

Producing knowledge syntheses that are both rigorous and relevant to policy makers

A Hands-on workshop

By

Florence Morestin, M.Sc.
François-Pierre Gauvin, Ph.D.

National Collaborating Centre for Healthy Public Policy

Annual conference of
The Canadian Public Health Association
Montreal, June 19, 2011



Centre de collaboration nationale
sur les politiques publiques et la santé
National Collaborating Centre
for Healthy Public Policy

*Institut national
de santé publique*
Québec

Imagine the following scenario...

The government wants to take action to address obesity and is asking the following question:

What are the most effective policies for addressing obesity?

You have been asked to produce a knowledge synthesis to inform their decision...

In 2005, the NCCHPP was given a dual mandate

1. produce a **knowledge synthesis** aimed at identifying **policy options that seem to be effective** at combatting obesity
2. document **the methodological issues** associated with this exercise

But what exactly is a
"knowledge synthesis"?

A knowledge synthesis

"[...] means **the contextualization and integration of research findings of individual research studies within the larger body of knowledge on the topic. A synthesis must be reproducible and transparent in its methods, using quantitative and/or qualitative methods**" (CIHR, 2008)

Different types of syntheses (CIHR, 2008)

- Systematic reviews (e.g.: Cochrane Collaboration) and meta-analyses
- Scoping reviews
- Narrative syntheses
- Realist syntheses
- Consensus conferences and expert panels

Why a method specifically for public policies?

- **A policy is not a simple intervention**
 - Decision makers are public authorities who are accountable
 - Applied at the population level
- **Beyond effectiveness**
 - Policy makers are interested in implementation issues
- **Beyond the literature**
 - Need to contextualize the data

Five principles guiding our investigation

1. Methodological rigour
2. Political relevance
3. Broadened conception of evidence
4. Flexibility – The best is the enemy of the good
5. We should play the role of an "honest broker" (Pielke, 2007)

Some sources of inspiration



National Collaborating Centre
for **Healthy Public Policy**

www.ncchpp.ca

METHOD FOR SYNTHESIZING KNOWLEDGE
ABOUT PUBLIC POLICIES

PRELIMINARY VERSION | SEPTEMBER 2010



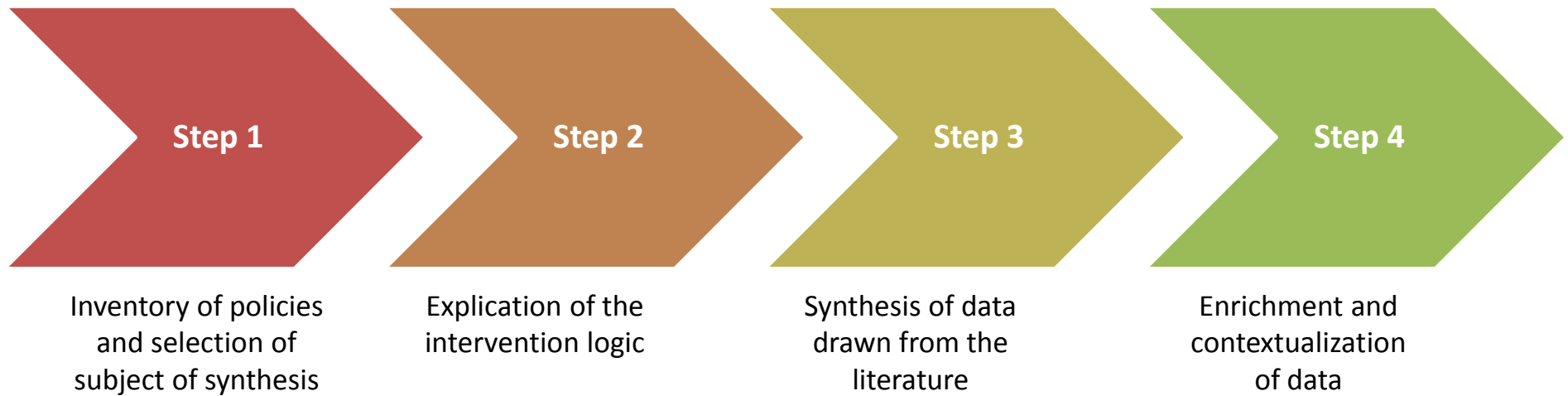
Centre de collaboration nationale
sur les politiques publiques et la santé
National Collaborating Centre
for Healthy Public Policy

Institut national
de santé publique
Québec

Available at:

http://www.ncchpp.ca/docs/MethodPP_EN.pdf

A synthesis in four steps



Objective of this workshop

Initiate participants in the use of a knowledge synthesis method adapted to public policies that focuses not only on effectiveness data but also on implementation issues

Workshop agenda

Step 1. Inventory of policies

Step 2. Logic model

The analytical framework

Break [around 10:30 a.m.]

The analytical framework (continuation and conclusion)

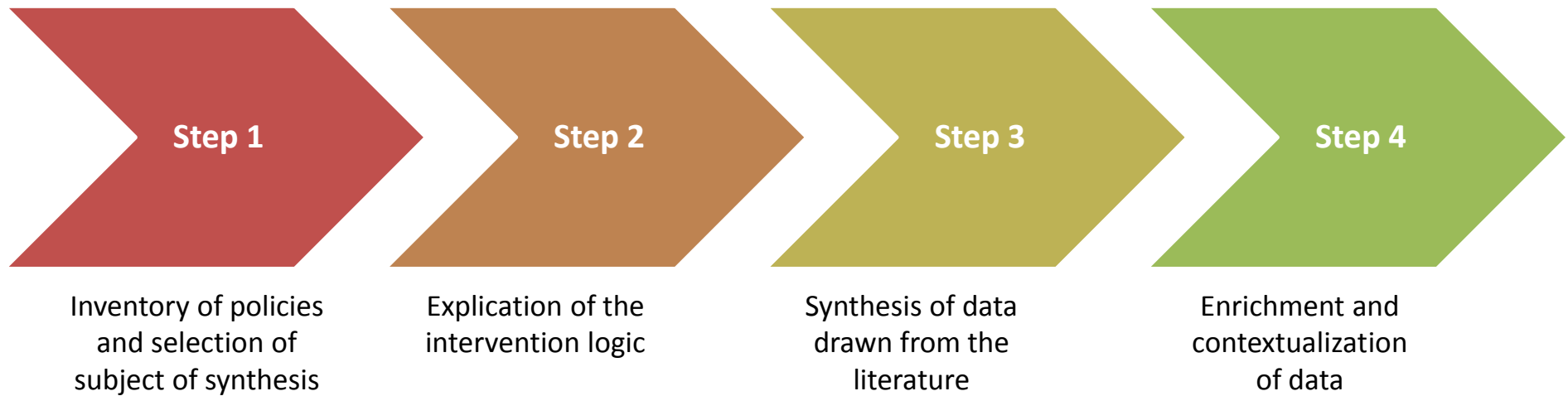
Step 3. Literature review

Step 4. Deliberative processes

Step 1.

