ENVIRONMENTAL SCAN

NATIONAL COLLABORATING CENTRE
FOR HEALTHY PUBLIC POLICY

National Collaborating Centres for Public Health
Centres nationaux de collaboration en santé publique

Institut national de santé publique Québec

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FOREWORD

The National Collaborating Centre for Healthy Public Policy's (NCCHPP) mission is to help develop the expertise of public health practitioners and partners in the field of healthy public policy. During its initial stages, the Centre produced various internal documents intended to present the main concepts behind its program development. This collection of texts constitutes the NCCHPP's Environmental Scan. This document has been made available for consultation by partners, in order to share information that has contributed to shaping the work of the NCCHPP.

Overview of the document

The ability to participate effectively in creating healthy public policy requires an understanding of the processes involved in policy development. As such, **Chapter 1** offers an overview of the field of policy analysis: its origins, foundations and more recent theoretical frameworks. It also describes the links between policy analysis and health promotion, drawing both on theory as well as on practical examples. This text was written in March 2007 by Louise St-Pierre, the NCCHPP Project Coordinator.

The **second chapter**, written in October 2006 by Denise Kouri, NCCHPP Lead, describes meetings that were organised in different parts of the country with potential users of the Centre. These gatherings were part of the Centre's efforts to determine how the NCCHPP could best support the public health community's efforts in promoting healthy public policy. The chapter highlights the user community's response to specific questions concerning the priorities of the Centre. **Appendix I** presents the agenda of the meetings; **Appendices II** and **III** provide greater detail about who participated in them and the themes identified by these participants.

The **third chapter** of the Environmental Scan is a synthesis of the public health models and stakeholders involved in healthy public policy, in eight Canadian provinces. This document was written by Phillip Poitras, NCCHPP consultant, in May 2006. Additional material providing a more detailed portrait of each province's public health and health promotion infrastructure may be made available upon request. The interview guide used by the author of this text can be found in **Appendix IV**.

The **fourth chapter** is a knowledge synthesis on the subject of knowledge transfer. This chapter provides insight into the fundamental, as well as more recent notions of knowledge transfer, highlighting the literature on the subject as well as the viewpoints of various experts in the field.

Finally, **Chapter 5** focuses on the health risks that may be modified through public policy measures. It examines various definitions and components of risk assessment. Furthermore, it discusses how risk assessment is related to other fields that affect healthy public policy. Chapters 4 and 5 were written by Geneviève Brisson, NCCHPP research officer, in April 2006.

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The ability to participate effectively in creating healthy public policy requires an understanding of the processes involved in policy development. As such, this chapter offers an overview of the field of policy analysis: its origins, foundations and more recent theoretical frameworks. It also describes the links between policy analysis and health promotion, drawing both on theory as well as on practical examples. This chapter was written in March 2007 by Louise St-Pierre, the NCCHPP Project Coordinator.

1.1 BACKGROUND

The adoption of healthy public policy is a health promotion strategy that has been traditionally recognized by specialists in the field. *The Ottawa Charter for Health Promotion*, issued in 1986 at the First International Conference on Health Promotion organized by the World Health Organization (WHO, 1986), contributed significantly to the recognition of the importance of considering health determinants beyond those of the health care system.

Twelve years later, at the Second International Conference on Health Promotion, the WHO reiterated the importance of the five strategies[1] identified in the Ottawa Charter, placing particular emphasis on the establishment of healthy public policy. In particular, the 1998 *Adelaide Declaration* (WHO, 1998) focused on the need to consider the health impact of policies issued by different sectors of society, as well as on the extension of accountability for the population's health to all areas of government. The declaration reflected an international consensus regarding the fundamental importance of healthy public policy as a means of maintaining and improving populational health. The *Ottawa Charter* and the *Adelaide Declaration* are still commonly invoked in support of health promotion. The importance of considering non-medical health determinants is increasingly at the forefront as health care systems reveal the limits of their ability to respond to the rise of chronic diseases.

Nancy Milio (1989) was a key contributor to the body of work that has led to this consensus. She was one of the first to dissect health problems and establish their relation to multifactorial causes rooted in an individual's environment. For this author, lifestyle and personal behaviour are conditioned by the physical and social environment in which the population evolves. She was the first to put forth the idea that healthy choices must be facilitated by various policies issued by non-health sectors, such as transport, energy, and education. She was also one of the initial thinkers in the field of health promotion to call on public health agents to enhance their understanding of public policy processes and become active in influencing them. Her book *Promoting Health Through Public Policy* published in 1989 (Milio, 1989) had an international impact, and is still a reference in the field of health promotion, today. Although the author discusses certain concepts related to political science,

[1] In addition to building healthy public policy, the other strategies are: creating supportive environments for health, strengthening community action for health, developing personal skills, and re-orienting health services.

such as actors, their power relations and the influence of coalitions, she makes no reference to theories or applied models from the discipline of public policy analysis.

While the need to influence public policy is increasingly being recognized[2], public health agents in Quebec seem to rarely make use of analysis and of action-based tools from the field of political science. However, the use of knowledge about public policy-making processes could significantly improve public health practices related to promoting the establishment of healthy public policy, at all levels of government.

In order to demonstrate the relevance of integrating analytical tools from the field of political science into the practice of health promotion, this document approaches the issue from two angles. First, an overview of the field of public policy-making will be provided, in the aim of better understanding its origins, the contextual background of its development, its basic theoretical principles, its main currents of thought in use, today. Secondly, an attempt will be made to explain the usefulness of this discipline to health promotion in general. A specific example will be discussed: namely, section 54 of Quebec's *Public Health Act*. Finally, by way of conclusion we will review the main concepts specific to public policy analysis that seem most relevant and that deserve, in our opinion, to be integrated into the practice of public health agents.[3]

1.2 THE ANALYSIS OF PUBLIC POLICY-MAKING PROCESSES AS A SCIENTIFIC DISCIPLINE

The analysis of public policy-making processes is part of a broader field, that of political science. Many authors date the beginning of the modern study of political science to the years following the Second World War. This period saw the development of the welfare state and the generalization of its initiatives to ensure prosperity and equity in the distribution of wealth (Meny & Thoenig, 1989; Howlett & Ramesh, 1995). Taking the relation between citizens and the government as its principal subject matter (Howlett & Ramesh, 1995), this field is especially rich in theory and in empirical study. It has matured as a scientific discipline by borrowing first from the economic sciences and, subsequently, from the social sciences, particularly in the last 20 years (Howlett & Ramesh, 1995). Thus, it forms a broad field of study covering numerous areas (e.g. the state, institutions, major policies, political regimes, etc.) composed of numerous schools of thought (rationalism, neo-institutionalism, constructivism, etc.). These paradigms are based on a variety of theories, giving researchers and analysts many frames of reference for both the development of new knowledge and the development of practices that support government action (Meny & Thoenig, 1989;

[2] Many initiatives have been developed in the last few years both in Canada and elsewhere promoting healthy public policies. For example: Quebec's public health legislation, the establishment by the Public Health Agency of Canada of a National Collaborating Centre for Healthy Public Policy and the recent creation of an Action Plan for the Integrated Prevention and Control of Chronic Diseases and Risk Factors through healthy public policies by the PAHO (Pan American regional WHO office).

[3] Although the term "health promoter" is not exclusive to the public health sector and public health agents can exercise many functions besides health promotion (e.g. surveillance, protection, disease prevention) which are generally associated with healthy public policies, in this text we use the two terms "health promotion agent " and "public health agent" interchangeably.

Lemieux, 2002). The study of public policy-making processes has both theoretical and practical implications and, as such, holds claim to the status of an applied science. This practical dimension is of particular concern to this text.

Many authors consider the study of the public policy-making process to be dominated by two main schools of thought (Sutton, 1999; Neilson, 2001; Howlett & Ramesh, 1995). The first, deemed rationalist, is inspired by the economic sciences (Meny & Thoenig, 1989). It is based on the premise that political actors make rational decisions by considering all possible options and choosing the one that is best aligned with the interests at play and rules in effect (theory of *institutional rational choice*), in a way that optimizes cost efficiency. The second school draws more from the social sciences and considers that decisions are made under ambiguous and uncertain circumstances, with a wide range of actors outside of the political decision system exercising influence on the policy-making process. This school has generated paradigmatic models opposed to rationalism, stressing the unforeseeable and, in particular, the non-linear nature of the process (e.g. the *garbage can model*). The theory of policy networks and that of coalitions support this second school.

Today, it can be said that the study of the public policy-making process is based on numerous conceptual theories and models specific to the field. These theories and models are the subject of rich debate and discussions, which suggest the continual development of the field. Indeed, according to Paul A. Sabatier[4] (1999), this field of knowledge has sufficiently developed and varied theoretical foundations to support quality empirical research, which in turn can refine existing theoretical concepts and, subsequently, guide practice.

1.3 WHAT DO WE MEAN BY PUBLIC POLICY?

The notion of public policy has been defined in several different ways, and tends to vary from one author to another depending on their frame of reference. For example, Dye states that a public policy is everything that governments choose to do and not to do (Dye, 1984, p.1), whereas for Meny and Thoenig (1989), public policies result from the activity of authorities invested with public power and governmental legitimacy (p.9). Like Dye, these authors define public policy as a function of governmental decision-making.

However, Lemieux (2002) believes that many classic definitions fail to take into account the many actors involved in the public policy-making process who come from outside the ensemble of governmental actors. The definition he proposes can be paraphrased as follows: regulatory measures resulting from power relations between political actors, aimed at solving public problems related to the distribution of resources in a collectivity[5]. This definition has the merit of underlining the various interacting elements involved in the public policy process; that is, actors, problems and solutions. The National Collaborating Centre for

[4] One of the scientists most involved in the field and editor of a recent collection of works on the main theoretical frameworks in the area of public policy-making theory.

[5] Personal communication, June 2005.

Healthy Public Policy has adopted the following definition: *the choices made by a government authority (provincial, regional or municipal) for the purpose of solving a public problem* (NCCHPP, 2007). Here, policies generally refer to measures or instruments (laws, regulations, subsidies, etc.) or to strategies, programs, or projects. It is interesting to note that the definition provided by researchers is different from the definition used by decision-makers, which is generally narrower. For the latter, a public policy refers to a political commitment for which they are accountable (Lemieux, 2002). This distinction is important to keep in mind when interacting with decision-makers in the field.

1.4 SEVERAL THEORETICAL MODELS

This section discusses the main approaches and models that appear to be the most influential in the study of the public policy-making process in North America. Our goal is not to provide an exhaustive review of all current models and schools of thought but rather to concentrate on those that seem particularly relevant to the work of public health agents. First, we briefly describe the *heuristic stage model* or policy cycle model that marked the beginnings of political science. This will be followed by a description of Kingdon's *policy stream model* (1995) and a presentation of Lemieux's work (2002), which, in many respects, makes up for certain deficiencies in the preceding models. We then summarize the *advocacy coalition framework* (ACF) developed by Sabatier and Jenkins-Smith (1993), considered to be one of the approaches most used by researchers in political science. Finally, we mention two other important approaches referred to in policy analysis that raise points of interest to health promotion agents: Lindblom's *incremental approach* (Lindblom & Woodhouse, 1993) and the *storyline approach* defended by Fischer (2003), which is firmly constructivist.

1.4.1 The policy cycle, or the policy stages approach

The public policy stages approach (also called the heuristic stage model or policy cycle model) was the most influential approach until the late 80s (Lemieux, 2002) and remains today, in spite of criticism, a basic reference for the analysis of public policies (Parson, 1995). Developed in the mid-50s by Lasswell who is considered to be the founder of the political science movement (Lemieux, 2002) and taken up subsequently by numerous authors, the model divides the public policy-making process into a series of stages, generally presented as follows: agenda-setting, formulation, implementation and evaluation. Agenda-setting refers to the stage at which a problem appears on the government agenda (Lemieux, 2002), while formulation refers both to the phase during which various alternative solutions are weighed and to that during which a decision is made. Implementation concerns the carrying out of the policy and evaluation measures the results of the policy.

The main criticisms of this model tackle its linear character, its oversimplification of complex realities and its *atheoretical* nature, meaning its weak predictive value and its inability to generate research hypotheses (DeLeon, 1990). Howlett and Ramesh (1995), for example, consider that this model fails to reveal the interplay of actors, the presence of various alliances, the constraints and contingencies that influence and restrict choices, and the impact of past experience. Sabatier (1999) considers that our current state of knowledge obliges us to change paradigm and replace this model with another that better accounts for the complexity of the process. In any case, it is now generally agreed that the various stages

of the model should not be considered sequentially, but in interaction with each other. In addition, it is recognized that the method of breaking down the process into a number of stages has made it possible to simplify the complex analysis of public policies, allowing each stage to become a field of study in itself (Sabatier & Jenkins-Smith, 1993). Some authors, such as DeLeon (1999), continue to argue in favour of this approach, suggesting that the model should be taken for what it is; that is, an approach without theoretical or predictive pretensions, useful as a means of characterizing political actions based on the various stages of the process they are associated with (and the actors responsible for them).

1.4.2 Kingdon's policy stream model

Kingdon focused on the agenda-setting phase of public policy, in an attempt to understand why certain societal problems appear on the political agenda and others do not. Building on the "garbage can" model of Cohen, March and Olsten (1972), which affirms the random nature of the decision-making process of policy makers, Kingdon suggests that for a problem to appear on the agenda, three independently evolving streams must intersect to open a window of opportunity. The three streams in question are: the problem steam, policy stream and politics stream. The latter stream refers to social norms and the "national mood" to which policy makers are also sensitive. According to the model, the three streams must be present simultaneously. For example, a problem can be recognized by decision-makers; however, in the absence of acceptable solutions it will not give rise to policy (policy stream). The model also recognizes the importance of policy entrepreneurs (politics stream). These are actors that invest time and energy in bringing about a coupling of streams and who know how to take advantage of a window of opportunity to push a problem onto the government agenda. The opportunity can be the result of a media crisis, a change of government, the tabling of a parliamentary study or another event.

For several authors (Zahariadis, 1999; Sabatier, 1999; Sabatier & Slagher, 2000), the value of this model lies in its integration of the concept that ideas and beliefs influence decision-making. In this way, it enriches more traditional models focused on the role of self-interest in decision-making. Like the stages approach, the stream model is criticized for underestimating the importance of environmental factors and for its weakness as a theoretical model; that is, its inability to generate research hypotheses and to predict results. Despite these criticisms, it model is widely used in policy analysis. Some authors have studied its possible extrapolation to other phases of the policy cycle (Demers & Lemieux, 1999; Zahariadis, 1999) and to non-industrialized countries (Ride, 2005) demonstrating its usefulness as a tool for understanding the policy process as a whole.

1.4.3 The place of actors and of Kingdon's streams in the policy cycle stages

It is relevant to discuss the results of an empirical study performed by Lemieux (2002). This study sheds light on the roles played by various actors in relation to different streams and stages of the public policy process. In an attempt to extend the stream model to the formulation and implementation phases (in addition to that of agenda-setting), Lemieux examined ten public policies developed in various countries. The goal was to draw conclusions about the roles of various actors associated with each of the three streams of

Kingdon's model, as well as about the place of these streams in the various stages of the policy-making process. The results of his study are summarized in the following table:

Table 1 Role of different actors, according to Kingdon's policy stream model

	Agenda setting	Formulation	Implementattion
Stream	Problem Stream; Politics Stream	Policy Stream; Politics Stream	Policy Stream; Problem Stream
Actors	Stakeholders (citizens) Officials	Agents Officials	Agents Officials Stakeholders

The study showed that during the agenda-setting phase, the two main streams are problem and politics.

The formulation phase is associated with the policy and politics streams.
And during implementation, the policy and problem streams predominate.

To study the role of actors associated with each of these phases and streams, the author used the classification system suggested by Kingdon, which divides the main actors into four broad categories based on whether they are within or outside of the government and whether or not they are specialists (see Table 2)

Table 2 Classification of principal actors

	Specialized	Non-specialized
Within	Agents	Officials
Outside	Stakeholders	Citizens

Thus, specialized actors are called *agents* when they are within the government and *stakeholders* when they are outside of it. Non-specialized actors are termed *officials* when they work within the government and *citizens* when they work outside it. It was observed that stakeholders and officials were most influential during the agenda-setting phase, whereas agents and officials (that is, government actors) were predominant during the formulation phase. During the implementation phase, stakeholders reappear to negotiate with officials and, in particular, with government agents. Citizens are absent from the implementation phase, but when they form coalitions or organize themselves, they can become stakeholders and play an important role.

Actors have strengths specific to their position, which they bring to bear at one time or another on the policy-making process. According to Lemieux, these include human, relational, informational and normative resources, among others.

Applying these results to the reality of public health agents, we can consider that they, as experts, fall into the category of specialists. They act as stakeholders when they are outside of the public service and as agents when they are within it (although the former are far more numerous than the latter). Their main strength is undoubtedly informational resources, given the specialized technical information at their disposal, either because of their training or their links to academics, researchers and other experts.

