promotion
University of Toronto

Steps

Step 1
Project Management

Step 2
Situational
Assessment

Step 3
Set Goals,
Audiences, and
Outcome Objectives

Step 4
Choose Strategies
and Activities and
Assign Resources

Step 5
Develop Indicators

Step 6
Review the Plan



*Evidence-based planning with ease.
Interactive. Flexible. Intuitive.*

What kind of planning support do you need?

From start to finish, I need help to **plan my program** in a systematic, evidence-informed way.

- Explore THCU's 6-step program planning model.
- The OHPP includes a workbook, worksheets, evidence to support decision-making, practical tips and recommended resources for each step.

Learning Centre

Other Planning Tools
and Resources

Evidence to Support
Planning Decisions

THCU's Planning
Workbook Online

Planning Case
Studies

For more information

- ciliska@mcmaster.ca
- National Collaborating Centre for Methods and Tools
www.nccmt.ca



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