Inventory of policies and choice of policy

A synthesis in four steps



Instead of deciding in advance that the synthesis will focus on this or that public policy...

... start with the targeted health problem and identify the range of policies proposed for addressing it

Preliminary exploration of the literature:

Grey literature

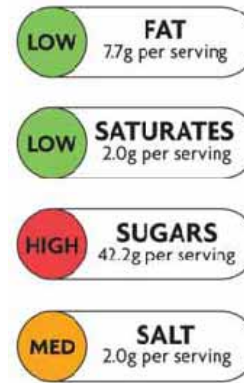
- Websites of national and international organizations interested in the targeted health problem

Scientific literature

- Websites that inventory systematic reviews
- Optional: preliminary exploration of databases

E.g.: "What can the government do in the area of nutrition to prevent obesity?"

- Regulation of advertising that targets children
- Food environments in schools
- **Nutrition labelling**
- Taxing unhealthy food
- Portion sizes
- ...



Source: Food Standards Agency © Crown copyright

Nutrition Facts	
Per 125 mL (87 g)	
Amount	% Daily Value
Calories 80	
Fat 0.5 g	1 %
Saturated 0 g + Trans 0 g	0 %
Cholesterol 0 mg	
Sodium 0 mg	0 %
Carbohydrate 18 g	6 %
Fibre 2 g	8 %
Sugars 2 g	
Protein 3 g	
Vitamin A 2 %	Vitamin C 10 %
Calcium 0 %	Iron 2 %

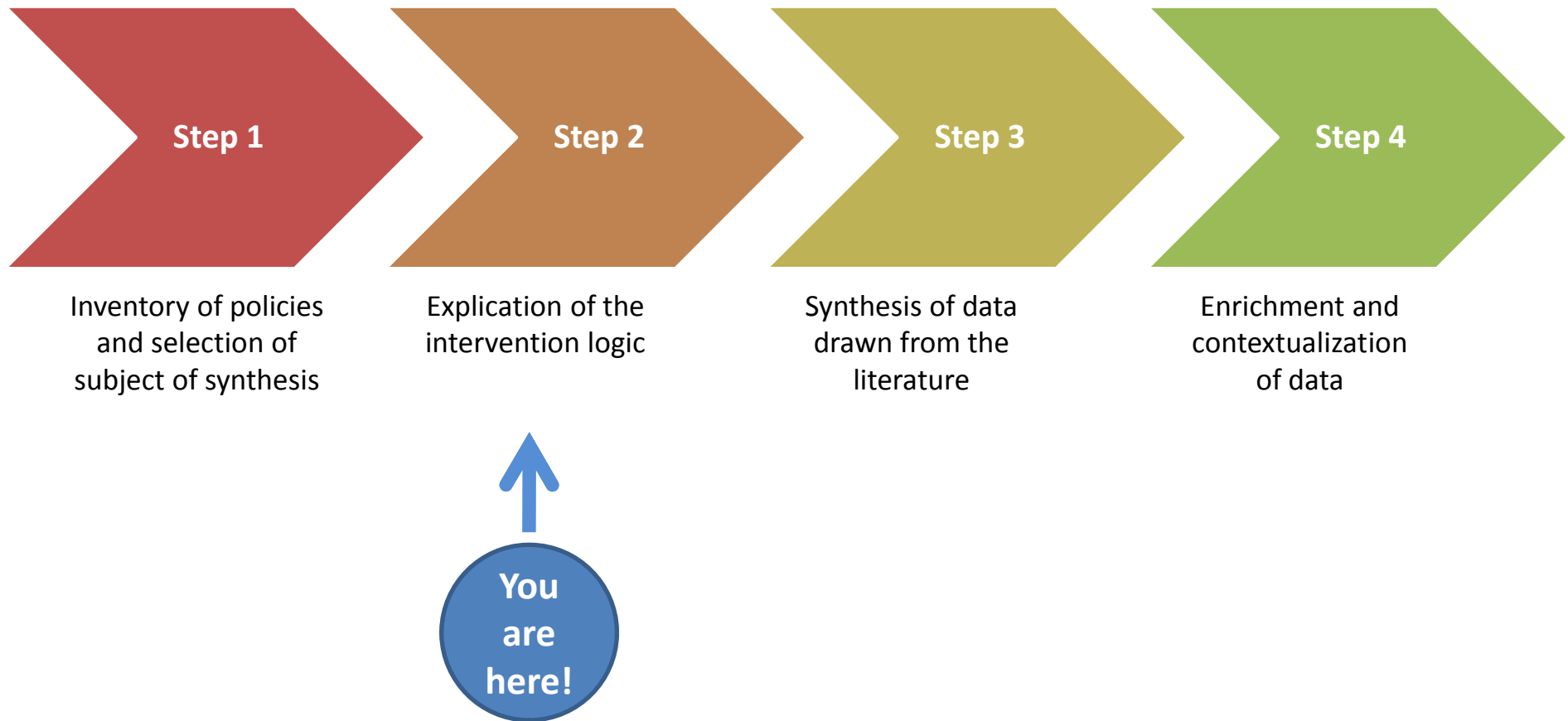
Source: Health Canada

If several policies are selected:
a synthesis for each one
=> A manageable amount of data

Step 2.

The logic model

A synthesis in four steps



- Prior to data collection
- How many of you have heard of logic models?
- How many have used one?
- Many terms...
 - logic model, theoretical model, conceptual framework, logical framework, etc.
- ...and they are assigned different meanings
- We do not wish to enter into these debates
What is important = understanding the proposed way of proceeding

Usually:

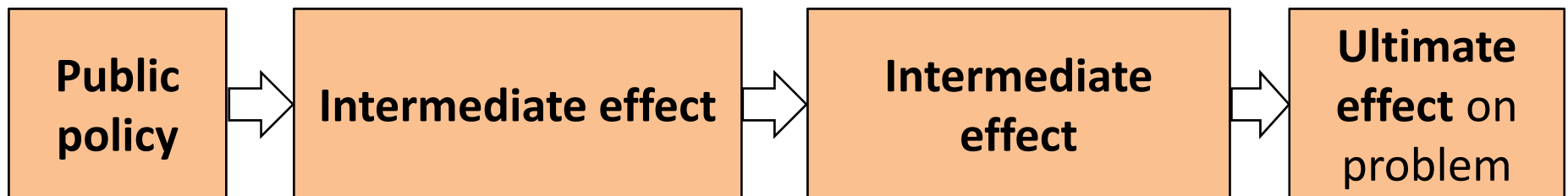
- A public policy is proposed as a means of obtaining a desired effect
- But the intervention logic (mechanisms of action) is not made explicit



Detail the intervention logic

Deconstruct the chain of expected effects
between the public policy and the problem
targeted