1.4.4 The advocacy coalition framework (ACF)

As noted above, the ACF developed by Sabatier and Jenkins-Smith is often said to be the most commonly used model, and the one that has made the biggest contribution in recent years (St.-Pierre, 2003; DeLeon, 1999; Fenger & Klok, 2001). For these authors, policy change is the result of competition among two to four coalitions, formed of groups and individuals of various origins, that share the same values and beliefs and that maintain functional ties among themselves in order to influence policy decisions in their favour. The reconciliation of varying positions is the work of individuals in each coalition who serve as intermediaries or policy brokers. A policy remains in effect as long as the coalitions continue to exert pressure. A change in policy is the result of changes in coalitions' frames of reference, due either to significant changes in the social, cultural, and economic environment, or to lessons learned over the years – what authors call *policy learning.*

This vision introduces two innovations to the study of the public policy-making process. The first is the idea of analyzing a policy through reference to a policy subsystem, which extends beyond the specific area of government concerned with a given policy. For example, the analysis of a policy in the transport sector must take into account not only actors within the transport ministry, but also interested parties within all other ministries, agencies, and interest groups, as well as researchers or academics concerned by the policy in question. These groups naturally coalesce in support of a particular option, on the basis of their beliefs and values. The analysis of this type of association is the model's second, original contribution. More specifically, according to this model coalitions are not formed on the basis of self-interest as was previously maintained, but on the basis of similar beliefs and values[6]. Values and beliefs are divided into three levels: core values (almost impossible to change without major environmental change), political (also referred to as "secondary") values and beliefs, which can change, insofar as they continue to serve core values, and strategic values and beliefs (more instrumental and more easily influenced).

[6] Although Kingdon also discusses the role of beliefs in the context of the politics stream, it was not analyzed in as much detail as in the ACF.

The authors drew on many theories (*policy network theory, policy learning theory, idea-based empirical research, institutional rational choice theory*) (Fischer, 2003), adapting them on the basis of their experience and of experimental studies to arrive at the formulation of the six main ACF principles (St.-Pierre, 2003):

- policy subsystems as the primary unit of analysis;
- consideration of various levels of government;
- system of personal beliefs and values as determinants of individual choices and actions;
- importance of technical information to learning within coalitions (policy learning);
- need for a temporal perspective of a decade or more;
- concept of advocacy coalitions.

Despite the theoretical strength of this framework, it has been the subject of certain criticism. The main criticisms refer to its inability to explain change, due to its excessive emphasis on external influence and consequent neglect of the role of coalition strategies (Fischer, 2003). In addition, the ACF pays too little attention to the roles played by institutions and by the actors who make policy decisions. Finally, this framework provides little explanation for the emergence of a new policy, arising from the impact of a crisis, for example. It mainly explains the status quo resulting from the force of inertia generated by the dominant advocacy coalition (Fischer, 2003).

1.4.5 From the incremental approach to intelligent democracy

Charles Lindblom is credited with the development of the incremental approach (Neilson, 2001; Howlett & Ramesh, 1995). This author was one of the first to criticize the rational decision-making approach, popular during the early years of development of the field of political science. He argues that it is humanly impossible for a decision-maker to be familiar with all possible solutions and their consequences and, thus, to be able to choose the best option. Therefore, faced with the complexity, uncertainty and conflict surrounding policy decisions, decision-makers are more likely to make small changes to existing policies. Major policy changes are attributed to the accumulation of small changes that take place over time. According to this approach, there is no optimal decision. The best decision is the one supported by the largest number of people and not the one that supports the best solution to the problem under consideration (Sutton, 1999).

This view of public policy-making approaches Weiss' analysis of the use of scientific knowledge in political decision-making. This author, who has devoted considerable attention to the transfer of research knowledge to the political decision-making process, believes that policy-making is a political process whose objective is to reconcile interests by seeking consensus and not a process guided by logic and the search for truth (Weiss, 1997).

Two types of criticism are levelled against this model: the first refers to its limited usefulness and the second, to the undesirability of incremental decisions (Howlett & Ramesh, 1995). Since it does not explain significant changes nor the sudden interest of politicians in a given problem (Kingdon, 1995), this model can not be used except in relation to stable situations

and existing policies. In addition, the model is criticized for not addressing the question of innovation, leaving aside the role of research and the possibility of promoting new and more adequate alternatives (Neilson, 2001; Howlett & Ramesh, 1995). It is also faulted for limiting the decision-making process to the sphere of bureaucrats, thus according little importance to other groups within society, especially citizens.

In a piece written in collaboration with Woodhouse (Lindblom & Woodhouse, 1993), Lindblom broadens his position by promoting what he calls "intelligent democracy." This time, he questions the influence of technical knowledge on decision-making, as suggested by Sabatier and Jenkins-Smith (1993), and Kingdon (1995). He offers as proof the phenomenal amount of information documented by experts concerning policy; information that does not necessarily lead to any changes or improvement in the policy in question. For these authors, economic pressure and business forces are omnipresent, and jeopardize the ability of the state (the US in this case) to produce policies promoting social equity. This leads to the idea of intelligent democracy, which depends on citizen participation. According to these authors, the problem/resolution process associated with public policy depends on the broadening of debate and the extension of decision-making power, beyond agreements between elites and professionals. Exposing the fallibility of policy analyses and the inability of theoretical models to solve the conflicts between values inherent to political decisions, the authors recommend, instead, adapting public policy analysis to the needs of citizens. The contribution of policy analysis experts would, thus, reside in their ability to support citizens, in the aim of achieving true democracy.

1.4.6 The storyline approach

In his work *Reframing Public Policy,* Frank Fischer (2003) puts forth two key ideas that are relevant to discuss here, given his critical perspective on the main schools of thought that currently dominate policy analysis. The first idea concerns the poor performance of the positivist approach, forcefully promoted by Sabatier, among others, who would like to see the development of universally applicable explanatory hypotheses. According to Fischer, this perspective, which he qualifies as neo-positivist, is incapable of explaining the why and the how of policy changes because they take place in a social, cultural and historical context, and exist within a dynamic of interaction specific to each situation. Referring to Lakatos' theory of knowledge, which identifies various belief systems and serve as a basis for the ACF, and invoking Hajer's theory (*discourse coalitions*) (Hajer, 1995), he develops an argument that places emphasis on the importance of discourse as a means of persuasion, used by advocacy coalitions. According to this approach, what unites people in a coalition is not so much beliefs and values, but rather their interpretation, based on these beliefs and values, of the facts relating to a concrete social context. These are what he calls *storylines*. These stories symbolically condense basic facts and values, and form the starting point for policy decisions. Emery Roe (1991), another author interested in the narrative approach, explains that stories reduce the complexity associated with the issues and policy problems to be solved, thus facilitating decision-making by politicians and communication of these decisions to the population. This partly explains why significant changes in the environment and in technical information do not always succeed in altering the policy direction of coalitions, as suggested in the ACF. To analyze a public policy, one should therefore study the popular discourses circulating within a coalition and among decision-makers, as well as

their meaning and effect on policy change, instead of focussing on the values and beliefs underlying coalitions and the influence of technical information.

The second key idea put forth by Fischer relates to concerns raised by Lindblom and Woodhouse (1993) regarding the participation of citizens in political decision-making. He describes this participation as the cornerstone of the policy process because it provides analysts with a fresh understanding anchored in the reality of those to whom policies are addressed. According to this vision, the role of the decision-maker (and of the expert) goes beyond that traditionally associated with the various stages of the policy process (formulation, decision, implementation). He also discusses the need for citizens' *civic discovery* of societal issues. This makes it possible to achieve a better understanding of the nature of problems and of acceptable solutions. According to this postmodern vision, this is the only way to close the gap between reality and science.

Thus, Fischer, like Lindblom and Woodhouse, raises questions about the predominant movement founded upon a more positivist perspective. The same positivist perspective informs a portion of the theory and practice in the public health field. Thus, these last two models introduce ideas likely to encourage the questioning of accepted beliefs, a process all experts must engage in, be they policy analysts or public health experts.

1.5 THE USE OF PUBLIC POLICY CONCEPTS IN HEALTH PROMOTION

To begin with, it should be clear that public health experts are not required to perform policy analysis but, rather, to promote new policies and to increase awareness of the negative health impacts of existing policies. Although the first process would develop knowledge of use to the second, we are not trying to turn public health professionals into political science experts but instead, to better equip them to perform their role in the most effective way possible.

This role can be performed in three different manners. On the one hand, public health agents can become involved in putting a new policy on the agenda as was the case, for example, with laws and regulations related to tobacco. In such situations, Kingdon's stream model could be very relevant. This model suggests that, if public health experts wish to influence political action, it is not enough for them to clearly document a problem using epidemiological data. They must also identify realistic and socially acceptable policy options that will reduce risks. The problem of automobile traffic could be cited here as an example. Although traffic-related public health problems, such as respiratory diseases and accidents causing injuries or even death, have been amply documented, restrictive measures aimed at decreasing the use of cars and promoting other means of transport are unacceptable to a large segment of Quebec society.

Public health agents can also be called upon to issue warnings against the potentially harmful impact of policies being placed on the agenda or being formulated, or even to oppose policies. The Montreal public health department's position on the extension of a highway towards the island's northern periphery or on the construction of a Casino in an underprivileged neighbourhood, are some recent examples.

The advocacy coalition model could help guide the public health sector's involvement in such cases. By identifying the role and the nature of the coalitions involved, and the structure of the policy subsystem concerned, public health experts can align their arguments with normative values in support of the option that is most preferable from a health perspective. Public health arguments must also be adapted to a wider audience that goes beyond policy makers.

Finally, a small segment of the public health sector working within the government apparatus can fulfil their role by trying to influence policy formulation. In this case, the incremental approach and the theory of institutional rational choice, which emphasizes the role of bureaucracy (Grindell & Thomas, 1991) and institutional arrangements, could help elucidate the dynamic in which public health agents must exert their influence.

In all these scenarios, however, public health experts exploit their principal resource, which is technical information. According to Lemieux (2002), this resource has a contribution to make during both the agenda-setting and formulation phases of a policy. In the case of agenda-setting, this advantage contributes, in particular, to the development of the problem stream by providing information about health determinants, for example. It also contributes to the politics stream, as noted by Zahariadis (1999), by participating in the development of ideas and social movements. In the ACF, technical information is thought to be what drives policy learning within advocacy coalitions. According to Sabatier and Jenkins-Smith, charting beliefs and public policies together on one map facilitates analysis of the role of scientific and other information in policy-making (St-Pierre, 2002, p.275).

However, we have seen the extent to which this advantage is limited and subordinate to other imperatives. This information, as solid and scientific as it may be, may not be used at all, a point raised by Lindblom and discussed above. Some authors suggest that decision-makers, overwhelmed by information, trust their own experience and common sense more, and that this acts in unison with their decision-making context (Neilson, 2001). Information can be rejected because it is not consistent with the ideology of the governing administration or it can be given alternate interpretations depending on the frame of reference of recipients. Fischer notes that for technical information to truly be of use, it is essential that knowledge transfer occurs in a climate of confidence, acceptance and credibility (Fischer, 2003). Taken together, these observations should alert public health experts to the need to pay special attention not only to the message conveyed (adaptation to basic values) and to its recipients (all actors in the policy subsystem) but also to the manner in which information is shared, recognizing the importance of the relational quality with which the information is transmitted.

Some public health agents may wish to go beyond the role of "expert" and be more proactive in influencing public policies. In this case, they can adopt the role of a policy entrepreneur as defined by Kingdon. This role can be fulfilled, for example, within a coalition, a pressure group or a professional association advocating in favour of a particular option. We need only think of public health agents concerned with the prevention of obesity who, encouraged by the population's growing awareness of this problem, have brought to the fore relevant data collected over many years, and have become actively involved in various organizations

aimed at putting this problem on the governmental agenda. Public health agents must be aware that such efforts require a medium- and long-term commitment. Constant effort must be exerted to build links between problems, policies and social norms (coupling of streams) while monitoring (and even provoking) the opening of windows of opportunity to help place the desired policy on the government agenda.

1.6 CONSIDERATIONS RESPECTING INTERMINISITERIAL ACTION TO PROMOTE HEALTHY PUBLIC POLICY

Institutionalizing government analysis of the impact of all public policies on health is a very powerful way to ensure the promotion and maintenance of the population's health. In Canada, section 54 of Quebec's *Public Health Act* [7] is a recent and promising example of this strategy. In December 2001, the Quebec government adopted the *Public Health Act*, one of whose sections stipulates that the Minister of Health is, by virtue of his or her office, the government's advisor on all questions of public health, and that in this capacity *"the Minister shall be consulted in relation to the development of the measures provided for in an Act or regulation that could have significant impact on the health of the population"*[8] (Government of Quebec, R.S.Q. S-2.2). In order to apply this provision of the legislation, the *ministère de la Santé et des Services sociaux* (MSSS) (Quebec Ministry of Health and Social Services) has set up an intragovernmental consultation mechanism, making a tool available for ministries assessing the health impacts of their laws and regulations, and offering the support of a group of ministerial representatives. The proposed screening tool is inspired by those used in Europe in the context of a movement, more popular there than here, called *Health Impact Assessment* (HIA). This tool reflects a rationalist approach, in that it makes use of the stages of problem solving: screening, scoping and summary analysis, in-depth analysis (if necessary, done by public health experts), adjustment, decision-making, and evaluation. Aside from its primary goal of encouraging the adoption of healthy public policy, this intragovernmental mechanism has two other objectives: to allow legislators to make informed decisions and to ensure consistency among various governmental decisions (MSSS, 2002).

However, such instruments must be handled with care because they impinge on the sensitive area of interministerial relations. The nature of this challenge is elucidated upon from a sociological perspective of policy analysis developed by the French authors Jobert and Muller. In their book *L'État en action (*Jobert & Muller, 1997), the authors express two key ideas that shed light on this subject: the concept of *hyperchoice* and the global-sectoral relationships (GSR) resulting from systems of reference. For these authors, uncertainty is at the heart of the policy process. The more the state and society develop, the more sectorization occurs, and the more interdependent the sectors become (Jobert & Muller, 1997, p.41). Thus, political action becomes more complicated. Decision-makers are increasingly confronted with what the authors call *hyperchoice;* that is, the need to choose among heterogeneous data derived from fundamentally different forms of logic (Jobert & Muller, 1997, p.41). It is undoubtedly because of this interdependence among sectors and

[7] *Act Now* in British Columbia is another promising example.

[8] Underlining by the author.

the inevitable overlapping between them that impact assessment clauses have been developed[9], reflecting the desire of lawmakers to ensure the social consistency of their various policies. However, this approach makes decisions even more difficult by complicating the task of actors in each sector. Section 54 of the Quebec *Public Health Act*, which obliges non-health sectors to integrate information arising from a different (and sometimes contradictory) doctrine whose objective differs from the objectives pursued by the laws and regulations in development, increases the difficulty associated with *hyperchoice*. Thus, this measure is not easily integrated by decision-makers.

The second key concept is that of the global–sectoral relationship; that is, the place and role of a sector relative to the society as a whole. The understanding a sector's actors have of their sector – its values, norms, and usefulness to society - is identified as the sectoral systems of reference. According to these authors, the development of a public policy always takes into account this system of reference and attempts to maintain the global-sectoral relation, which is closely tied to the power structure within the sector concerned. The persons who actively develop these referencials within sectors are called mediators. They contribute to the development of norms and values as well as to the leadership of their sector within society. A sector can develop its leadership to the point where it exercises a certain hegemony over other sectors. The authors define hegemony as a situation wherein a social group imposes its vision of the world, its project, on the society as a whole. To what extent does the priority given to health concerns in policy decisions conflict with existing systems of reference and, above all, destabilize the GSRs of all sectors, thus affecting their power structure? Faced with such a possibility, it is not surprising to encounter a certain resistance - in particular on the part of sectors whose economic vocation is more ideologically remote - given what could be viewed as the hegemonic vision of the public health sector.

Impact clauses or health impact assessments are applied during an advanced phase of policy-making; that is, the formulation phase. We saw in previous sections that, during this phase, the decision-making process draws closer to the centre of decision-making power, where institutional and bureaucratic rules come into play. The incremental approach can thus be of some use in anticipating difficulties. According to this approach, the more uncertainty there is, the more change takes place incrementally (Grindle & Thomas, 1991) through small changes to existing policies. Based on Jobert's and Muller's thesis that the complexity of political decisions has increased due to sectorization, one can assume that the majority of legislative decisions made by ministers only produce marginal changes. One can also assume that the addition of new information from the public health sector exacerbates the uncertainty which, paradoxically, risks hindering major change. In addition, at this stage, administrators tend more to look for solutions (and not new problems) and to use the same instruments, regardless of the problem being dealt with (Howlett & Ramesh, 1995).

These considerations should caution public health agents within the government apparatus to be discerning in their promotion of the impact assessment tool and realistic in their

[9] The need to evaluate the impact on health, poverty, regional development, etc., of laws and regulations as a whole.

expectation of major change. However, this theory reminds us that minor changes are possible and that, by accumulating over time, they may bring about important and lasting transformations. Here, the theory of institutional, rational choice can prove useful by confirming the relevance of institutionalizing the practice of analyzing the health impact of public policies. In particular, this theory affirms the importance of institutional rules in influencing the behaviour of individuals. Although the institutionalization of a rule can strengthen the legitimacy of certain actors, allowing them to exercise power (Lemieux, 2002), an effort must be made to ensure that all actors called upon to use a new rule share a common understanding of it (Ostrom, 1999) for the rule to be actually put into practice.

The institutionalization of the rule calling for an assessment of all laws and regulations that could potentially affect the population's health may be a means of ensuring the viability of the measure. However, to ensure its success; that is, to ensure that every government sector assumes responsibility for the population's health, intersectoral collaboration is essential because it facilitates, as Jobert and Muller point out (1997), the reorientation that must accompany changes to systems of references.

1.7 CONCLUSION

Influencing public policies to make them conducive to health is intrinsic to the responsibilities of public health agents. It is acknowledged that, in industrialized countries where health care systems are well developed, the improvement of the population's health now depends on the fight against inequalities and the improvement of physical and social environments.[10] Furthermore, given the constantly increasing costs to the health system, more and more observers are of the opinion that it is urgent to act on the causes leading to diseases and on health determinants. However, this objective cannot be the sole responsibility of the health sector. It requires the involvement of all government officials as it is an intersectoral, and even societal, responsibility. Some governments have been innovative in this regard, acknowledging this imperative through intersectoral initiatives. Whatever their level of involvement (national, regional, or local), public health agents are encouraged to promote healthy public policy.

Public health professionals and officials are generally well trained in health sciences, but less well equipped to take action on public policy. It is, thus, in their interest to make use of theoretical concepts developed in the field of political science that can enrich their understanding of the circumstances surrounding the public policy-making process. Learning about such concepts can help public health agents direct their actions to the proper stages of the public policy-making process. The agenda-setting stage of a public policy is a stage where public health agents can play a key role because they possess the qualities essential to this phase: informational resources and opportunities for forming alliances with other groups of actors such as academics, researchers, specialized media or simply groups within the population. Public health knowledge is required to define the characteristics of situations that are problematic for populational health and to identify the elements of solutions that

[10] OECD, 2004.

reduce risks. Another advantage that public health agents possess is that of being associated with a cause that represents a fundamental value in Canadian society: health. Not only is this value very present in the politics stream, as defined by Kingdon, but it is usually associated with an ideology of social solidarity and common good, on the basis of which advocacy coalitions can be identified and supported.

Another point to consider is that policy analysis models suggest that public health agents must factor in the temporal dimension, which seems to be central to the public policy process. This dimension varies depending on the type of policy changes desired and on the population's and the political actors' receptivity to them. Change can require many years and be gradually implemented, in step with the evolution of the systems of reference that characterize policy sectors and advocacy coalitions. Conversely, they may be triggered by events and take place suddenly. This reality requires public health agents to have a good understanding of policy subsystems and of the various forces at play (actors, power relations, resources used, etc.) and to remain constantly alert to possible windows of opportunity, so as to be ready to merge streams when the opportunity arises.

Although theoretical models serve as guides to action and clarify the main factors at play as well as their interrelations, they also have their limits. As suggested by Howlett and Ramesh (1995), a researcher must choose a theory, test it and improve it. As experts, public health agents must consider all the facts in relation to many of the available models, evaluate the relevance of models to a specific context and choose the strategies that seem most appropriate.

While it is useful for public health agents to acquire greater skill in influencing public policies through judicious use of their strengths and through a refinement of their understanding of the policy process, they must not neglect their duty to perform critical analysis, as encouraged by certain schools of thought in political science. Thus, as indicated by authors such as Lindblom and Woodhouse (1993), in the final analysis technical information has but a limited impact. Furthermore, the complexity of the human interactions existing in the world of public policy as well as the ethical questions involved oblige public health agents to consider a variety of approaches, as urged by authors such as Fischer, of the constructivist school.

In general, public health agents subscribe to a positivist and rational view according to which scientific knowledge is true in and of it self, and can be directly used by policy makers in their decision-making. The political science perspective assumes that many external, non-rational and non-scientific factors influence problem definition and political decision-making, thus relegating scientific primacy to a secondary position. The destabilization of this steadfast belief in scientific supremacy is undoubtedly the greatest contribution political science can make to the practice of public health.

CHAPTER 2 USER COMMUNITY MEETINGS: AUTUMN 2006

This chapter, written in October 2006 by Denise Kouri, NCCHPP Lead, describes meetings that were organised in different parts of the country with potential users of the Centre. These gatherings were part of the Centre's efforts to determine how the NCCHPP could best support the public health community's efforts in promoting healthy public policy. The chapter highlights the user community's response to specific questions concerning the priorities of the Centre. ***Appendix I*** *presents the agenda of the meetings;* ***Appendices II*** *and* ***III*** *provide greater detail about who participated in them and the themes identified by these participants.*

2.1 BACKGROUND

Knowledge exchange methodology tells us that potential users of information should participate in setting the agenda for its development. As a result, during our program development stage, the National Collaborating Centre for Healthy Public Policy (NCCHPP) organized several consultations with researchers, policy makers, practitioners, and other actors in public and population health.

The first consultations were held in the 2005-06 fiscal year during the proposal development phase, and included participants from Quebec as well as from other provinces. The second set was held in the fall of 2006, six months after the Centre became operational. These consisted of two meetings, one in British Columbia and another in New Brunswick. The objective was to consult potential users, organised by region. Participants from the four western provinces were invited to the session in British Columbia, and those from the four provinces of the Atlantic, to the session in New Brunswick. Quebec user interests had already been taken into account, and meetings in Ontario and the territories would be held at a later time.

The NCCHPP's target clientele (see Figure 1) includes public health officers, population health planners and other actors in the health system at various levels, who are concerned with healthy public policy. It also includes members of non-governmental organizations (NGOs), think tanks and community groups whose concern with healthy public policy makes them partners in this effort. Our knowledge exchange efforts will be directed to these public health clients, in the first instance. However, because public policy advocacy implies that these public health actors will, themselves, target those in policy positions at various levels of government, we consider these latter policy makers to be indirect clients of the NCCHPP. Moreover, because public policy depends on the support and understanding of the population, public opinion and interaction with policy makers will be part of the NCCHPP's framework. Finally, the research community is part of the NCCHPP community, both as providers of research and as users of the Centre's products.

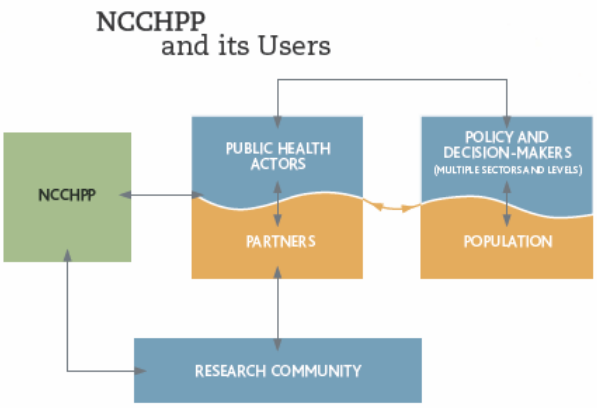

Figure 1 NCCHPP Client Community

2.2 RESULTS OF THE FALL USER MEETINGS

The purpose of the NCCHPP's two user meetings in September and October was to solicit the views of a selection of direct clients about our program, priorities and potential products. The general question we asked was how the NCCHPP could best support the public health community's efforts in promoting healthy public policy. Specific questions included to what extent we should focus on research syntheses of specific interventions, and to what extent on building understanding of public policy processes. We also inquired about any specific common themes or public policies that we should focus on. Finally, we addressed the question of how they might continue to interact with us and how we might support collaboration among the participants, themselves.

Participants were invited in equal numbers from the eight provinces covered by the consultations, i.e., the four Western and four Atlantic provinces. Members of our different client groups were represented (Figure 1), with public and population health actors at provincial and regional levels making up the majority, and with representation from municipal government and non-governmental organizations (NGOs). Although several were invited, only one government-level policy maker in a non-health sector actually participated. Finally, although the target clientele of these particular consultations was not the research community, there was some participation by university researchers, as well as experts from non-university think tanks.

Table 3 User Meetings: Participants by Type

Participants by Type	Number of Participants	Proportion
Public/medical health officers (provincial and regional levels)	12	38%
Population health planners (provincial and regional levels)	7	22%
Municipal officers and staff	3	9%
Non-government organizations and think tanks	5	16%
University researchers	4	12%
Non-health provincial policy makers	1	3%
TOTAL	**32**	

Following a presentation outlining the NCCHPP's goals and potential program, participants engaged in group discussion and ended the day by completing a written questionnaire about their opinions and potential use of NCCHPP tools and participation in our efforts.

The results of these consultations validated our program, but also changed our emphasis to some extent. Participants confirmed the value of and need for research-based information in their healthy public policy efforts. However, they placed emphasis on the importance of tools, frameworks and processes. They asked for tools and training on the subject of public policy processes, and for more information about facilitators and barriers to policy adoption.

Participants agreed with the NCCHPP's proposal to focus on health impact evaluation. They also asked for policy evaluation; in particular, wanting to build the "business case" for healthy public policy.

They asked for more emphasis on intersectoral and "whole government" approaches, as well as on community approaches. They noted the importance of including multiple levels of authority, such as municipal and local as well as provincial jurisdictions. Participants identified regionalization as an area of study and collaboration with regional health authorities as a way to work. They noted the need for developing leadership for healthy public policy.

In addition to research, participants wanted more sharing of information about what others are doing throughout the country and internationally. They asked for an inventory of interventions, as well as case studies and illustrative stories.

As for the specific subjects on which they would like to have additional research information, the vast majority prioritized health disparities and social inequities. Other specific subjects included housing, transportation, obesity, food, education, early childhood interventions, and youth at risk. However, it was noted that the prioritization of such latter subjects can change

over time and that it would be better to help users be equipped as a community, in order to meet future needs in an appropriate and proactive way.

Table 4 User Meetings: Summary of Major Themes

Tools, frameworks and processes	- Intersectoral approaches - Health impact assessment - Political and policy processes
Topics for knowledge syntheses	- Heath disparities and social inequities - Urban themes (housing, transportation, planning), - Food issues (obesity, food security) - Also, need for general capacity (« clearinghouse »)
Sharing practices	- Inventory of interventions - Case studies
Dimensions	- Equity - Community participation
Other concerns	- Regionalisation - Governance - Leadership

CHAPTER 3 PUBLIC HEALTH MODELS AND STAKEHOLDERS INVOLVED IN HEALTHY PUBLIC POLICY IN EIGHT CANADIAN PROVINCES

This chapter of the Environmental Scan is a synthesis of the public health models and stakeholders involved in healthy public policy, in eight Canadian provinces. It was written by Phillip Poitras, NCCHPP consultant, in May 2006. Additional material providing a more detailed portrait of each province's public health and health promotion infrastructure may be made available upon request. The interview guide used by the author of this text can be found in ***Appendix IV****.*

3.1 BACKGROUND

Within the context of its program development, the National Collaborating Centre for Healthy Public Policy (NCCHPP) sought to create a profile of the principal public health infrastructures existing in eight Canadian provinces[11], with particular emphasis on the mechanisms in place to implement health promotion initiatives and healthy public policy.

The objectives of this initiative were:

- To acquire basic knowledge of public health infrastructures in Canada, including an awareness of the distribution of roles at each level and of significant, recent public health events;
- To evaluate the level of importance accorded to action targeting socio-economic determinants of health by public health authorities, including government mechanisms to support healthy public policy (e.g.: legislation and intersectoral action);
- To identify key stakeholders holding a potential interest in the Centre's products, whose role is to support the development of healthy public policy;
- To provide brief analysis, based on the principal results of the primary and secondary data collected.

The current report meets these objectives. Indeed, it is the first[12] inventory of its kind, and offers information from which the NCCHPP will develop its programs and respond to needs of users across the country. This report focuses on public health infrastructures in eight Canadian provinces and, consequently, does not provide an inventory or list of Canada-wide strategies, initiatives, networks, committees or programs sponsored by the federal government (Health Canada, Public Health Agency of Canada, etc.).

[11] Quebec and Ontario were excluded from this profile because the Centre's experts are well aware of Quebec's infrastructure, and because Ontario's infrastructure was undergoing major transformation at the time of study.

[12] Our literature review found no similar document providing an overall portrait, without necessarily being exhaustive, of the public health infrastructure of Canadian provinces.

The next section of this report presents the methodology used, as well as the underlying limitations of the data collection process. Sections 3.4 and 3.5 present a series of highlights, analytical findings, and conclusions.

3.2 METHODOLOGY

This project employed the following course of action:

- Exploratory meetings with the NCCHPP team;
- Background reading and familiarization with concepts;
- Literature review:
  - Paper and electronic documents supplied by the NCCHPP;
  - Electronic documents obtained via Internet searches (see all documents consulted for each province on CD[13]);
- Preparation of an interview guide and validation by the Centre's team;
- Scheduling of telephone interviews with key informants (Chief Medical Officer of Health) in each province.
  - With the exception of Saskatchewan and British Columbia (where the NCCHPP had already identified certain participants), interview participants were all identified by the Chief Medical Officer of Health.

    This approach proved to be a successful way to identify almost all participants. Obtaining an appointment with these individuals was facilitated by having been referred to them by the Chief Medical Officer of Health.
  - The vast majority of participants work for the provincial government, within the Health ministry or another sector, and hold an executive position (director, executive director, or assistant deputy-minister). Some respondents are based in regional health agencies, associations or non-governmental organizations (see list of interviewees in Appendix IV).
  - A minimum of three interviews were done, per province.
- 26 semi-structured telephone interviews were conducted between March 29 and May 2, 2006. The interviews lasted between 45 and 90 minutes;
- In addition to the information gathered in each province, the interviews provided three important added benefits for the NCCHPP:
  - They provided an opportunity to promote the NCCHPP and its mission to over 30 people in key positions in public health and/or in health promotion, in the eight participating provinces.

[13] Available upon request.

- All participants demonstrated an interest in obtaining more information about the Centre's upcoming activities, and agreed to be on its contact list.
- This project undoubtedly contributed to reinforcing the public health community's awareness and receptivity to the issue of healthy public policy in Canada.

3.3 DIFFICULTIES ENCOUNTERED AND LIMITATIONS OF THE APPROACH

3.3.1 Secondary data

3.3.1.1 Grey Literature

- The documents found in the existing grey literature were of unequal value. Much of the literature provides description of the principles, concepts and underlying benefits of a population health approach and the necessity of healthy policies, but devotes little time to the best practices and/or to the inherent difficulties of their development and implementation.

This confirms the relevance of the NCCHPP's mandate, particularly in terms of the information products and knowledge syntheses it will produce and disseminate.

3.3.1.2 Websites

- In several provinces, the provincial government's website is not up to date, and does not provide much information concerning provincial public health infrastructure. For the most part, information is inconsistent and presented in disparate chunks on various sections of Web sites and via electronic versions of official documents.
- As such, the quality of provincial websites, in terms of their capacity to provide specific information required for the project, was extremely poor. However, certain sites provide more information than others (British Columbia, Alberta, Manitoba and Nova Scotia are exemplary).

As a result of these limitations, much of the interview was devoted to assembling various bits of information into a coherent picture.

3.3.2 Primary information (data)

- Despite the level of seniority of respondents and the high degree of professionalism they exhibited, most individuals had much to offer in terms of specialized information specific to their professional duties, but little familiarity with contextual information, historical perspectives or overall vision with respect to the policy-making process within the government.

This factor not only added another level of difficulty to the interviews (since time was required to understand the structures), but also made it difficult to fully apply the interview guide.

In sum, the main challenges and limitations to our methodology are:

- The available documentation and information from the interviews did not always reveal the particular mechanisms and tools underlying the development and implementation of healthy public policy in each province;
- At times, this tainted the accuracy and depth of information collected for each province, and caused some inter-provincial variation;
- Given the process by which participants were identified (by direct referral) and the fact that almost all respondents came from the fields of public health and health promotion, it is possible, although not necessarily the case, that the collected information was slightly biased towards activities led or coordinated by the health care sector to the detriment of the activities led by other sectors (social affairs, family, education, environment, etc.).

3.4 SYNTHESIS OF RESULTS

The literature review and interviews provided an overall portrait of the public health infrastructures in each of the eight provinces involved in the survey, with a particular focus on the fields of health promotion and healthy public policy.

3.4.1 Highlights by province

- In March 2006, the government of Newfoundland announced its first wellness strategy, the *Provincial Wellness Plan*. This occurred three years after recommendations were tabled by the Provincial Wellness Advisory Council, an important interministerial committee involving NGOs and community groups from various fields. This committee will continue to advise the provincial government, and monitor the implementation and evolution of the *Provincial Wellness Plan*.
- In April 2006, Nova Scotia announced the creation of the Department of Health Promotion and Protection. Previously, a Health Promotion department existed within the Ministry of Health.
- The government of New Brunswick launched its *Wellness Strategy* in January 2006. Furthermore, the Premier announced five major political objectives to be achieved within five years (*5 in 5 Initiative*). Several of these objectives address, directly or indirectly, issues of health promotion and social determinants of health.
- At the beginning of the decade, Prince Edward Island launched the *Healthy Child Development Strategy*. Its implementation is managed by a permanent committee, the Children's Secretariat. This committee is made up of 7 provincial ministries and the presidents of 11 community-based implementation committees. The Children's Secretariat is interdepartmental, cross-sectoral and interjurisdictional (involving several levels of government: provincial, municipal, school boards, regional health agencies, etc.).
- Manitoba has implemented a unique system called *Healthy Child Manitoba*. This initiative is the responsibility of the Minister of Healthy Living and is also supported by a committee of deputy-ministers, as well as by a permanent interministeriall committee. *Healthy Child Manitoba* is a structure that has an independent operational and program budget.

- In 2004, the government of Saskatchewan tabled a strategy to promote health based on a population approach, entitled *Healthier Places to Live, Work and Play: A Population Health Promotion Strategy for Saskatchewan*. Already in 1994, the province of Saskatchewan set up the *Human Services Integration Forum* (HSIF), a permanent intersectoral committee. The HSIF is made up of assistant deputy ministers from eight departments. This executive council was established to foster the creation and implementation of horizontal public policies in the areas of health, education, youth, employment, community services, services for natives, etc. *Regional Intersectoral Committees* exist in each region of the province. These committees are chaired by regional health agency representatives, and are comprised of local stakeholders from various sectors including education, community services, native communities and municipalities.
- In 2002, Alberta set up an interdepartmental health initiative called the *Health Sustainability Initiative* (HIS). This initiative was created specifically to improve cooperation between nine departments, by creating and implementing policies likely to reduce the growing costs of health care, to target the social determinants of health, and to improve population health.
- At the time of study, the public health sector was undergoing major change in British Columbia. This province was overseeing a major renewal of its public health legislation. Furthermore, the BC government was working towards the adoption of a provisional bill, which would extend the reach of the public health act to address health determinants and health inequalities. This bill was made public for consultation by the population.