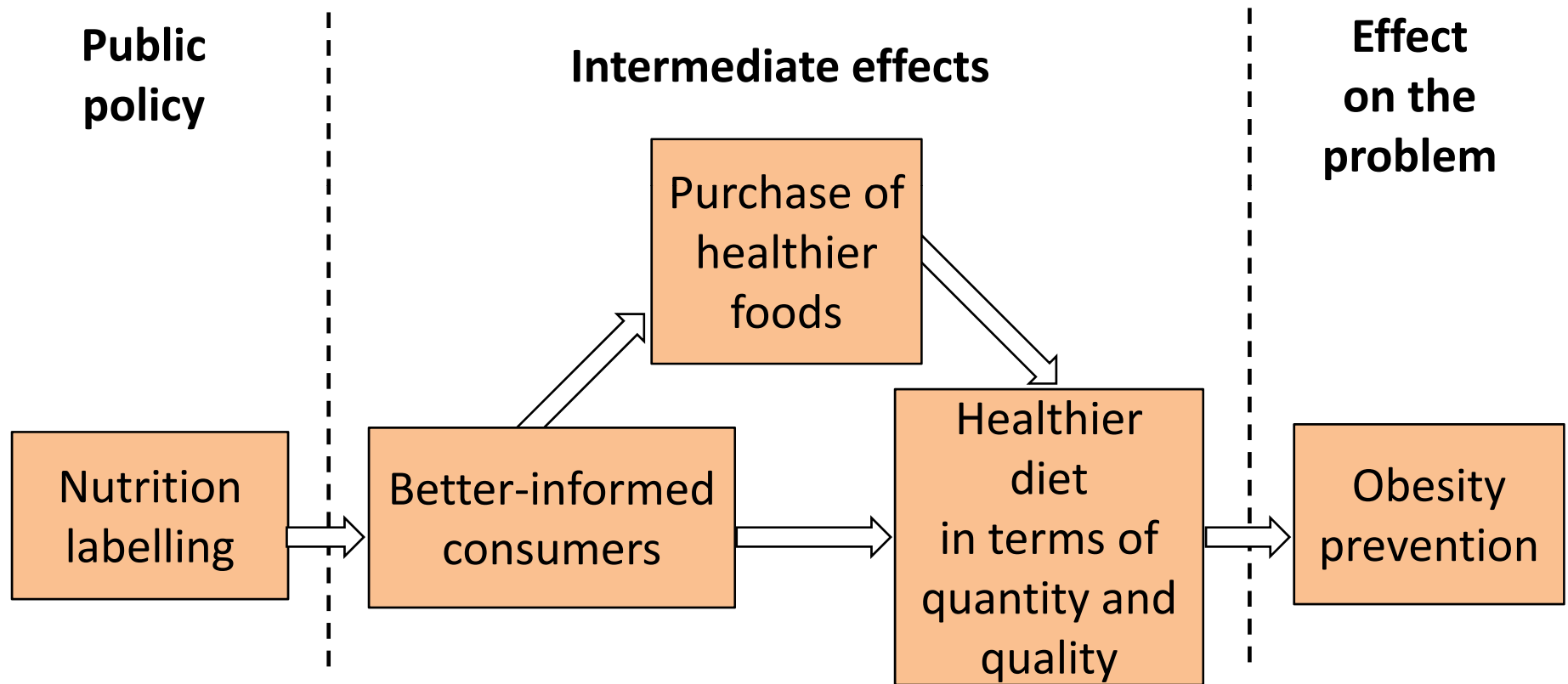
(Champagne et al., 2009; Weiss, 1998)



Champagne, F., Brousselle, A., Hartz, Z., & Contandriopoulos, A.-P. (2009). Modéliser les interventions. In A. Brousselle, F. Champagne, A.-P. Contandriopoulos, & Z. Hartz (Eds.), *L'évaluation : concepts et méthodes* (pp. 57-70). Montreal: Les Presses de l'Université de Montréal.

Weiss, C. H. (1998). *Evaluation: Methods for Studying Programs and Policies (Second edition)*. Upper Saddle River: Prentice Hall.

Example: Nutrition labelling



Contribution of logic model

1. Define the subject of the knowledge synthesis
 - Too complex a model = confusion among several policies?
E.g.: Improving food environments in schools
⇒ a *family* of different types of policies
 - To be able to manage the data gathered:
Narrow down the subject of study until there is a single mechanism of action

2. Plausibility of the intervention logic?

 If plausibility is weak: not worth pursuing

3. Examine effectiveness step by step

Identify what is more or less likely to succeed (effectiveness gaps), to be verified during data collection

 If there is a significant gap upstream: not worth pursuing

Contribution of logic model (cont'd)

4. Strengthen the assumption of causality

As opposed to simply correlating policy and ultimate effect

5. Guide data collection

- Relevant intermediate effects to document
- Note: often pointless to document the "final link"
 - Interesting, because data on ultimate effects of public policies are scarce

6. Structure the synthesis (the report)

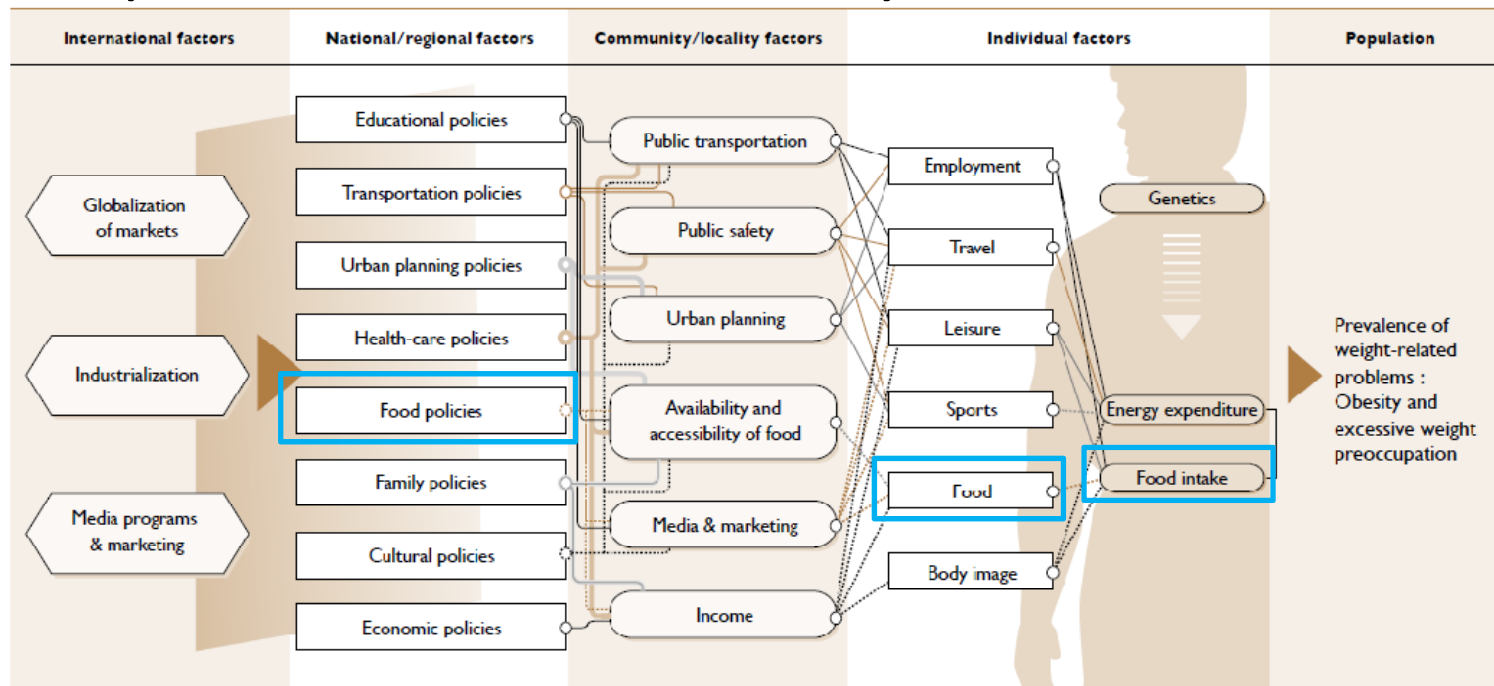
- In the text synthesizing the effectiveness data: a subsection for each intermediate effect
- Useful as a guide to decision making and action