  Also, in the midst of preparations for the 2010 Olympic Games the BC government launched a major health promotion platform called *Act Now BC*. This platform includes ambitious goals to promote healthy lifestyles. An interministerial committee has been established to ensure that each ministry's policies are geared to meet program objectives. Each minister will be required to submit an action plan to the Premier's office, and ensure that his or her ministry meets set objectives. This program involves intersectoral cooperation between ministries, as well as collaboration with the BC Healthy Living Alliance and interjurisdictional activities with the Union of British Columbia Municipalities.

3.4.2 Overall findings

- Provincial public health services and infrastructures are undergoing major changes throughout the country and, to various degrees, are increasingly integrating the field of health promotion into these new systems.
- There are fewer differences between the provinces with respect to the traditional fields of public health (health protection, surveillance, monitoring, emergency measures, etc.) than in terms of health promotion. This field is carried out to varying degrees and in different ways by each province.
- While Quebec and British Columbia (currently in process) are the only provinces to have public health legislation addressing the social determinants of health and social inequalities, there is a strong movement towards health promotion programs addressing

healthy lifestyles, healthy schools, active lifestyles, etc. throughout the provinces. This momentum is obvious both on political and organizational levels.

- Health promotion approaches are "in fashion" and benefit from growing political support in several provinces.
  - For example, political support is particularly strong in Nova Scotia and British Columbia, where the Premier's office grants special interest to health promotion policies and measures.
  - Manitoba has a Minister of Healthy Living who also oversees *Healthy Child Manitoba.* This department works concurrently with the Health and Healthy Living Department.
  - Saskatchewan has recently named a Minister of Healthy Living Services. This ministry works in concert with the Health ministry.
  - New Brunswick recently transferred the "wellness" component of the Health Department to a sector where the component will become a higher priority for the minister: the Department of Wellness, Culture and Sport.
  - To a lesser degree, the province of Alberta has added the "Wellness" component to the Department of Health (Department of Health and Wellness), without adding ministerial responsibilities.
- The need to reduce a future explosion of health costs, rather than the desire for social justice, appears to be the determining factor behind the provinces' implementation of health promotion policies and strategies.
- Still, the provinces all recognize the need to work on health determinants and to reduce inequalities. In fact, in their official documents all provinces explicitly acknowledge the necessity of adopting a population health approach and to act "upstream" at the level of the social determinants of health, in order to reduce health inequalities. The question remains how to operationalise these goals. Indeed, when put into practice, health promotion, wellness or healthy lifestyle initiatives generally do not go beyond interventions that target individual factors such as lifestyle, individual ability to adapt, early childhood development and local support networks. It is, therefore, necessary to understand the significant gaps that appear to exist between intentions and concrete action.
- In general, the Chief Medical Officer of Health primarily oversees traditional public health activities. His or her activities are usually in parallel to those of the division responsible for the creation and implementation of health promotion programs (e.g. Population Health Branch, Wellness Unit, etc.).
- When involved in the implementation of health promotion activities, the Chief Medical Officer of Health and its divisions generally concentrate their efforts on programs aimed at changing lifestyle habits to prevent chronic diseases, as well as on childcare programs. They demonstrate little or no leadership towards working "upstream" with other departments on more fundamental determinants, such as improving revenue and working conditions, education and literacy, etc.
- In general, childcare measures are often led by ministries other than health (education, family, children, etc.).

- The majority of committees and/or interministerial mechanisms identified are applied to programs concerning the healthy development of children. Initiatives to promote healthy lifestyles are, generally, intersectoral and interjurisdictional.
- Several provincial initiatives to promote health and child development have been launched in conjunction with federal government initiatives. As such, it would appear that federal programs in this area have an important structuring effect for many of the provinces.
- In several provinces, the number of regional health agencies has decreased over the last few years, compared to the first phase of health care services regionalization which took place in the late 1990s and early 2000.
- In general, on an organisational level provinces do not use a performance and efficiency framework that would allow for the identification of the health ministry's responsibilities relative to those of regional health agencies, in terms of their health promotion policies or initiatives.

3.5 CONCLUSION

Based on the results of this preliminary study, it is clear that the provincial governments surveyed here have not only accepted the principles of a population health approach, but have also moved ahead to integrate this approach through initiatives involving various mechanisms and committees of intersectoral and interjurisdictional nature. While their approach does not systematically consider health issues when developing policies in areas other than health, changes occurring within provincial governments have made it increasingly common for them to employ horizontal, intersectoral initiatives. These initiatives represent definite steps toward concrete action in matters of health promotion. In fact, by experimenting with mechanisms that are both intersectoral and multidisciplinary, provinces are learning constructive lessons on what does and does not work, even if these experiences take place mainly within the more limited context of programs that aim to modify behaviour and to reduce the incidence of chronic diseases.

By examining the continuum of these innovations within the context of public administration and healthy policy development, this profile has made it clear that the provinces have left the zero mark, but still have a ways to go before reaching the point where health promotion is integrated into all fields. Still, they are move forward, with some initiatives and methods that will be worthy of mention as best practices.

On a different note, there is confusion surrounding the terminology used in the field of health promotion. Indeed, difficulties encountered during interviews with key informants, and the variations noted in the academic literature indicate a diversity of interpretations of the concepts "healthy public policy," "population health", and "health promotion". The objectives of intersectoral and interministerial action were also subject to divergences. This confusion exists in the English context, as well as in the translation of concepts between English and French. For example, the concept of "health promotion" in English appears to have a more limited scope (healthy lifestyles and chronic illness prevention) than in French, where the expression "*promotion de la santé*" refers to a more integrated approach that affects other health sectors.

In addition, it will be necessary to pay close attention to the distinction between healthy public policy considered *ex post* by the observation of a series of joint and organized actions involving many partners and carried out without an overall plan, and the development of policies that are well thought out and that have an overall plan established according to theory (*ex ante*). In other words, it is possible for actors to develop and implement healthy policies at the provincial, regional and local levels, without actually knowing that they are, indeed, healthy policies.

In conclusion, this preliminary analysis provides a snapshot of the current situation occurring in the eight participating provinces. It is a starting point for establishing new alliances with partners in the field.

Furthermore, these findings propose interesting avenues for reflection and action, which the NCCHPP could transform into opportunities to rapidly establish a constructive presence. The following opportunities could be considered:

- A similar project, implemented in collaboration with the National Collaborating Centre for Health Determinants, could survey key stakeholders working in ministries with a social mandate (economy, employment, affordable housing, family, community services, etc.). These ministries are directly involved in targeting the main social determinants of health. As such, this would not only permit the exploration of healthy public policy from a social perspective but would also add to this first study by identifying initiatives that might have fallen between the cracks of our analysis, which collected data exclusively from public health authorities.
- To eliminate any confusion regarding terminology and concepts and to ensure that the NCCHPP and its partners speak the same language, it would also be advisable to take the opportunity to create a tool that would clarify the concepts in both official languages. This tool would surely be welcomed by academics and actors working in the fields of health promotion and public health.

CHAPTER 4 KNOWLEDGE TRANSFER: A KNOWLEDGE SYNTHESIS

This chapter is a knowledge synthesis on the subject of knowledge transfer. It provides insight into the fundamental, as well as more recent notions of knowledge transfer, highlighting the literature on the subject as well as the viewpoints of various experts in the field. This chapter was written by Geneviève Brisson, NCCHPP research officer, in April 2006.

4.1 BACKGROUND

In the effort to inform decision-makers so that their choices have a positive effect on public health, it is first necessary to produce reliable and relevant information concerning health issues and risks. However, producing information is not enough. The information needs to be assimilated by policy analysts and policy-makers who are receptive and able to understand the research results. The most useful and usable information corresponds to the needs and realities of policy-makers.

To this end, a knowledge synthesis on the subject of knowledge transfer in the field of health promotion was done in two phases. The first phase, to identify knowledge gaps and issues, consisted of a review of the texts that knowledge transfer specialists consider mandatory reading. Also, interviews with specialists helped to complete a brief overview. In the second phase, this corpus was enriched with more contemporary texts identified by initial reading and interviews. These reports and scientific articles were chosen for their broad scope, and because they presented either a conceptual framework or a review of relevant literature[14]. Texts were used in order to identify definitions, methodologies, information gaps and issues, principal points of discussion, and linkages to other conceptual fields.

4.2 KNOWLEDGE TRANSFER[15]

The subject of knowledge transfer has spawned an abundant literature of case studies and conceptual analyses, as well as more popular works for the general public. We selected a number of documents and analyzed them: first, in order to present the state of research in the field and general themes. Second, our analysis sought to present the methods of knowledge transfer currently in use, with special emphasis on the advantages and limits of each. This paper also discusses how knowledge transfer operates in the context of healthy public policy.

[14] See Bibliography.

[15] We are extremely grateful to Marie-Claire Laurendeau, who contributed enormously to a first draft of this text. We would also like to thank Léonard Gilbert and Louise St-Pierre who commented on this document.

4.2.1 Understanding the concepts

4.2.1.1 Some history: A current term for a long standing concept

Knowledge transfer is a term commonly used by producers and users of knowledge and information in the fields of pure and applied science, social science, academia, business and government. Its fairly recent appearance in our vocabulary might suggest that knowledge transfer is a new and solely contemporary practice. Yet it has existed for many years. In fact, the field emerged after the Second World War, when it became possible to conduct research outside academia: particularly, in businesses. Applied use of scientific research became accepted practice; the notion that research existed not only to advance pure knowledge but also to solve concrete problems and serve economic objectives gained credence. In this new paradigm, it became important to build bridges between researchers (producers of scientific knowledge)[16] and social actors who use research findings (users).

Since the mid-twentieth century, knowledge sharing has been referred to by other terms: research promotion, knowledge distribution, knowledge dissemination, knowledge translation, program deployment, knowledge exchange, and, especially, knowledge transfer.[17] Over the past fifteen years, the field appears to have reached a turning point in Canada. There is now a stronger political and social will to emphasize knowledge sharing in practice, not only in theory. This new emphasis is apparent in the current practice of offering researchers financial incentives to adopt knowledge sharing activities. It is not unusual for funding agencies to make it a prerequisite for grants that researchers develop a plan for knowledge sharing. This is true of major foundations and grant-giving agencies in Canada and elsewhere.[18] These organizations support knowledge producers and users. As such, they are key to ensuring awareness and application of knowledge sharing (Pyra, 2003).

Thus, knowledge transfer is presently enjoying a boom in the worlds of research and practice. There is considerable interest among producers of knowledge, and many say they take knowledge transfer into account in their research efforts. Still, the term knowledge transfer is not always clearly defined, and the field may suffer accordingly[19].

4.2.1.2 A field of research and practice

It is accepted in the literature that knowledge transfer encompasses all actions that encourage and lead to sharing between producers and users (Pyra, 2003). It is both a field of research and a field of practice. It is a field of research because knowledge transfer is a

[16] In this paper the word “researcher” is used in the same sense as the term “knowledge producer.” Both refer to anyone who conducts scientific research, whether it be in an academic environment or not.

[17] This is the most common term in the literature, and the one chosen for this document. We prefer, however, the term of "knowledge sharing," which seems to be gaining gradual acceptance and which implies a two-way and interactive relationship between producers and users of scientific knowledge.

[18] For example, the Canadian Health Services Research Foundation (CHSRF).

[19] Marie-Claire Laurendeau, interview, June 2005.

subject of study and analysis for researchers from different disciplines, including but not limited to administration and management, political science and nursing. One of the main subjects of investigation deals with barriers to the use of knowledge. This is because many studies have shown that much research data goes unused. Other research into knowledge transfer seeks to understand factors that influence the process of knowledge use (Rosenbaum, 2003). It is particularly challenging for researchers to define how certain variables influence the use of scientific data, specifically within the framework of policies adopted by decision-makers at all levels of government[20].

Knowledge transfer is also a practice. It can be understood as an array of strategies to transmit and disseminate research findings to individuals. There is considerable diversity and increasing complexity in these practices. For example, the concept of knowledge transfer is central to systematic literature reviews and to many collaborative centres and groups, which either transfer knowledge or support, and which coordinate the transfer (Kiefer, 2005; Rosenbaum, 2003; Pyra, 2003). Many researchers within the field of health promotion are also involved in rethinking the knowledge transfer process.

4.2.1.3 Developing relations between players

No sharing of knowledge is possible if the principal players do not enter into mutual contact. This relationship involves at least two types of actors:

1. Producers of scientific knowledge, generally from academia.
2. Users of scientific knowledge: citizens, professionals, managers, policy-makers and policy authors. Potential users of scientific knowledge are found at all organizational levels in public and para-public bodies; they work at local, regional, provincial, national and international levels, and have policy-based or intervention-based mandates. J. Lomas (cited in Pyra, 2003) identifies five main target groups of potential users: lawmakers (MPs, MLAs, and others.), managers, decision-makers at the clinical level, business leaders, and citizens. Each group has different needs and motives for using research results.

   In the field of public policy for health promotion, users tend to come from a small circle of professionals, managers, and policy-makers. Other categories of users are seldom described. Nonetheless, a review of the literature of other fields shows that users come from various interest groups, e.g., health and social service providers, and members of advocacy groups. Still another group of users are the informants and participants in research projects.
3. Finally, one other group of players may intervene in the relationship between researchers and users, mainly in order to facilitate the sharing process: knowledge brokers. These actors are the subject of much current discussion and study.

[20] Réjean Landry (2003) reviews many of these variables. He strongly criticizes the lack of an integrated approach; research to date tends to provide lists of indicators rather than a heuristic model.

Knowledge transfer research focuses on the meaning and direction of the relationship between the players. This relationship has been the subject of several research projects. While it is generally accepted that the concept refers to all actions that create and encourage sharing between producers and users (Pyra, 2003), there is less consensus on the finer shades of meaning. Some use the words "transfer," "sharing," or "translation" interchangeably because any definition necessarily involves a two-way exchange. Others limit "transfer" to a one-way, bottom-up approach, from the researcher to the user ("user push" approach). Two-way processes are designated by terms such as knowledge sharing or knowledge translation.[21] The term "knowledge sharing" seems especially appropriate here, although the two-way process remains an evolving ideal.

4.2.1.4 Objectives and strategies

Isabel Walter and co-authors (2003) list eight major interventions used in knowledge transfer, which correspond to eight distinct mechanisms. The authors review the entire spectrum of the field and organize the mechanisms as follows:

- **Dissemination** comprises strategies to present and circulate research findings in the form of written material (summaries, guides) or oral presentations (seminars, workshops, conferences). The aim is to modify knowledge and attitudes by persuading people of the value of the message (i.e. that it is scientifically based). As such, the purpose is to provide information. The recipients are clients who are concerned with professional development and wish to stay informed of new ideas in their field. The message may be tailored to potential users in several ways: by targeting the mailings, for instance, or by providing explicit recommendations. Research shows that decision-makers and managers consider summaries especially interesting when they provide factual data on relevant subjects (Pyra, 2003). Another approach is to distribute summaries of preliminary research findings through a deliberate "leaky release" process (for example, the L-I-N-K-S network in Saskatchewan).
- **Education** requires the more active participation of users. In addition to formal courses, interactive sessions and a variety of teaching approaches are favoured. As is the case above, the primary goal of this strategy is an increase in knowledge and understanding of research findings. Some have questioned the effectiveness of educational activities, which seek to change behaviours occurring within complex circumstances (Rosenbaum, 2003). Still, the need for training continues to be important for public health and population health researchers (Kiefer, 2005).
- **Social influence** is the ability to influence colleagues, the capacity to change norms and behaviours, and the possibility of acting as a role model. Often this requires persuasive arguments, in order to convince people of the relevance of research knowledge. A frequently used approach is to identify "champions" who are positive leaders in their communities and who have some influence with strategists and practitioners. Champions may also convey the message through discussion with peers and informal social

[21] Marie-Claire Laurendeau interview, June 2005.

consensus-building. The strategy is supported by social theories that hold that receptivity to change is greater when change respects community norms and values.

"Knowledge brokers" are actors who aim to create links between producers of research knowledge and users. Brokers help groups understand each other's goals and professional cultures. They are influential with decision-makers. The strategy of brokering is the subject of serious discussion and enquiry. It has been documented that knowledge brokers are becoming more numerous, and that they come from a number of milieus, including central brokering agencies, interest groups, and organizations (governmental, funding-related, educational and research).[22] Some researchers have questioned the important place brokers are accorded, considering that most experts agree that knowledge brokering is just one tool among many. There is also concern that more should be done to define the profession and assess its activities[23](Pyra, 2003).

- **Collaboration** implies strengthening the links between researchers, strategists and practitioners in order to improve the impact of research. Lack of interaction between researchers and users, or the poor quality of existing interaction, is reported to be a main cause of research underutilization. The greater the investment in mechanisms linking the two parties (informal contacts, committees, transmission of reports to non-academic organizations), the greater will be the use of knowledge (Landry, 2003). Other factors that determine the level of collaboration are the mechanisms for "improving the flow of information and ideas between researchers and potential users "(Walter, 2003, p.5). The objective is to encourage interactive encounters and exchanges that help break down barriers between different cultural backgrounds. Constructivist approaches postulate that previous knowledge and experience shape new knowledge. This highlights the importance of understanding how users assimilate knowledge and renegotiate it within their own contexts. Another area of interest is tacit user knowledge, which refers to how tacit (as opposed to explicit) knowledge enables users to incorporate research data in a way that leads them to acquiring new knowledge.
- **Incentives** encourage activities and practices that are influenced by research results. Incentives run the gamut from the intellectual satisfaction that comes from positive research outcomes to the material benefits and socio-professional advantage (enhanced professional status). The strategy of offering incentives is rooted in behavioural psychology (positive reinforcement for desired behaviours), but also borrows from economic models and theories of power.
- **Reinforcement** aims to influence users repeatedly, before, during and after a given behaviour, through the use of feedback, memory aids and audits.
- **Facilitation** supports and empowers users by providing assistance (financial, technical, organizational, emotional) to carry out research and to develop evidence-based policies or practices. Facilitation provides both the means to act and the means to avoid obstacles to action, often through training. This approach is most effective for complex procedures (Rosenbaum, 2003).

[22] People with other primary duties may occasionally function as knowledge brokers, e.g., scientific journalists.

[23] Their interventions are being assessed by the CHSRF (Pyra, 2003).

- **"Multifaceted" initiatives** employ approaches that combine the above mechanisms.

4.2.2 Knowledge transfer in the decision-making process

Many authors focus on the place of knowledge transfer in the decision-making process and on identifying the appropriate stages for integrating knowledge. They do this in two ways: by examining the operation itself and by observing the process from the point of view of the user.

4.2.2.1 Study of the purposes of knowledge use

Knowledge transfer research is concerned with the desired effects of knowledge sharing. These effects are directly associated with particular strategies for dissemination (Walter, 2003). Work on this issue has focused primarily on understanding the purposes of knowledge use. Researchers have sought to characterize information use in terms of goals. Their conclusions:

- Research results may be used instrumentally, i.e. through the direct use of research data. This use is infrequent, especially in the public sector (Caplan & Dunn, cited in Landry, 2003).
- Research results are more often used for symbolic purposes, to support or uphold a decision, practice or policy.
- Research results are commonly used for purposes that might be called conceptual. That is, research provides a conceptual foundation that allows users to consider different possible alternatives before making a decision (Landry, 2003).

4.2.2.2 Factors influencing knowledge use

There have been many analyses of knowledge use and non-use by decision-makers at all levels. Use is closely related to the way decisions are made, and to organizational realities. Researchers cite different cultural factors to explain how knowledge is used. Links between the worlds of research and decision-making are also considered.

4.2.2.3 Decision-making models

According to Réjean Landry (2003), the subject of how policy decisions are made has motivated much research on knowledge transfer. He classifies this body of research into two subgroups: those that employ mechanical theories ("engineering explanations") and those that refer to socio-organizational frameworks. “Engineering explanations” hold that research in government services is produced and considered in a linear fashion. For advocates of this model, academic research is the source of new government services, or of improvement to services. Some researchers define knowledge transfer as one of the stages of decision-making; they take an instrumental view. This postulate is not borne out, however, because decision-making is not always linear or Cartesian. In opposition to the mechanical explanation, more and more research suggests that knowledge use is not a single stage or event that may be analyzed in isolation, but rather an approach that recurs at several stages

of the decision-making process. Such a dynamic depicts knowledge transfer as a comprehensive process. It lends itself to policy-making models (see box). A large portion of knowledge transfer research deals with the nature and complexity of the policy-making process (Pyra, 2003).

Models of decision-making

- Before 1945: bureaucratic and economic rationality predominates. Authors note the existence of clear goals, the definition of all possible options before making a choice, and the gathering of all information needed to inform this choice. It is assumed that decision-makers choose the best option available to reach their objectives.

- For Simon (1945), decision-making is a non-systematic process, yet accomplished by human reason. Decisions reflect a search for satisfaction. This implies maintenance of organizational routine, resistance to change, and the choice of a known and acceptable solution. Context exerts a strong influence.

- Lindblom (1959) presents the decision-making process as a “muddling through.” The approach is an incremental one, with small successive steps, that above all seeks to cope with crises.

- Other researchers influenced by materialism (Crozier 1964; Petticrew 1973; Allison 1971) consider the decision-making process to be a power play among interest groups for control of resources. Groups seek to arrive at a decision to suit their own purposes; information is manipulated accordingly.

- March and Cohen (1972) refine the postulate of limited rationality and see decision-making as social and political interaction in which the decision-makers are limited in the face of complexity and uncertainties. “Organized chaos” and “garbage can” are metaphors for this view of decision-making. An accidental merging of variables (concerns, solutions, participants, opportunities) ultimately leads to a decision.

- Mintzberg (1976) argues that intuition is a decision-making variable with as much influence as analysis and political negotiation. He is criticized by Simon, for whom intuition does not exist. Simon speaks of decision-making "habitus": analyses that are petrified in habits. Simon allows that such analyses hold an important place in decision-making and may even improve the process.

- Klein (1993) has renewed interest in intuition. From a naturalist standpoint, he places intuition within context and defines it as recognition of patterns in familiar situations. For Klein, pattern recognition defines the competence of decision-makers and separates the wheat from the chaff: experts are the people who can recognize the patterns and proceed by inductive reasoning.

Source : Champagne (2005)

With the advent of modelling, research has focused on factors that influence decision-making. Most authors note that scientific study is but one of many factors that influence decision-making. Some dwell on the differences and contrasts between the world of researchers and that of decision-makers. Many list criteria that are key to the chances of scientific work being used. These may include an array of "facilitating" measures for the knowledge transfer process. Even though the measures appear to vary from one study to the next and from one context to another, all aim to ensure high-quality, relevant, and usable data. However, a number of authors note that more development and investment is needed to adapt the research output and to promote sound practices (Kiefer, 2005; Landry, 2003; Pyra, 2003; Rosenbaum, 2003).

4.2.2.4 Organisational influence

Studies reveal decision-making to be a world of competing interests. When they examine decision-making processes empirically, researchers find that decision-makers do seek the best research evidence possible when they develop policies, but that research evidence is just one consideration among others. Other variables come into play (Rosenbaum, 2003; Pyra, 2003; Champagne, 2005). The significance of research in the decision-making process is shaped by factors such as context, economic resources, power relationships among the interested parties, political feasibility, capacity for implementation, and social values. External influences that affect decision-makers include customs, laws and other constraints. Also, public opinion, the media, consultants, peers, and even immediate family may exert influence. Factors such as personal experience, judgment and intuition are highly prized in certain fields of decision-making.

Characteristics specific to the environment in which a decision-maker operates, such as organizational structure and size, particular field of public policy, position in the organization, and role of the user, may determine a decision-maker's interest in research. Resistance to change and poor research-assessment skills are other limits on a decision-maker's ability to incorporate research into policy decisions. It is important to understand how professionals and managers from different milieus and organizational levels use research in their professional activities (Landry, 2003). However, it is arduous to develop a theory on the subject. The factors involved are too situation-specific and difficult to unify into a general theory of knowledge use.

4.2.2.5 Differences between the research community and the user community

The literature points to contrasts between the worlds of researchers and decision-makers (Pyra, 2003; Rosenbaum, 2003) and to the fact that these differences are poorly understood. This explains, in part, the challenges involved in making effective use of knowledge. In particular, researchers often fail to understand how the two communities differ in organizational culture and in the personal characteristics of the professionals who work in them. Other differences include objectives, norms, values, and several basic elements:

- **Time:** The worlds of research and decision-making operate according to different notions of time. Research projects and other activities such as systematic reviews are scheduled

over relatively long time periods. Decision-making often takes place over shorter amounts of time. One reason for this may be the pressure to arrive at a decision.

- Research shows that if data are unavailable when a decision is to be made, the decision-maker will proceed anyway[24]. Lack of time to consult research findings and to adapt research is perceived to be the most important barrier to knowledge transfer, by both researchers and users. It is strongly recommended that material be produced with user time constraints in mind; keeping key messages clear and direct helps.
- **Style and language of communication:** The uninitiated do not easily understand the technical and specialized language that researchers use to communicate with their colleagues. Furthermore, academic journals and conferences, which are common means of communication among researchers, are not accessible to decision-makers; consequently, they not a preferred means of accessing knowledge (Landry, 2003). Academic journals are particularly inappropriate for decision-makers because of the form, content, and mode of distribution. Forms of communication that are more successful with decision-makers are short summaries, government reports, written and electronic media, and opinion surveys. Thus, work is needed on several fronts: to develop an attractive medium for users and to make research findings easier to read and understand.
- **Information goals:** The two groups do not have the same objectives. Decision-makers may actually care little about the advancement of knowledge. They do care about different positions on an issue; they need to be certain that political or ideological positions are not based entirely on biased data. Often, decision-makers are interested in data on feasibility and implementation. (Landry, 2003). Researchers are concerned that their work strictly adheres to scientific rules, such as the reliability and validity of data. This is not the main concern of decision-makers: "Researchers focus on excellence […] and decision-makers focus on relevance" (Frenk, cited in Pyra, 2003, p. 8). The difference leads to tension. Also it points to a problem: researchers may not understand how to formulate research questions (and answers) that grab the attention of strategists and policy-makers. This is a serious problem because current practice in knowledge transfer is limited by availability of relevant research. To improve transfer, Réjean Landry (2003) identifies the need for more specific and operationalizable conclusions and recommendations, including intervention proposals. All experts stress the importance of considering the needs of users and developing a means to integrate them in the research process (i.e. by having users help produce or revise knowledge products). Another recommendation is for better standards and methodologies, to ensure that information is scientifically rigorous and, at the same time, meets the needs of users regarding format and time constraints.

  The situation may be improving. According to Landry (2003), a large proportion of professionals and managers who work in government report that they are receiving more relevant research data than in the past. They say that research influences their decisions more often than is recognized, especially in the fields of health care and social services.

[24] The CHSRF suggests providing information for decision-making according to an agenda that is specific to the decision-maker: same day, three weeks, or 12 to 18 months (Laurendeau ,2004).

- **Work environment:** Many researchers conclude that a useful strategy would be to define the world of users more systematically; for example, by defining the context of their work. It is important to identify the most appropriate targets for knowledge dissemination (i.e. policy analysts rather than policy-makers). It is also crucial to understand the contexts for decision-making and policy processes.

In sum, it is important to note that considering user needs, alone, in order to increase research use is not sufficient. Empirical research has shown that relevance and good timing have a greater effect on the likelihood that research will be used than other factors. It is essential to target the information to the appropriate users, to carefully select ideas and findings, and to deliver the information with sensitivity to users' needs and resources, abilities, and contexts (Rosenbaum, 2003).

4.2.2.6 Interaction between researchers and users

Because there are significant cultural differences between the research and user communities, it is crucial to develop constructive relationships between the two. A constructive relationship tends to strengthen commitment and trust between the parties. Experts have suggested that we give up the traditional dissemination model (the "push" model) in favour of interactive, political, strategic, tactical or conceptual models (Champagne, 2005). Some researchers propose paying more attention to producer/user relations and to the context in which the relations develop at all stages of knowledge production, dissemination and use.

It is generally accepted that the lack of interaction between researchers and users is the main source of research underutilization. Sometimes, existing relationships between the two groups leave much to be desired, with interactions tending to be haphazard rather than organized according to the needs of each party. Current data indicate that the greater the investment in mechanisms linking the parties (informal contacts, committees, transmission to non-academic organizations), the greater the chance that knowledge will be used. Reviews of the literature demonstrate that the best approaches involve direct personal contact, and sustained relations between users and researchers. Furthermore, when a number of mechanisms are employed, efforts are reinforced and results are better (CHSRF, cited in Rosenbaum, 2003; Pyra, 2003). For François Champagne (2005), the most important aspect of the relationship is that it brings a scientific mindset to decision-making; activities such as questioning, critiquing, seeking to understand, experimenting, and observing limits of knowledge are the methods of science. Strategies to this end include:

- involvement of decision-makers in research at all stages of producing, preparing, and disseminating findings;
- inclusion of decision-makers on advisory committees of research bodies;
- face-to-face encounters;
- joint seminars or workshops;
- networks; and
- development of the users' capacities to conduct their own literature searches.

According to Réjean Landry, there are three key activities that are necessary to effective knowledge transfer. In fact, Landry claims that, taken together, these activities are more effective at increasing knowledge use than efforts to highlight the advancement of theoretical research or intrinsic characteristics of the research product (Landry, 2003). First, there must be concrete initiatives to encourage interaction between users and producers of knowledge. Second, efforts must be made to meet with the users and document their needs and interests. Finally, efforts to provide the users with training and support for their information gathering ("training to be better informed") will guarantee better knowledge transfer.

4.2.3 Variety of mechanisms and interventions

It is not enough to improve the quality and availability of factual data. Explicit strategies are needed to ensure that research has a real impact on policy and practice (Walter, 2003). As well, it is important to understand that a multitude of approaches are required and that a single approach or single means of knowledge transfer is not enough (Pyra, 2003, p. 10). A variety of approaches has been developed according to the needs, contexts, objectives, desired impacts and scope of research projects.

The literature does not provide a thorough taxonomy of modes of intervention employed in knowledge transfer. The EPOC (Effective Practice and Organisation of Care) group of Collaboration Cochrane has developed a classification of possible interventions based on the group's themes. Another taxonomy, which is available to several sectors, has been developed by the Research Unit for Research Use (RURU) at the University of St. Andrews (Walter, 2003). These two taxonomies are useful tools to aid understanding and help develop better interventions. Although the systems describe rigid and closed categories (when the realities are often more complex), they should be understood and used with flexibility. The systems serve to classify the diversity of knowledge transfer interventions. Ultimately, such interventions are as many and as varied as the imagination of their designers.

Discussion has focused on the advantages and limits of each of the different approaches. It should be added, however, that although the value of each strategy is judged in and of itself in the literature, many authors warn against analysis that does not consider context. The choice of appropriate strategy depends very much on contextual variables.

In a survey of managers and decision-makers in different health care organizations, Rosenbaum and co-authors (2003) ranked interventions in terms of respondents' preferred means of receiving information. Among the most appreciated sources of information were conferences and workshops, short summaries, direct communication from colleagues, and professional health care journals. Websites, newsletters and, especially, mass mailings trailed far behind. Overall, the preferred means of communication were executive summaries (53.2%) and abstracts (17.4%).

4.2.4 Shortcomings of research

Many researchers have called attention to current gaps in the field:

4.2.4.1 Problems in knowledge transfer efforts

Recent research has painted a mixed picture of the field of knowledge transfer. Authors suggest that the predominance of conventional research methodologies, such as systematic reviews of the literature, are not conducive to knowledge transfer because of the time and skill involved in assessing these products. Furthermore, the volume of information is too large for user capacities and needs, and it is of variable quality. Finally, too much knowledge output is inspired by a conventional transfer model ("push") and does not aim to establish real sharing or true dialogue between researchers and users.

4.2.4.2 Gaps in research on knowledge use.

There is still no valid and accepted method for measuring research use. As such, some writers deplore the lack of information on factors that determine whether professionals and managers use academic research. Many researchers also mention the lack of information available for modelling efficient transfer strategies. Frequently, writers mention the lack of research and data on the contexts in which different groups use strategies. Some writers deplore both the small number of qualitative research efforts and the fact that little research occurs in contexts outside clinical practice (Laurendeau, 2004).

Réjean Landry discusses various conceptual frameworks of knowledge transfer (Landry, 2003). He points out that many attempts have been made to develop such conceptual models, but that each model focuses on a single variant. He laments that there have not been further efforts to develop an integrated conceptual model. He also notes that the limited number of case studies prevents cumulative advancement of knowledge on all stages of use.

Some question the methodology of research into knowledge transfer. Sample composition makes generalization difficult, because samples often consist of a single field, a single organization, or a single organizational level. These dimensions "represent important variations in the types of needs of research and the magnitude of use of research" (Mandell & Sauter, quoted in Landry, 2003, p. 193). Similarly, the term "use" does not always have the same meaning in all research projects and it becomes difficult to review and summarize the literature. There are also limits to retrospective research that asks decision-makers to explain how a study influenced decision-making. Such research design lends itself to biases, as it relies on the memory, often incomplete, of informants, and does not correspond to the reality of knowledge use[25].

[25] It is preferable to ask users for descriptions of their standard practices (Landry, 2003).

4.2.4.3 Lack of strategy assessment

At present, knowledge transfer practices are seriously limited when it comes to assessing strategies used, their effectiveness and the application and impacts of knowledge transfer (Kiefer, 2005; Rosenbaum, 2003; Landry, 2003; Marie-Claire Laurendeau[26]; John Lavis[27]). To date, only a few models have been developed to assess knowledge transfer strategies[28] and, with a few exceptions, the effectiveness of the tools has not been evaluated. Thus, there is a lack of factual data on strategy benefits and knowledge use outcomes at both the scientific and the political levels, such as the political agenda, the processes of policy development and policy implementation (Pyra, 2003). The field remains to be developed.

4.2.4.4 Lack of resources

Finally, knowledge transfer usually takes place in the context of academic research (Rosenbaum, 2003). The literature increasingly mentions shortcomings in the academic milieu, where insufficient time and resources are allocated to knowledge transfer activities. It is a challenge for researchers to produce material for non-academics, since this kind of activity is relatively little rewarded in academia. Funding remains inadequate; some authors recommend subsidizing knowledge transfer in the same way that knowledge production is subsidized. There are also calls for greater investment in activities to make the user context more receptive to academic research, especially by demonstrating the relevance and validity of research efforts in specific fields of practice (Landry, 2003).

4.2.4.5 Ethical questions

The subject of knowledge transfer also raises several ethical questions[29]:

- When should knowledge be transferred? Is it acceptable to transfer preliminary research findings[30]? Should results be transferred even when data is insufficient?
- Is there a need for more balance among different fields of study, in order to ensure that decision-makers take a comprehensive view of health? Is a new approach needed, one that requires a full appraisal of related subjects and disseminated (and non-disseminated) knowledge?
- What criteria are used when deciding which research should be disseminated and which should not?

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[26] Interview, June 2005.

[27] Interview, November 2005.