The logic model is not...

... a causal model:

- Does not represent *all* the causes of the targeted problem, only those targeted by the policy under study

Example: Causal web for obesity



Source: Groupe de travail provincial sur la problématique du poids (inspired by work carried out by the International Obesity Task Force), 2004, p. 12

Groupe de travail provincial sur la problématique du poids (2004). *Weight problems in Québec: Getting mobilized*. Montréal: Association pour la santé publique du Québec.

The logic model is not...

... proof of causality:

- It represents the *theory* of how the public policy should produce its intended effects
- Data collection will indicate whether this proves true in reality

Constructing a logic model

- Reflection based on:
 - knowledge gathered during the preliminary exploration of the literature
 - (as needed) consultation with experts
 - simple reasoning
- On one side, name the policy under study
- On the other, name the ultimate effect sought
- Identify the logical steps that lead from one to the other
“if... then”
- Suggestion: Start by noting the “last” intermediate effect
 - Generally the most well-known in the field of public health
e.g.: food intake => obesity
smoking => lung cancer

Constructing a logic model (cont'd)

- Variable number of steps
- One path or many
- **== Simplicity ==**
 - Key to establishing level of precision: is additional detail useful for reflecting on data collection?
- In the boxes: specify the direction of change
(more / less, increase / decrease / maintain)

Constructing a logic model (cont'd)

- **No "right answer"**

"Logic models are always incomplete approximations. [Then,] if logic models are always wrong, why do we make them? Because they are good enough to guide practical decisions" (Morell, 2006)

- Tool to guide reflection
- Possible discussion aid: with mandator of the knowledge synthesis, with stakeholders...
- **Iterative construction**
 - Prior to data collection
 - During: rework model based on data found

Use of logic model

- Applicable to all types of programs
- Multiple uses outside the context of knowledge synthesis (Porteous et al., 2006):
 - Planning
 - Communication
 - Monitoring and evaluation
 - ...

Small group activity

The logic model

Imagine the following
scenario...

You are a professional in a public health agency.

You are called to a meeting.

You are informed that the Minister of Health for your province continues to be concerned about the use of cell phones while driving.



The government is juggling with the idea of a complete ban on cell phone use while driving (including “hands free” devices) with the aim of reducing the number of road injuries and deaths

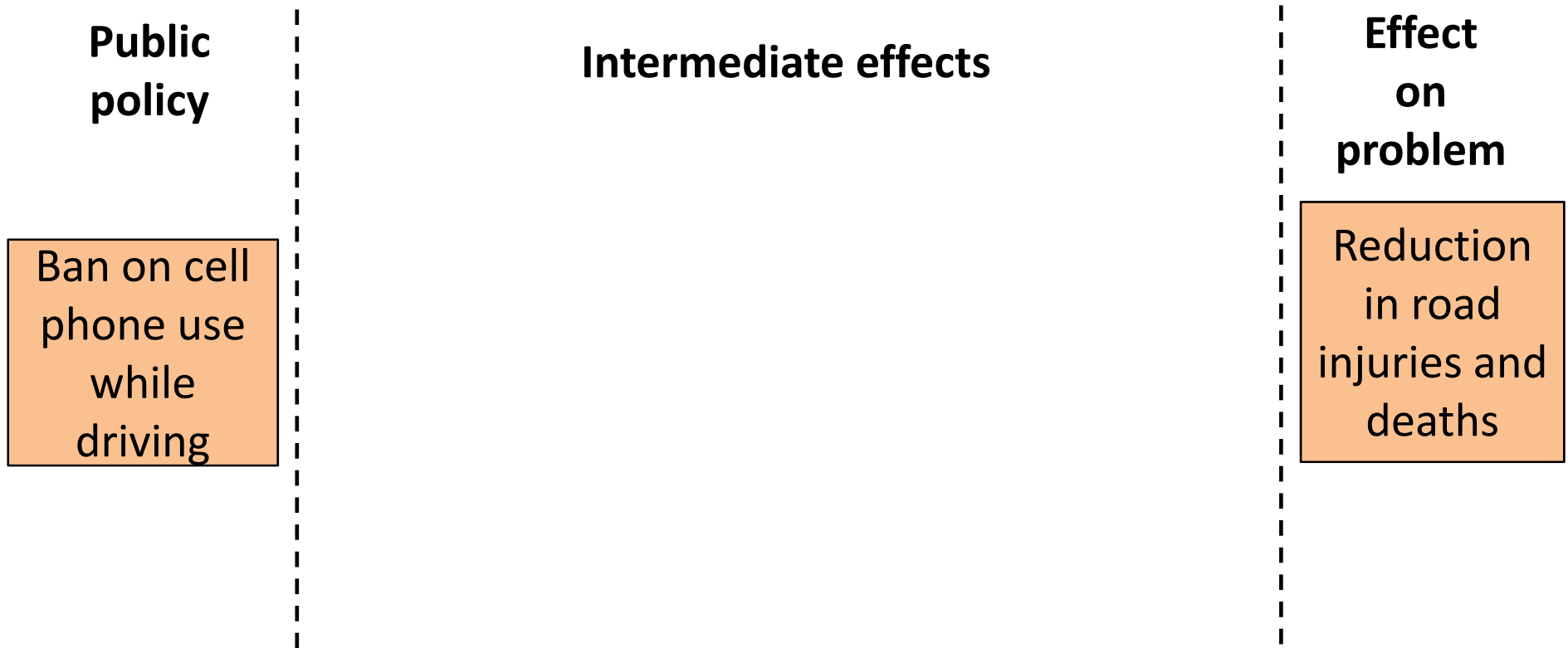


© iStockphoto.com/ Laurent Davoust

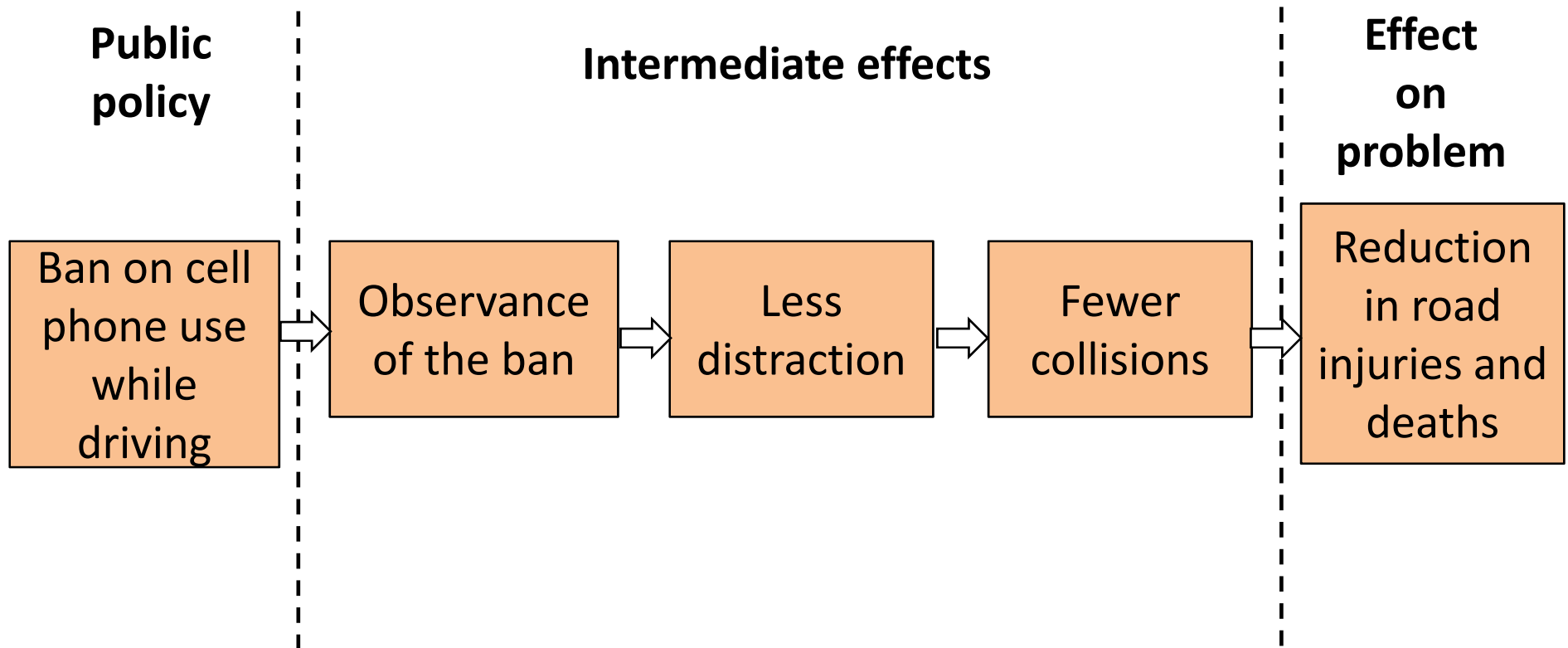
Your mission

Produce a **knowledge synthesis** to inform the government about this option

Activity - Construct the LM for a ban on the use of cell phones while driving



Proposition: Logic model for ban on cell phone use while driving



The analytical framework

Introduction to the study of public policies

A framework for guiding data collection

What do we want to know about the policy
under study?

- Classic focus in public health: effectiveness
- But policy makers also want to know about the implementation issues

Example: supervised injection sites

- Sites where the injection of illegal drugs is authorized and supervised by medical personnel
 - Positive health effects (Noël et al., 2009)
 - But obvious problems in terms of social acceptability
- ⇒ Reaction of a policy maker to a knowledge synthesis that only documents effectiveness?
- However: the initial reticence of residents and business owners diminishes over time, since there is a reduction in public nuisances (Noël et al., 2009)
- ⇒ A knowledge synthesis that also documents this aspect is likely to lead to a more favourable decision

Analytical framework

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Cf. Salamon, 2002 ; Swinburn et al., 2005

List of elements to consider for each dimension

Salamon, M. L. (2002). The New Governance and the Tools of Public Action: An Introduction. In L.M. Salamon (Ed.), *The Tools of Government: A Guide to the New Governance* (pp. 1-47). New York: Oxford University Press.

Swinburn, B., Gill, T., & Kumanyika, S. (2005). Obesity prevention: A proposed framework for translating evidence into action. *Obesity Reviews*, 6, 23-33.

Effectiveness

Remains the most important dimension of the analysis

- Effectiveness of the policy under study at addressing the targeted problem
 - Cf. objective pursued
 - Do not forget failures: neutral or negative effects
- Intermediate effects
- Plausibility of the intervention logic
- Impact of context on effectiveness

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Unintended effects

Unrelated to the objective pursued but practically inevitable

- Effects in all sorts of areas:
 - Other health effects that are unrelated to the problem targeted, economic, political and environmental effects, effects tied to social relations, etc.
- Positive or negative
- Anticipated or not

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Equity

Watch out for policies that improve the overall average but increase inequalities

- Differential effects of the policy under study on various groups
- Effects on social inequalities in health

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Cost

- Implementation cost for the government
- Costs for other actors
- Cost compared to that of other potential policies
- Cost-effectiveness
- Distribution over time
- **Visibility** (Salamon, 2002; Peters, 2002)

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Salamon, M. L. (2002). The New Governance and the Tools of Public Action: An Introduction. In L.M. Salamon (Ed.), *The Tools of Government: A Guide to the New Governance* (pp. 1-47). New York: Oxford University Press.

Peters, B. G. (2002). The Politics of Tool Choice. In L.M. Salamon (Ed.), *The Tools of Government: A Guide to the New Governance* (pp. 552-564). New York: Oxford University Press.

Feasibility

- Conformity with all relevant legislation
- Existence of pilot programs
- Automaticity (Salamon, 2002)
- Directness (Salamon, 2002)
- Number of actors involved in implementation
- Hierarchical integration (Sabatier and Mazmanian, 1995)

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Salamon, M. L. (2002). The New Governance and the Tools of Public Action: An Introduction. In L.M. Salamon (Ed.), *The Tools of Government: A Guide to the New Governance* (pp. 1-47). New York: Oxford University Press.

Sabatier, P. A. & Mazmanian, D. (1995). A Conceptual Framework of the Implementation Process. In S.Z. Theodoulou & M. A. Cahn (Eds.), *Public policy - The Essential Readings* (pp. 153-173). Upper Saddle River: Prentice Hall.