[28] The Australian Biosecurity Cooperative Research Center has developed tools, with quantitative and qualitative perspectives.

[29] Although the articles we consulted do not directly raise questions about ethics, the subject was raised by Marie-Claire Laurendeau in interviews, May 2005.

[30] For example, the L-I-N-K-S network in Saskatchewan.

- How can real knowledge sharing be established between researchers and users, and what status should be given to the information that results from this process?

4.3 CONCLUSION

With respect to public policy, the literature on knowledge sharing informs readers of the best possible conditions to ensure that health data and studies are considered. This field seeks to understand the realities of the worlds of research and decision-making and to foster the creation of interactive links between the two.

Knowledge transfer has been the subject of interest for many years. Nonetheless, this knowledge synthesis suggests that much remains to be done in terms of identifying the best strategies and deciding when to use them. It is essential to consider context and to take into account the interests and capacities of both knowledge producers and users. The main topics relating to knowledge transfer have been described and may provide an informed basis for action.

CHAPTER 5 HEALTH RISK ASSESSMENT: A LITERATURE REVIEW

This chapter, written by Geneviève Brisson in April 2006, focuses on the health risks that may be modified through public policy measures. It examines various definitions and components of risk assessment. Furthermore, it discusses how risk assessment is related to other fields that affect healthy public policy.

5.1 INTRODUCTION

The National Collaborating Centre for Healthy Public Policy recognizes the importance of providing decision-makers with the information they need so that the public policies they develop and implement do not compromise health. This involves supplying them with information about health problems and risks. Risk assessment is one way of doing so. In addition to scientific data on risk, other useful information includes an analysis of the political context and of the various policy-making instruments available. Also, it is necessary to consider the possible impacts of different policies and courses of action; in other words, to assess the health impacts of policy decisions. This is true for all areas of public policy, not only the health sector. In the effort to better understand this field, this literature review aims to describe the field of risk analysis using a methodology identical to that of the preceeding chapter of this *Environmental Scan*[31].

5.2 HEALTH RISK ASSESSMENT

Risk assessment is an accepted means for conceptualizing health-promoting public policies (Turgeon, 2005). While acknowledging that health risks may be modified by a variety of factors, this text focuses especially on health risks that may be modified through public policy measures. First, the paper examines various definitions and components of risk assessment. Next, it discusses how risk assessment is related to other fields that affect health-promoting public policies.

In his literature review, Turgeon (2005) discusses theoretical frameworks that might contribute to the creation of comprehensive methods to manage decision-making on public health risks. Most of the texts discussed by this author are written by public health officials from Quebec, Canada, and from the United States. These practitioners work in the field of environmental and toxicological risks, where risk is associated with biological factors and where effects are clearly delimited in time and space. A document produced by the World Health Organization (WHO) has a different premise: it attempts to identify health risks through an epidemiological approach and addresses causal factors by examining various risks existing in social contexts. Despite the difference in perspectives, the WHO document

[31] This literature review took place in two phases. The first phase consisted of a review of several texts that risk management specialists consider mandatory reading, accompanied by a series of interviews with specialists. The primary purpose of this phase was to identify current knowledge gaps and issues. In the second phase, the author read recent texts, reports and scientific articles suggested by the specialists. The texts provided definitions, methodologies, research gaps and issues, principal points of discussion, and links to other conceptual fields.

has many similarities with the other papers. Whereas most documents focus on specific risk factors (in order to manage them more effectively), the WHO report has a broader scope, and tries to describe a number of major risks to health. This difference in approach will be expanded upon in the following pages.

5.2.1 Understanding the concepts

5.2.1.1 Defining health risk

Over the past twenty years, health risk has become an increasingly important social and theoretical concern, as the literature on the subject shows. Risk can be defined in different ways. Initially, it was defined as a probability: a "concept used to give a meaning to some thing, force, or circumstance that represents a danger to people or that they consider important; the representation of a risk is made in terms of probability" (MSSS, 2002, p.30). All people are exposed to risks, but some more than others; people living in poverty have the most exposure to risk (WHO, 2002).

If we examine in more detail how the concept of risk is operationalised in the health field, four principal definitions emerge:

- a probability of adverse outcomes in specific circumstances;
- a factor that raises this probability;
- a consequence; or
- a potential adversity or threat.

The term “risk” does not mean the same thing to public health professionals and researchers. The meaning seems to depend on the methodological approach favoured by the practitioner and the context within which he or she works. Researchers who use an epidemiological approach consider risk as it relates to causes. Environmental health and toxicology professionals are more interested in risk in terms of effects. These variants define health risks.[32]

The environmental health documents we consulted focus particularly on one specific aspect of risk: a particular *hazard, agent,* or *event*, that may be delimited in time and space, but which may be cumulative (MSSS, 2002). The Presidential/Congressional Commission on Risk Assessment and Risk Management (1997) specifies that “risk results from the combination of two factors: the probability of the occurrence of an adverse event and its consequences" (MSSS, 2002, p.30). This definition is similar to other definitions employed by practitioners in Canada and Quebec. The WHO report has a broader perspective, considering an array of factors while basing this approach on the notion of risk, as understood in epidemiology. This means that the WHO would not only like to identify risks due to specific problems, but also those that might be preventable through measures, possibly at the government level. The WHO also suggests looking beyond health problems

[32] Unless otherwise specified, the idea that risk is linked to health will be implicit in this text.

when determining risk. This approach leads the organization to define risk in terms of the probability of an adverse health outcome or a factor that raises this probability (WHO, 2002, p.1). The WHO focuses on risk factors that have potential global impact, display a high likelihood of causality, are modifiable (via different human interventions at various levels), are neither too specific nor too general, and have reasonably complete data on distribution and disease relationship (WHO, 2002, p.20). The organization's position is that priority should be given to health risks[33] that are "well-known, common, substantial and widespread, and for which effective and acceptable risk reduction strategies are available" (WHO, 2002, p.11).

5.2.1.2 Defining health risk assessment

A report published in 2002 by the *Ministère de la santé et services sociaux du Québec* (MSSS), Quebec's Ministry of Health and Social Services points to the language problem associated with the concept of risk assessment. The English term "risk assessment" is increasingly translated as *analyse de risque*, especially in the area of food safety. Quebec's Ministry of the Environment uses the term *estimation du risque*, reserving the term *évaluation du risque* for a value judgment of risk acceptability. In public health circles, the term *appréciation du risque* is also used. The MSSS, Health Canada and the INSPQ have agreed to standardize their terminology by using the term *évaluation du risque* (or *évaluation des risques*).

The concept of risk assessment appears to have developed within the field of toxicology and the study of environmental problems. Assessment of risk began with different activities to identify, quantify, and characterize threats to health and the environment. The discipline has since evolved. A conceptual framework seems to be used, almost without exception, to assess risk in North American public health documents. In the sources consulted from Quebec and from the rest of Canada, risk assessment is undertaken in order to estimate, qualitatively and quantitatively, the probability of suffering adverse effects and the seriousness of health impacts due to a hazardous agent or situation. Risk is identified in relation to causes, such as exposure to specific hazards or absence of factors that positively affect health (INSPQ, 2003).

The World Health Organization bases its definition of risk assessment on epidemiology. Through analogies with assessment of environmental risks, it established methods "for assessing population-attributable risks, that is, the proportion of disease in a population that results from a particular hazard" (WHO, 2002, p.10). The WHO expects that this methodology could be used in many other fields. For the organization, assessment is presented as "a systematic approach to estimating the burden of disease and injury due to different risks" (WHO, 2002, p.4).

[33] The WHO also calls them "risk factors", but they seem to correspond to the "risks" in other reports consulted. We will examine this point later in the text.

5.2.1.3 Risk assessment and risk management

It is now generally understood that there are three components to risk management: risk research, risk assessment and risk management activities. This was not always the case. Risk assessment was once considered to be an independent field.

Prior to the 1990s, risk assessment was approached as a purely scientific stage, immune to external influences and thus cut off from the political, economic, and social considerations that belonged to the management field (MSSS, 2002). Many critics disagreed with this conceptual division and held the view that science is not exempt from the influences of the society in which it operates. They observed that the practice of risk assessment includes taking account of players and integrating broader risk management objectives, which necessarily affect the assessment in approach and scope. As the MSSS report notes, it is important not to create the impression "of an assessment that is free of all political constraint or value-free, which would be false" (MSSS, 2002, p.54).

Indeed, there has been a reconsideration of the traditional division between risk assessment and risk management. In a number of countries, the term "risk management" now encompasses the entire process. This is the case in the North American documents consulted. In these documents, risk management includes pre-decision-making stages, such as problem contextualization and risk assessment. It integrates the scientific stages of risk management with traditional considerations of management, i.e., consideration of issues of a political, social, cultural, ethical, legal, economic or technological nature (MSSS, 2002).

The WHO report does not completely follow this train of thought. It maintains the distinction between risk management and risk assessment (which it also calls "risk analysis"). The organization makes this distinction because it does not take direct risk factors into account, but only indirect or external ones. Political considerations also motivate their choice of words: the WHO knows that it cannot implement actions or interventions, which are the responsibility of member states (this is often true for risk management, as we will see in a later section). WHO does not deny that important political considerations are involved in risk assessment; it views assessment as a factor occurring within a larger process.

5.2.2 Risk assessment process

5.2.2.1 Frames of reference for risk management

Frames of reference exemplify an inclusive approach to risk management. They meet a specific health need, that of adopting a comprehensive perspective on risks and thereby making interventions more effective, e.g., by reducing unexpected adverse effects. In general, such frames of reference apply outside emergency situations, for which another protocol is used. As the MSSS notes, these management frameworks are ideals, and are at times technically and culturally distant from public health officials.

In risk management, public health officials are frequently asked for their opinions concerning topics such as the extent of risks, the means to reduce risks, and the means to protect health. Officials may come from various fields, but try to generalize risk assessment by using

a common language that goes beyond differences in methods and objectives. This approach recognizes the importance of examining risks in a public health context and of being sure to target the most important risks. Also, the MSSS highlights the limits to harmonization. It is particularly important to remember that goals, resources, contexts, methods, and even data type and data quality may vary according to the type of risk. Also, a number of authorities believe that frameworks should remain flexible, serving as guidelines rather than as rigid institutional rules.

During the 1980s there was a significant increase in the number of identified risks. In response, the United States designed an integrated framework for risk assessment, in order to support decision-making. Canada, the Quebec public health sector, and MSSS managers of toxicological risks followed, defining their own models based on the American approach. All frameworks propose a structured and systematic population-based approach to health. They also involve a succession of stages organized in an interrelated and non-linear way (e.g., Figures 3 and 4), despite being represented by a variety of designs (Shortreed et al., 2003). All aim for a comprehensive approach to decision-making, in order to protect health. The process is ongoing; it is receptive to new information and risk-related decisions. It also meets the need for coordination and adaptation mechanisms. Solutions are to be dealt with intersectorially. It is noteworthy that, even though it is the preferred approach, this process is only beginning to be implemented (MSSS, 2002).

The frameworks have many similarities. The Quebec framework focuses on physical risks and infectious diseases. In Canada, the framework adopts a more administrative language. Apart from these differences, the following stages are found in all management frameworks:

- **Defining the problem and its context:** Initiated by a diagnosis or a perception, this early stage attempts to identify and characterize the health problem, and then analyze it within its context. This stage also includes assessing the emergency, identifying the risk managers concerned, and determining risk management objectives. Also at this time the different outlooks and concerns (of the public and the experts) are identified, and a process of public participation is planned.
- **Assessing the risk:** This stage involves assessing the reliability of data and the hypotheses defining the problem. In short, the aim of this stage is to identify the danger, to describe it, and to identify the populations at risk. Next, the causal relation between the danger and the effect on health is quantified and/or qualified, as well as the probability and magnitude of the exposure. The risk is then estimated by cross-tabulating the data and assessing the weight of the evidence. Uncertainties and perceptions of different groups are documented, and finally the risk is defined from a comprehensive standpoint.

  Health Canada has added a risk/benefit comparison that operates from a societal standpoint. The department's approach is one of ongoing risk management, with efforts to modify conditions as necessary.

- **Identifying and examining risk management options:** Specific objectives for reducing risk factors and/or indirect causes are stated. The appropriate options to achieve these objectives are documented, including a cost/benefit analysis. The following variables are considered: existing laws and policies, social acceptability of the risk, perceptions, values, and concerns of the people affected.

  Health Canada presents the following options to mitigate risk: regulations, national guidelines, consciousness-raising and counselling, conscious action, economic approaches, technological approaches, and hands-off approaches. These choices are closely associated with policy instruments.

- **Choosing the management strategy:** Administrative and political decision-makers choose one or more solutions—those deemed most appropriate to prevent and reduce risks. Health Canada also applies the precautionary principle here.

- **Implementing interventions:** When interventions fall within his or her jurisdiction, the risk manager plans, and then applies the actions in a coordinated manner. When they fall outside his jurisdiction, other decision-making and political authorities are responsible.

  At this stage, communication activities that affect different sectors must be carefully coordinated.

- **Assessing the process and interventions:** Effectiveness of the actions is reviewed in relation to their objectives (outcomes, other benefits, costs). A monitoring mechanism is usually set up for this purpose. One must determine when it operates and what form it will take. Results of the monitoring may lead to a readjustment of the process. Health Canada adds a mechanism to monitor execution of the action plan.

- **Communicating risks/Getting concerned parties involved:** This theme is central to the process and comes into play at every stage. Quebec's public health frame of reference places communication at the middle of a circle (INSPQ, 2003); other agencies and authorities prefer to include communication in the larger process of community involvement, where communication is implicit in social acceptability and informed decision-making.

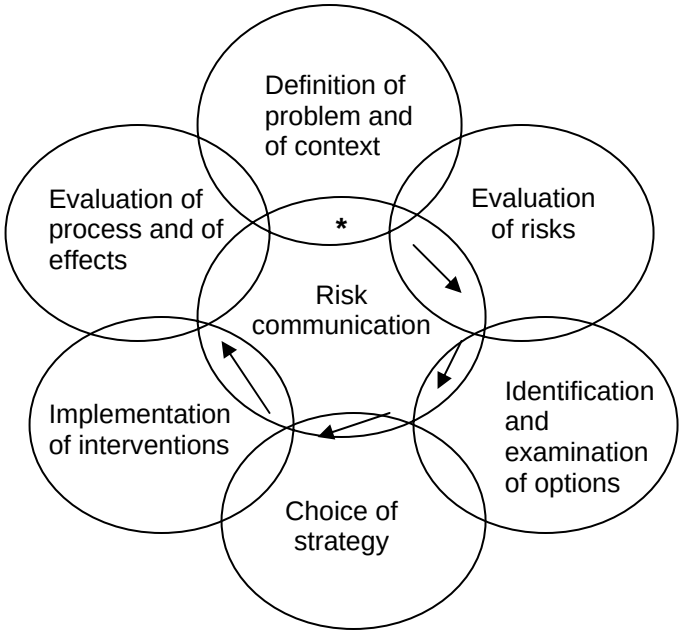


Figure 2 Risk management framework, inspired by Health Canada (INSPQ, 2003, p.3)

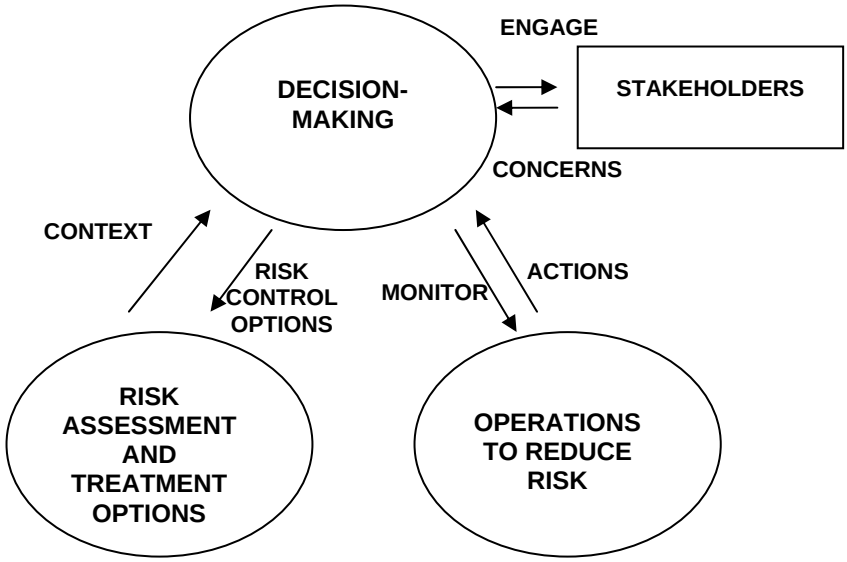
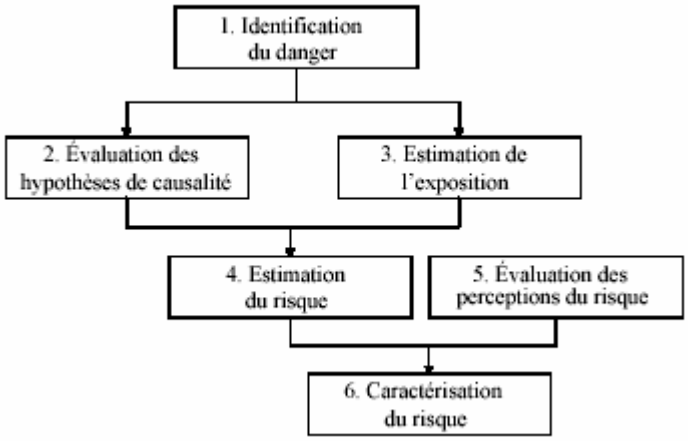


Figure 3 Risk management framework, NERAM (Shortreed et al., 2003)

Note that the conceptual frameworks are similar to decision-making models in management (Shortreed et al. 2003). This similarity may make public sector managers more receptive to the risk management framework. As we will later see, these models aim to support the decision-making process of policy-makers by providing an estimate of the probability that measures will produce a favourable or unfavourable health impact.