Feasibility (cont'd)

- Quality of the cooperation among actors
- Ability of opponents to interfere
- Availability of human resources required
- Availability of material resources required
- Availability of “technological” resources required

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Acceptability

- How stakeholders view the policy under study
- Influenced by their knowledge, beliefs, values, interests...
- Identify relevant stakeholders / actors:
 - Groups directly targeted by the policy, the wider public, ministries, municipalities, other decision makers, professionals from the relevant public sectors (for example, health, education, housing), funding agencies, industry, the media, political organizations, etc.

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Acceptability (cont'd)

For each actor concerned:

- Acceptability of acting on the problem
- Acceptability of the policy under study:
 - Assessment of its effectiveness, unintended effects, equity, cost, and feasibility
 - Assessment of the degree of coercion involved (information vs. incentives vs. regulation)
- Acceptability of the decision-making process
- Acceptability of the actors involved in implementation
- Acceptability of accountability measures

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Using the analytical framework

- To guide data collection (literature & deliberative processes)
 - List of key questions
 - List is indicative, answers to everything rarely found
 - Keep in mind the 6 dimensions: Does this sentence / do these figures elucidate one of the 6 dimensions?
 - Breakdown into 6 dimensions is also indicative (organize data collected into coherent groups)

Using the analytical framework (cont'd)

- Structuring
Extraction tables & structure of report
- Outside the context of knowledge synthesis:
summarize informal knowledge possessed about
a policy
=> Analysis of situation, assists reflection
(individual or group)

Reference	Characteristics of document	Status	Effectiveness	Unintended effects	Equity	Cost	Feasibility	Acceptability

Small group activity

The analytical framework

The government is juggling with the idea of a complete ban on cell phone use while driving (including “hands free” devices) with the aim of reducing the number of road injuries and deaths



© iStockphoto.com/ Laurent Davoust

Complete ban on cell phone use while driving

In small groups reflect on **topics that may surface during the collection of data** on this public policy.

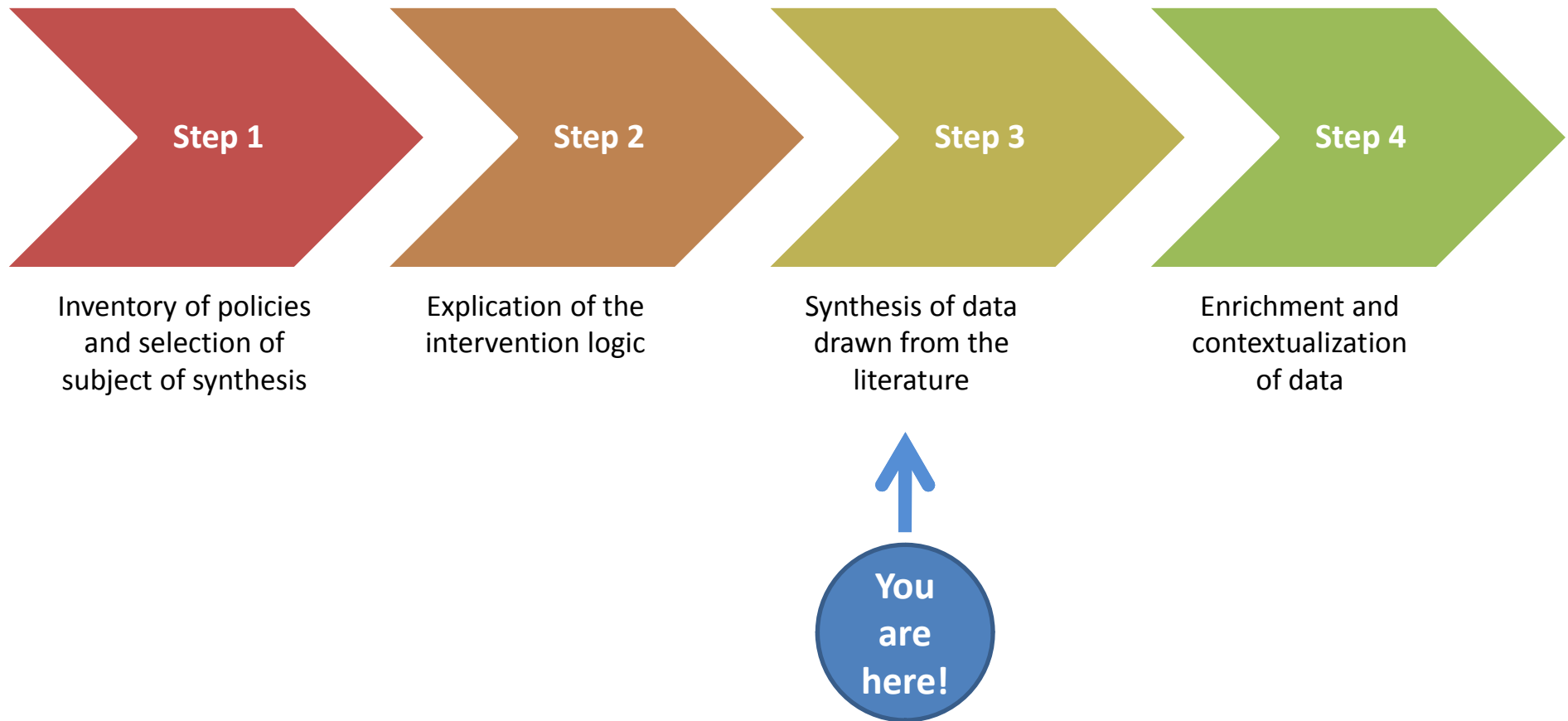
Try to list 3 topics for each dimension.

Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

Step 3.

Collection and analysis of data drawn
from the literature

A synthesis in four steps



Step 3. Synthesis of the literature

1. Documentary search
2. Appraisal of the quality of data
3. Extraction
4. Synthesis

1. The documentary search

- **Describe and justify all the decisions made** to ensure that the process is transparent and reproducible (i.e. keep a log)
- **Define inclusion and exclusion criteria** (e.g.: content, countries, period, language)
- Consult the scientific literature **AND** the grey literature
- **Do not restrict yourself to a single discipline** (e.g.: public health, political science, sociology, anthropology, economics, ethics, law...)

E.g. Nutrition labelling

-Scientific literature: PubMed, PsycINFO, CSA Worldwide Political Science Abstracts, CSA Social Services Abstracts, CSA Sociological Abstracts, PAIS International

-Grey literature: 60 websites of Canadian and foreign organizations

- Corpus: 40 scientific articles and 31 documents (grey lit.)