5.2.2.2 Updating causes and factors related to health risk

Risk assessment is a fundamental scientific stage within an overall framework for managing risk. It consists of a rigorous scientific process that aims to estimate actual risks. To do this, researchers analyze data in support of different hypotheses and conclusions, and compare results. They are then able to supply policy experts and public health officials with the scientific information they need to make risk-related decisions. Risk assessment may be viewed as a sequence of stages, each depending upon a number of factors. In describing risk assessment related to environmental health, the stages can be diagrammed as follows:



1. **Identifying the danger**
2. **Assessing hypotheses of causality**
3. **Estimating exposure**
4. **Estimating risk**
5. **Assessing risk perceptions**
6. **Characterizing the risk**

Figure 4 Stages of risk assessment (INSPQ, 2003, p.9)

While the World Health Organization (below) uses a different schematic picture to represent each phase, the following stages of activity are common to all of the documents we consulted:

1. Documentation of a situation or a factor (agent) that may carry a risk to public health. Also, description of the ways people might be exposed to the risk, the effects, and the populations affected.

2. Description of the impact on health, documentation of how and when adverse effects may occur. Seriousness, incidence, and dose/response curve are all considered and often expressed in reference values. This is a key point in time, when recognized scientific parameters come into the picture. For the WHO, it is ideal to use common or standardized measurement units.
3. Measurement of exposure to the risk, calculation of what is happening in a given situation or estimation on the basis of other known situations. In its calculations, the WHO pays special attention to poverty as a risk factor.

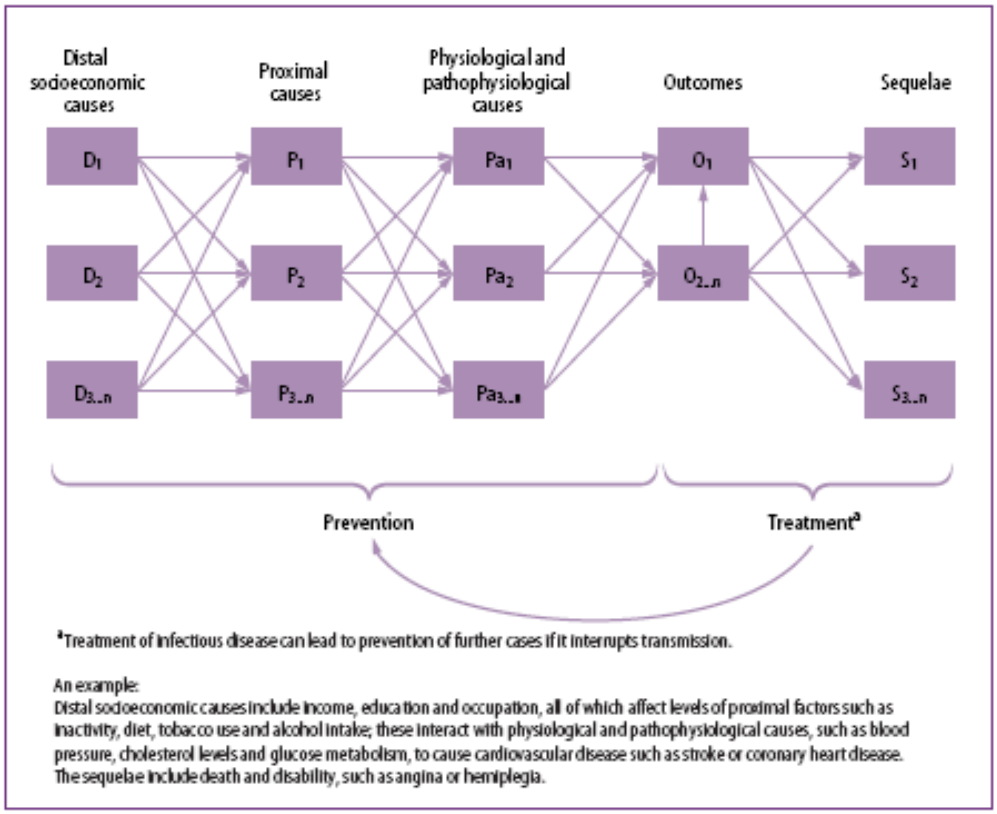


Figure 5 Causal chains of exposure leading to disease (WHO, 2002, p.14)

By establishing how factors relate to each other, it becomes possible to assess risk and to establish both the uncertainty and the probability that a particular population will be affected. Many organizations add a search for other factors "where this information is demonstrated to have an impact on the level of risk" (Health Canada, 2000, p.27).

This involves:

- Taking the causes of risk into account, most often called "factors"[34] (Health Canada, 2000; MSSS, 2002; WHO, 2002). Some risks are associated with immediate causes and others with intermediate and more distal causes (socio-economic). The causal chain may stretch over a number of years and extend to more general socio-economic determinants (Figures 4).
- Assessing protective and harmful factors that play a role in the risk (see preceding note) (WHO, 2002).
- Looking for information on risk perception and the level of social acceptance (Health Canada, 2000; MSSS, 2002; WHO, 2002).
- Assessing general knowledge that the population has about the subject, as well as specific knowledge.

Finally, the Health Canada document prescribes ongoing risk management. The ministry compares risks and benefits, something that other organizations consulted fail to do.

5.2.2.3 Identifying and examining the options

Because of the connection to public policy, an important stage in the risk management cycle, which takes place after the initial risk assessment, is to identify and examine options to reduce or even prevent risk. The Presidential/Congressional Commission and the INSPQ mention that it is not necessary to await completion of the risk assessment stage before going ahead with this analysis, even though risk assessment may help identify options. The order can even be reversed and "in some cases, examining risk management options may help refine a risk analysis" (Presidential[…], 1997, p. 29). Therefore, it is essential to define the problem appropriately.

The documents we consulted do not all include this exploration of options; some papers are focused solely on risk assessment. This is the case in documents prepared by the WHO (2002), Health Canada (2000), INSPQ (2003) and the Presidential/Congressional Commission on Risk Assessment (1997). These papers define this activity as "identifying and analysing potential options to prevent or reduce the risk of concern, and making recommendations regarding the preferred option(s)" (Health Canada, 2000, p.40). According to the INSPQ management framework, options may be assessed in relation to more specific objectives, which may, in some situations, be formulated in terms of indirect indicators (INSPQ, 2003, p. 9).

[34] There is a certain ambiguity concerning the word *factor* in the WHO report in relation to the other documents consulted. Since the WHO targets "health risks" from a comprehensive standpoint (e.g., morbidity risks), the risk factors are those which, in other reports, are described as risks in and of themselves (e.g., cardiovascular illnesses, smoking).

First**,** it is necessary to determine exactly what options exist. Everyone agrees that it is best to study a variety of options (when circumstances allow).[35] These may include regulatory options, non-regulatory options, and hands-off responses. Health Canada summarizes certain possibilities, which may be considered to be different theories on the classification of policy-making instruments and measurements[36] (Figure 6).

Options for Risk Management	
Regulation	Direct regulation involves the enforcement of requirements stated in legislation. Self-regulation involves allowing parties that produce the risk (risk producers) to create mechanisms to ensure that regulated processes or products conform to legislated requirements. The use of permits and approvals require risk producers to obtain written permission from government before undertaking in specific risk-producing activity.
National Guidelines	National guidelines include voluntary standards and codes of practice that provide approaches for dealing with specific risk-related issues or undertaking a specific risk-related activity.
Education/Advice	Education/advice includes the provision of information that helps risk producers reduce risk, or that help interested or affected parties make more informed decisions.
Voluntary Compliance	Voluntary compliance involves encouraging risk producers to take action that reduces risk. This is a good example of risk management through collaboration.
Economic	Economic approaches are typically directed at risk-produces, and use financial incentives or disincentives to limit risk; examples include providing financial assistance to developers of risk-reducing technologies and imposing penalties on polluters.
Technological	Technological approaches involve the development of new risk-reducing methods or the application of existing methods by risk producers.
Taking No Action When None is Required	This option involves maintaining the current level of health protection. It may be used for example, when the current level of risk is considered to be negligible, when the risk management strategy that is already in place is considered sufficient, or when there are no feasible, effective risk management options to implement.

Figure 6 Options for risk management (Health Canada, 2000, p.41)

Additional factors may determine the possible options. For example, Health Canada (2000) considers that jurisdiction, existing policies, commitments, and speed of response to risks are elements to be taken into account.

[35] The WHO appears to be following a long-term work plan to determine the most cost-effective options in relation to major risk factors (WHO, 2002, p.107).

[36] We establish this nomenclature in another section of this chapter.

Several sources consider that defining options is an activity to be done in partnership with the people concerned and affected by the risk. (Health Canada, 2000; Presidential […], 1997). "This is especially important in cases where the responsibility for managing risk is shared, or where various parties may participate in implementation of the selected strategy. The breadth and depth of consultation should reflect factors such as the nature of the issue, who the issue affects, the urgency required to resolve the issue, and the resources available" (Health Canada, 2000, p.42). The American document calls for the participation of concerned parties in developing methods to identify and elaborate on options. In Canada, such a partnership is used to research and choose criteria for analysis. In both the United States and Canada, the participation of concerned parties is actively sought to help with analysis and to identify communication approaches that will make options as acceptable as possible.

The **second part** of the process is the analysis of options, which involves taking a group of different elements into account:

- Effectiveness
- Legal requirements
- Obligations and restrictions
- Feasibility of the option
- Equity in risk distribution, costs, and advantages
- Justice, or ensuring a balance between the rights of individuals and the rights of society
- Acceptability of the risk to all interested and affected parties.

For Health Canada, these elements are of prime importance, although factors such as social and legal contexts also matter. Other agencies believe that assessing cultural and social impact is more important. The cost/benefit ratio is also a necessary criterion for judging effectiveness, as is the assessment of benefits and inconveniences when these can be given an absolute value (Presidential […], 1997; INSPQ, 2003; WHO, 2002). A cost/benefit ratio includes costs of implementation, resources available, urgency and speed of the expected response, negative or undesirable effects, residual risk, and acceptability of risk. Another stage in the process is to assess the perceptions, concerns and values of interested parties in relation to the possible options.

The WHO report mentions several ways of doing cost/benefit analyses. The organization has standardized some of the methods to assess both costs and impacts (CHOICE program). It also models situations that would be expected to result in the absence of policy options (counterfactual scenario), an approach which requires a complete risk assessment. The organization is aware that this cost/benefit ratio is just one element of information in the hands of decision-makers, and recognizes the necessity of studying other data.

This second stage may result in a variety of actions. Some options will be eliminated. Others will be selected. In general, preferred options are those that protect health at an acceptable level, are the most effective at reducing or preventing risks, provide the most benefit for the lowest cost, create as few adverse effects as possible, and are socially acceptable.

5.2.2.4 Communicating the risks

The risk management framework also involves the activity of risk communication. By this term, we mean the relationship between those in charge of managing a risk and the population concerned by the risk. This is an important stage, central to many management frameworks. Communication is aimed first and foremost at the lay person, i.e., the non-expert, the non-scientist and the non-politician, so that these ordinary people get relevant information about the risk and risk management process in a clear, precise, timely, and useful manner. The WHO insists on the comprehensiveness of factual data; on the uncertainties and on the independence and credibility of the organization transmitting the information. This means that the organization should be free of all political attachments. The entire process should foster a climate of trust, transparency and democracy. Education is key to the process; risk response options and their outcomes may be presented through public consultations or other means. The WHO report calls attention to the growing importance of media and interest groups who act as intermediaries in the education process.

The organization expresses concern that media and interest groups are not necessarily reliable sources of information, and that the public, in general, may not be sufficiently critical of the scientific information they receive. Another worry is that media and other groups may serve their own interests by selecting or altering the information they convey. In its 2002 report, the WHO highlighted this crucial influence on risk perception.

The approach advocated by Health Canada, the MSSS and the WHO goes beyond the dissemination of risk information to include the importance of understanding the needs and responses of the affected population. Furthermore, the organizations suggest that the parties affected by the decision-making process be placed at the centre of the process. This is especially useful when uncertainties are being assessed. The WHO suggests a democratic decision-making approach to risks. The MSSS concurs, stressing the importance of giving up the expert/layperson dichotomy in favour of a process of genuine exchange. This implies knowledge translation skills such as the simplification of information, openness, and a certain degree of power sharing in the public policy process. These partnership goals are summarized in the *Alternative Dispute Resolution* (Beauchamp, quoted in MSSS, 2002, p. 40). Risk communication becomes a means to resolve conflicting opinions, values, and data, with the goal of reaching consensus on the elements of risk management.

In Quebec and Canada, there is no set form for this communication stage. Also, the activities of conveying information and receiving feedback are demanding in and of themselves. This procedure has not yet reached the level of arbitration, except for the *Bureau d'audiences publiques sur l'environnement (BAPE)*[37], and is still non-binding on public policies. Underlying this point, as the 2002 WHO report remarks, is that of risk governance. How can we encourage groups to become involved in considering important social issues? How can

[37] The mission of the *Bureau d'audiences publiques sur l'environnement* is to inform and consult the public [in the province of Quebec] on questions related to the quality of the environment assigned to it by the Minister of Sustainable Development, Environment and Parks" (http://www.bape.gouv.qc.ca/sections/bape/organisme/eng_organization_ind.htm).

we encourage them to share political power (and responsibilities)? At the same time, how can we create a more transparent process? These questions, the mechanisms, and their implications still need to be explored. For now, the communication approach categorizes citizens and decision-makers differently. One possible solution would be to bring the two groups closer together by creating well-informed public policy processes, as recommended in *The World Health Report* (WHO, 2002).

5.2.3 Methodological approaches

Risk assessment is really a number of different methods based on quantitative and qualitative approaches. It is more appropriate to speak of risk assessments, since there is not a uniform methodology. The field is subdivided by speciality, each with its own practices and methods to determine the danger, to characterize the effects on health, and to measure the risk exposure. The work of risk assessment may be fragmented and compartmentalized in "silos". This lack of interaction between areas of work may affect the efficiency of resource use or citizens' trust in experts, whose information may be, at times, contradictory. Problems may appear, related to comprehension and knowledge transfer, consistency, equity, and the transparency of the process for all social groups (MSSS, 2002). Above all, this fragmentation has tended to cause narrowness in defining the questions. As advances occur in research, the situation is improving. While the conventional approach focuses on a single risk agent, now researchers and policy-makers recognize the complexity of factors that cause risks and their interactions. While the ways of assessing risks may differ, the essential components of risk assessment are now similar. These components are expressed differently, however, depending on the objectives, scope, and purpose of the assessment. The operational or strategic application of risk assessment determines the relative proportions of the elements.

There are two basic approaches to the risk assessment stage: qualitative and quantitative. In the field of public policy, either approach may be used to assess the probability of a risk occurring (but not to identify a risk). Generally, the purpose of research and the related methodological questions determine which research strategy is appropriate. Researchers have demonstrated that the nature of what needs to be known, as well as the way we would like to learn about it, supports using one approach or excluding the other (Mucchielli, 1991).

5.2.3.1 Qualitative approach

By definition, qualitative methods use techniques that make it possible to observe and analyze what cannot be measured quantitatively. Because the aim of research suggests which techniques are suitable, qualitative techniques are not based on systematic codification but do take into account the participation and effects of people. Research findings based on qualitative methods tend to have greater value when there is support such as the acceptance by research participants, robustness of data and adequate sampling, and peer recognition of the value of research, in terms of plausibility and consistency.

The social sciences and humanities generally prefer a qualitative approach, because these fields are concerned with understanding, explaining, and analyzing human and social phenomena that do not arise from chemical or physical processes. Social scientists address

the dynamic aspects and intentions of individuals, groups and society: "The usefulness of the research thus rests on the person or community as a subject of the action that establishes society and […] which is defined by its time and space" (Gauthier, 2003, p.41). Qualitative methods attempt to collect information about human behaviours and “social facts” which encompass representations, beliefs, perceptions, relations, procedures and strategies, the world of the imagination, practices and usages, and values. This action, which some call "social or human fact" (Mucchielli, 1991, p.15), presents itself as a complex whole. Indeed:

- A social fact is all-encompassing. It integrates extremely varied but inseparable aspects. It is difficult to grasp by separating or isolating it within the frameworks of specific research programs. It is understood more as a set of levels – political, technical, economic and symbolic. It reveals itself through discussions, experiences and representations, which can be studied and which inform.
- A social fact is subjective: it is built and observed by people who have their own logic and it cannot be separated from this perspective. The social and cultural approach affirms itself as a science by recognizing the subjectivity of social players and researchers rather than by denying this subjectivity.
- A social fact is and makes meaning - in the social sciences and the humanities, events are analyzed in terms of what they send back to systems of values and meanings, and the ultimate purpose of research is to grasp these values and meanings. A social fact encapsulates these social meanings and reveals their complexity.

5.2.3.2 Quantitative approach

Quantitative methods involve gathering and converting data to digital forms. Methods fall within the field of statistics and, as such, use statistical tools. Research results achieved by quantitative methods are validated by proving the accuracy of the instruments and protocols used. As well, research results should be replicable: research repeated under the same conditions should yield similar results, no matter who conducts the research.

The quantitative approach is based on directly observable phenomena, which can be isolated according to evidence. Such phenomena have one-dimensional or linear characteristics that may be defined by shared external traits (e.g., age, sex, income, language, etc.). The approach is useful when one has to measure and describe something that may be quantified and defined in terms of operational properties, and that may express itself by one type of measurement or another. For example, the following approaches could be used: frequency of use, rate of satisfaction, correlation between two quantifiable elements, number of times an assertion is verified and so on.