2. Appraisal of the quality of data

- **The traditional approach** which evaluates studies on the basis of research design and method is **difficult to apply** to policies
- Sort the documents gathered according to their **relevance** (contribution to the knowledge synthesis)
- Describe the main characteristics of the documents selected (e.g.: type, source, design, authors' affiliations, **potential sources of bias**)

3. Data extraction

- Use an extraction grid
- Analyze the scientific and grey literature independently

Reference	Characteristics of document	Status	Effectiveness	Unintended effects	Equity	Cost	Feasibility	Acceptability

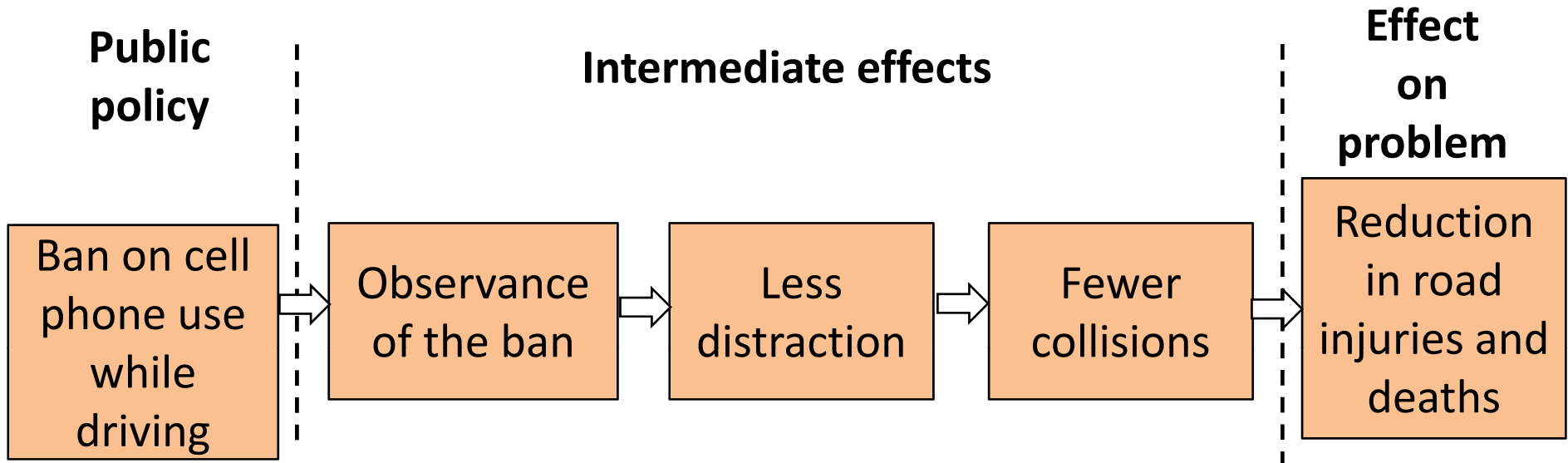
4. The synthesis

- A thematic synthesis **structured according to the six dimensions**
- Point out where the data from the various documents converge and diverge.

Plenary activity

The documentary search

Ban on cell phone use while driving



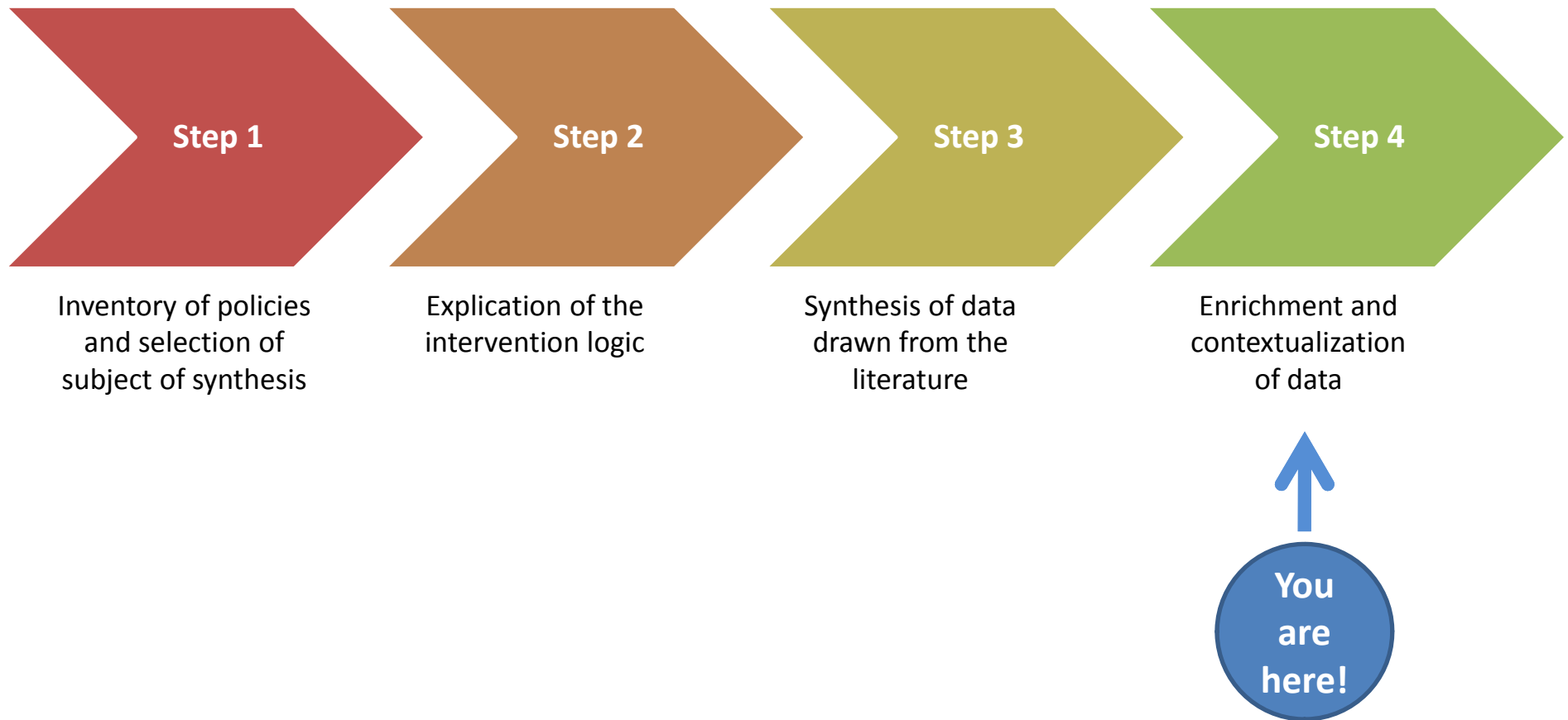
Effects	Effectiveness
	Unintended effects
	Equity
Implementation	Cost
	Feasibility
	Acceptability

1. **Scientific literature** – What sources of scientific literature do you wish to consult?
2. **Grey literature** – What organizations may have produced reports that would be relevant?

Step 4.

Enrichment and contextualization

A synthesis in four steps



A deliberative process

1. A dialogue among a group of 10-20 persons (invited), including experts, decision makers, actors from civil society
2. A synthesis of knowledge drawn from the literature is submitted to them before the meeting
3. The participants critically examine the problem, the proposed policy options and their implications

The contribution of deliberative processes

PERSPECTIVES ON EVIDENCE, SYNTHESIS AND DECISION-MAKING

Moving Forward on Both Systematic Reviews and Deliberative Processes

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

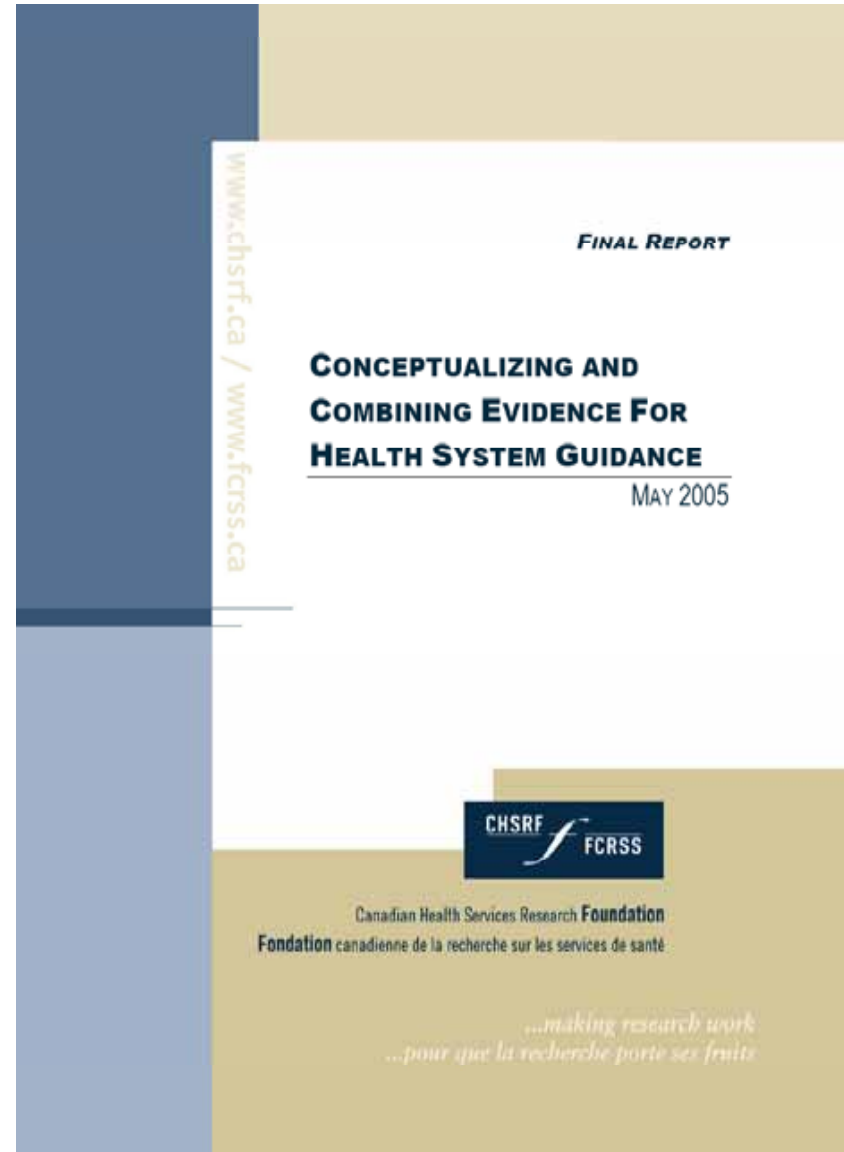
by JOHN N. LAVIS, MD, PHD

Member, Centre for Health Economics and Policy Analysis
Associate Professor, Department of Clinical Epidemiology and Biostatistics
Associate Member, Department of Political Science
McMaster University, Hamilton, Canada

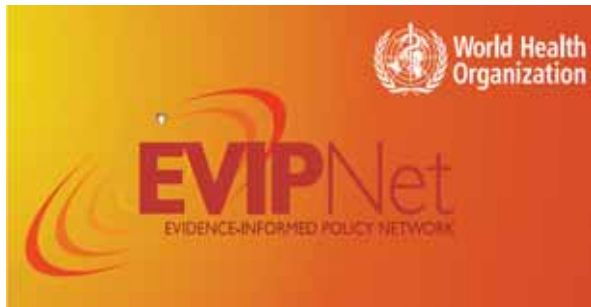
Abstract

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.

HEALTHCARE POLICY Vol.1 No.2, 2006 [59]



A few organizations that promote deliberative processes



Why deliberate?

- Bring to light issues that were not identified in the literature
- Contextualize the data drawn from the literature
- Generate new knowledge
- Encourage application of the knowledge



Two warnings

- Organizing deliberative processes takes time and resources
- Some issues may be politically sensitive

E.g.: Nutrition labelling

- Deliberative processes in British Columbia (n=1) and in Ontario (n=2)
- Participants involved in the fight against obesity, from the public, non-profit and academic sectors (e.g.: public health, agri-food, education, physical activity, children's services)

Advantages

- Literature included little Canadian data
- Brought to light knowledge that was not found in the literature (e.g.: simplified nutrition labelling initiatives)
- Suggested avenues for the implementation of new labelling policies in Canada
- Overview of the standpoint of concerned actors in Canada (population, industry, decision makers)

After the 4 steps...

Integrating the different kinds of
knowledge gathered

Structure of knowledge synthesis document

- Transparent description of the process
- Logic model of the policy under study
- Synthesis of data drawn from the:

- Scientific literature
- Grey literature
- Deliberative processes

On the 6 dimensions
of the analytical
framework

Use of the method

- From start to finish
- One or more elements in isolation:
 - **Inventory** => Quick overview of proposed policies and debate surrounding a problem
 - **Logic model** => Reflection on potential effectiveness.
A tool for planning, communication, monitoring & evaluation...
 - **Analytical framework** examining 6 dimensions => Analysis of policy
 - **Literature review** (approach adapted for policies)
 - **Deliberative processes** => to complement / contextualize an existing literature review

National Collaborating Centre
for **Healthy Public Policy**

www.ncchpp.ca

METHOD FOR SYNTHESIZING KNOWLEDGE
ABOUT PUBLIC POLICIES

PRELIMINARY VERSION | SEPTEMBER 2010



Centre de collaboration nationale
sur les politiques publiques et la santé
National Collaborating Centre
for Healthy Public Policy

Institut national
de santé publique
Québec

Available at:

http://www.ncchpp.ca/docs/MethodPP_EN.pdf



Centre de collaboration nationale
sur les politiques publiques et la santé
National Collaborating Centre
for Healthy Public Policy

**Institut national
de santé publique**
Québec 

Florence Morestin, M.Sc.
190 Crémazie Blvd. East
Montreal, Quebec H2P 1E2

Tel.: 514-864-1600 ext. 3633
florence.morestin@inspq.qc.ca

François-Pierre Gauvin, Ph. D.
945 Wolfe Ave., Rm. A5-52
Québec, Quebec G1V 5B3

Tel.: 418-650-5115 ext. 5544
francois-pierre.gauvin@inspq.qc.ca

www.ncchpp.ca