It is difficult to apply quantitative methods to a social phenomenon with multi-dimensional characteristics; it is also difficult to apply quantitative methods to assess the behavior of an individual. Understandably, quantitative methods are less commonly employed in the social sciences and humanities. However, the choice of method depends on what is being studied. Multi-disciplinary research teams may mix approaches to explore various dimensions of the same theme. Furthermore, quantitative tools may be used in the operational planning of

research, even if a qualitative approach is generally used. An example of this is when a population sample is being determined.

5.2.3.3 Quantitative and qualitative approaches to risk assessment

Risk quantification is the most commonly used approach when doing risk assessment in a health field; some forms of assessment seem to be confined to quantitative measurement of risk (WHO, 2002; Health Canada, 2000). Qualitative assessment is useful for the identification of risk factors or uncertainties. In documents from Quebec, the approach often integrates scientific factors and the social players involved (MSSS, 2002, p.33). The process takes both qualitative and quantitative appraisals. According to the INSPQ document, when the causal and risk hypotheses are being assessed, operations are carried out in both ways. In the MSSS document, the risk assessment stage integrates the qualitative dimension into the methodology, interpretations and assessment of limitations and uncertainties. All of the documents include assessment of risk perceptions, concerns and values, for which a qualitative approach is most appropriate.

Use of qualitative data is especially appropriate when dealing with difficulties in characterizing social determinants (indirect risks), difficulties that may appear when making decisions that impact on public health. According to authors cited in the Health Canada document, use of qualitative data is necessary and unavoidable, since it is almost impossible to develop consistent quantitative models for use in predicting a project's overall impact on the health of a population. Clearly, however, use of qualitative data is open to question in a field that is accustomed to defining scientific rigour in terms of quantitative processes.

Thus, it is important to be aware of the differences between the two approaches and, when employing either or both approaches, to recognize their limits. This way, "the generalizations made in social sciences can never reach the status of the statements-laws of generalizations in the physical sciences. The social systems are submitted to the influence of conscious human beings, who have the ability to influence the system through individual choices. The future of social systems is open, while that of natural systems is determined by the causality" (Gro, quoted by Health Canada, 2002). Several authors concur on this point: the place of qualitative data is not yet clearly assured in risk management, despite the importance of such data (Zayed, cited in INSPQ, 2003, p.77). In a milieu dominated by the biomedical approach, the value, rigour, and ways of working with qualitative data are still poorly understood. For this reason, it is important to rethink the place of qualitative data in the realm of decision-making, especially when it comes to examining risks related to the social determinants of health.

Finally, it is probable that the culture of decision-makers, like that of health practitioners, is generally more receptive to information provided in a quantitative or mixed form. Decision-making may be facilitated if some assessments are quantified, notably in terms of order of magnitude of effects of the risk.[38] Still, the effort to provide quantitative data should

[38] Robert Jacob, personal communication, November 7, 2005.

not be undertaken to the detriment of making qualitative approaches better known and integrated.

5.2.3.4 Uncertainties and the precautionary principle

In matters of public health, risk assessment always operates under the guiding principle of scientific rigour. According to the WHO report, "the best health policies are those based on scientific evidence" (WHO, 2002, p.5). This means that evidence must be exact and data must be used correctly. In the Canadian context, it is a given that decisions must be based on facts: The only way to reach public policy decisions is through consideration of relevant scientific opinion, by examining all information rigorously and objectively, and by taking a precautionary approach, since risk management takes place "in a context of considerable scientific uncertainty" (Health Canada, 2000, p. 9). In Quebec, this rigour implies gathering adequate scientific knowledge from all concerned disciplines. Also, a system of scientific rigour involves seeking the opinions of experts and scientists from these disciplines, considering minority viewpoints and opinions, and following a structured and systematic approach (INSPQ, 2003, p. vii). During the risk assessment stage, it is necessary to seek professional judgment to interpret the data. Also it is essential to identify sources of uncertainty and their potential impacts (INSPQ, 2003, p.8).

The reports from Health Canada (2000) and the WHO (2002) highlight the dilemma faced by policy-makers, who must make decisions even when they lack all of the necessary information. According to these two organizations, the precautionary principle must be followed. Although not everyone defines the principle in exactly the same way (Figure 5), in general the principle requires implementation of provisional measures in order to avoid delays in initiating action: "A lack of full scientific certainty should not be used as a reason not to take preventive measures when reasonable evidence indicates that a situation could cause some significant adverse health effect" (Health Canada, 2000, p.8). According to Health Canada and the WHO, the principle encourages the search for new information. The lack of availability of information should not be accepted as an irremediable *fait accompli*, but rather as a transitory situation which should lead to further research and better risk assessment. It is necessary to examine—often qualitatively—the importance of missing elements, the time needed for research, and the significance of possible new information. When potentially important information is lacking, it is reasonable to map out a plan of action to obtain and manage the new data. "[T]here should be investment in risk management efforts which do not focus on particular hazards but which will improve capabilities for identifying emerging hazards and for coping with them" (WHO, 2002, p.152). The organization recommends developing ethical principles including transparency and adequate infrastructures to deal with these uncertain risks.

Box 6.1 Contrasting views of the role of the precautionary principle within different world views of regulation

Weak precaution	*Moderate precaution*	*Strong precaution*
Presumption of unfettered market-led development and technological innovation.	Underlying presumption of unfettered market-led development and technological innovation, but recognition that this can sometimes be overthrown by high levels of societal concern.	No presumption of either market-led or technologically driven development.
Regulators intervene only on positive scientific evidence of risk and only use interventions that are demonstrably cost-effective.	Presumption about interventions as under 'weak precaution,' but with case by case flexibility to shift the need for proof towards the risk creator.	Risk creator has to demonstrate safety of activity. Little acceptance of cost-effectiveness arguments.
Presumption of risk management. Banning very rare.	Underlying presumption of risk management. Banning possible, but only as last resort.	Presumption of risk avoidance. Banning very likely.
Presumption of free trade based on objective scientific criteria. Individual preferences and societal concerns given no weight.	Underlying presumption of free trade on the basis of scientific criteria. Recognition that individual preferences and societal concerns do matter.	No automatic presumption of free trade. Individual preferences and societal concerns are dominant.

Adapted from: (14).

Figure 7 Contrasting views of the role of the precautionary principle within different world views of regulation (WHO, 2002, p. 151)

The degree of uncertainty has become a major issue of concern for risk management. This has led some to conclude that the risk management stage may be controversial (Presidential 1997). Disputes are "exacerbated in this by the fact that societies of modern times are generally carriers of multiple and intensive change" (Zayed, cited in INSPQ, 2003, p.77). In contentious situations, scientific knowledge itself may appear to be fragmented and splintered. Science is not always able to offer a single, consistent explanation of the world. Scientific evidence is not indisputable; it is necessarily influenced by the researcher's perspective and choice of theory and methodology (WHO, 2002). As well, science often fails to provide a complete demonstration of cause and effect. The authority of scientists may be in doubt "when they are no longer able to produce reliable, credible assessments of the risks" (Lemieux & Tremblay, 1996, p.218). This leaves the door open to other players and other social constructions of risk. Such observations highlight the widespread recognition that knowledge depends on point of view. Identifying variables that affect point of view is paramount, and such variables form a reference point (Zayed, cited in INSPQ, 2003). Also central to this understanding is a requirement for public participation in the management of risk.

This is where two fields of study - the study of risk and the study of policy - intersect. The place of policy in risk management concerns issues beyond risk assessment, which is characterized by scientific data. The management of uncertainty is one important policy area. The WHO report clearly links elements of the risk management process to public policy. According to the WHO, risk assessment provides a fundamental basis for political intervention, especially in prioritizing interventions. According to the report's authors, accurate measurement of risks is in general neglected and very limited. However, the authors consider accurate measurement essential because "[w]ithout some quantitative

approach to gauging the importance of specific risks, in terms of the likely size of their impact on populations, government policies might be driven exclusively by factors such as pressure groups or the emotive weight of individual cases" or media treatment and its bias (WHO, 2002, p.3).

5.2.4 Integration into the world of public policy

5.2.4.1 Public policies and risks

Risk assessment provides data of a scientific nature (epidemiological or other) on health. It is without a doubt the method that best enables the public health field to contribute to public policy. Decision-makers balance the data provided by risk assessment against other considerations when formulating policy. This dynamic will be discussed in the following section.

Public policies may be both the solution to risks and the cause of risks. Certainly, public policies address options for the management of general conditions associated with risk. At the same time, policies may be related to the socio-economic causes of health risks.[39] Health Impact Assessment (HIA) methodologies seek to provide information on how policy may contribute to risk. When policy increases a risk or even constitutes a risk, then the policy needs to be managed. Throughout the process of risk management, public policy may also constitute one of the possible ways to counter the risk. Nonetheless, once public policy has become an option, its implementation leaves the sphere of risk management (as outlined by the frames of reference). At that point, policy is beyond the control of public health officials who have developed it and enters the sphere of policy implementation. Better understanding of this sphere and its models are useful to public health officials, and may lead them to play a more constructive role in the policy-making process. Subsequently, they may be better able to craft their contributions and data to fit each stage of the process, and choose approaches that suit the circumstances.

The WHO report provides a good illustration of this dynamic. This report refers to a new management approach initiated by the organization; an approach meant to be applied over a very broad base. In developing its approach, the WHO no longer attempted to determine a specific risk for a target population. Instead, it sought to assess the impact of a set of risk factors for the entire world population. To do this, the WHO first identified main health risks, and then quantitatively assessed their impacts and the burden of avoidable morbidity. Next, the organization identified a range of management approaches - political, educational, and persuasive - and assessed each by a cost/benefit method. The purpose was to prioritize the possible management approaches, in terms of importance, cost-effectiveness, and social values. This is the limit of the WHO's activities. Indeed, the organization recognizes that it is up to authorities in each country to implement policy, and adapt it to suit local needs. The objective of the WHO is to help countries reduce risk and improve health, not by prescribing

[39] For example, the WHO report (2002) states that changes in agricultural and trade policies have affected the eating habits of populations.

particular action but by presenting a method for assessing primary risks and possible courses of action. The WHO is especially interested in promoting an approach that places scientific and empirical information at the heart of good policy. Also, the WHO encourages effective communication.

5.2.4.2 Arbitration of decisions

The importance of policy in the field of public health is obvious, and there is overwhelming evidence to support this. However, there are times when public health risks must be assessed with regard to other social concerns. According to the document by the MSSS (2002, p.34), risk management should allow for social, economic, cultural, and ethical considerations as well as political ones, and should integrate such considerations into actions to reduce or prevent risk. The MSSS document explains that this comprehensive approach to risk management was developed (at least in part) to ensure that risks are assessed within their social and political context. The WHO report stresses the importance of considering risk assessment and the scientific data that goes with it, in a societal context. The report outlines key links, such as the relationship between assessment and politics. For the World Health Organization, risk assessment "is a political activity as well as a scientific one and embraces public perception of risk, bringing in issues of values, process, power and trust," notably in approaches, methodologies, and communications (WHO, 2002, p.4).

Many experts establish a clear line between politics and the issue of public health risks. According to the WHO report (2002), it is a duty of public officials to promote strategies to reduce risks. Here, risk is viewed as a responsibility shared among individuals, community, and governments. However, it is particularly the responsibility of public authorities to invest in risk prevention because they are responsible for the health of citizens, and they are responsible for seeking to reduce risks to an acceptable level. The WHO report considers that interventions by public authorities are especially important when individuals have a limited chance of modifying their own risk exposure. Political interventions may take the form of long-term measures which involve policy instruments (taxation), institutions, programs, and intersectoral linkages. Among possible actions for risk reduction, the WHO advocates legislation, alone or in association with educational tools. Development of prevention policies by the international community is a priority for the WHO, but policies need to be based on solid risk assessment.

Lemieux and Tremblay (1996) suggest a realistic appraisal of the responsibility of public authorities. Although various approaches adopt the position that certain risk categories (involuntary or unavoidable risks) require social management and come under government responsibility, this may not be possible in reality. Merely recognizing a risk is not enough to make leaders adopt appropriate measures; other considerations come into play, including the leaders' own perception of risk and availability of reasonable solutions. It may be useful to consult data and research, in order to understand the real workings of risk management. Also, risk takes on different values at different stages of the public policy-making process. Some activities, such as assessing health impact, occur in order to identify risks related to developing and implementing policies. Underlying these activities is the premise that the State must assume responsibility for citizens. An activity, such as assessing health impact, is

a useful tool for decision-makers who wish to raise awareness of health risks inherent in public health policy interventions. This is true in all areas of public policy.

There are political considerations concerning the acceptable level of risk. The perspective in Quebec is different from the Canadian framework. Quebec documents show that officials separate the stage of assessing risk from that of estimating acceptable risk. This is in keeping with a more scientific perspective in Quebec. As pointed out by the MSSS, estimating acceptable risk (with regard to other issues and interests) is a decision that lies outside the competencies and responsibilities of scientists. The decision should belong to actors who exercise political authority, or to a representative. Differentiating between the two processes is supported by the ethical and social arguments of many researchers. Assessing risk is the scientist's job. A zone of uncertainty, however, surrounds what may be considered "acceptable," since this appraisal stems from value judgments and perceptions, which are subjective and variable. Although public consultation processes are increasingly used to assist decision-making, ultimately the political manager is the one with the authority to decide the pros and cons of an intervention and its health consequences: "At best, the power of imposing a risk on a sub-group of society rests on the notion of the common good and on the State's authority as sole exerciser of legitimate force (Beauchamp, 1996, cited in MSSS, 2002, p.45). Even with expert advisors and reliable data, any decision comes down to a value judgment on the part of the manager with authority. Acceptable risk is therefore a notion that depends on politics, but one that "creates confusion and raises controversy" (MSSS, 2002). Reducing the zone of uncertainty through better understanding of attendant risks and their impacts could assist decision-makers in making the best decisions on health issues.

5.2.4.3 Risk perception

Risk analysis recognizes that the perceptions of decision-makers and of citizens are important factors that influence decisions about risk.

In the frames of reference we consulted, perception is defined as arising from variables that differ from one individual to the next, and which interact with the knowledge of the experts, often called "reality." This is the conventional approach to science, which assumes the objectivity, reliability, and rationality of scientific predictions. Yet the literature shows that these assumptions are questionable; science has a high degree of uncertainty and is tied to social choices and contexts (WHO, 2002, p.30). The WHO report defines perception with reference to basic ideas of social science; that is, that perception results from learning, which takes place in the family, in society, and in institutions.[40] Experience, information, and values determine how perceptions are integrated and subsequently altered. The WHO report stresses the importance of media and pressure groups on perception. The report notes that perception is intrinsic to the policy-making process and to some of its challenges, i.e., understanding the risk and seeking socially acceptable solutions.

[40] This definition is close to Bourdieu's concept of *habitus*, which explains what it is to be human. A human being's perceptions, values and systems of knowledge are acquired by belonging to a given milieu and a personal and collective history (Couturier, 2002).

In frames of reference for risk management, perceptions are considered either at the stage of risk assessment (WHO, 2002; Health Canada, 2000; MSSS, 2003) or at the stage of problem identification (INSPQ, 2003). In the WHO report, the study of perception is based on the idea that risk assessment must be placed within a broader context, beyond the simple activity of measurement. Most of the documents we consulted state the importance of considering the social perception of risk. Documents report that different perspectives of risk may lead to impasses or discord in risk management. It is also noted that perceptions influence behaviour, in terms of the actions implemented in order to protect the public. Finally, perception influences a person's measure of what constitutes an acceptable level of risk. Therefore, perceptions of decision-makers concerning levels of acceptable risk should be known.

Risk perception seems to be one of the few gateways for studies and social approaches on health risk. Even though social science researchers dwell on showing how risk is a social construct that differs by social group (Lemieux & Tremblay, 1996), this line of thinking is barely perceptible in the documents we consulted, with the exception of the WHO report. For the time being, documents on risk management in public health bodies in Quebec and in Canada are still are based on cognitive classification of perceptions. Such perceptions are understood on the individual level only[41]. This kind of work is interesting, but remains limited. Other paradigms stemming from the social sciences advocate a contextualization of perception, making it possible to avoid an individual-centred public health approach. This assists planning and acting on a societal level, where many risk causes are situated (WHO, 2002, p.43).

Finally, in these frames of reference, risk perception involves a very different concept: that of local knowledge (in opposition to expert knowledge). Local knowledge constitutes an element that is not considered to be separate from perceptions. In the MSSS report, the authors show that consideration of knowledge from previous experiences helps the ministry pursue two objectives: first, to gain a complete overview of the perceptions of risk causes and, second, to build a credible, transparent, and fair link to the people concerned. This recognition of the value of local knowledge is linked to a concern for giving all participants an opportunity to express their points of view; indeed, this is one of the MSSS guidelines. The mode for communicating risk should be adapted to match a person's or group's understanding of data.

5.2.4.4 Transferring risk knowledge to decision-makers

Risk perception and risk communication are linked concepts. For players in the field of public policy, this is especially important. Risk management is a tool to assist decision-makers who must consider a risk or problem. The activity is necessarily concerned with how to best communicate information, especially information about the assessment of risk itself. It is crucial to establish a relationship with decision-makers that includes effective knowledge

[41] The Covello Scale classifies factors of perception and is a good example of how factors may be taken into account (MSSS, 2002, Appendix 1).

sharing strategies. Risk communication, however, is not the usual term for this activity. The literature we consulted rarely mentioned risk communication, even though it is a key stage in handling information. The framework developed by the INSPQ and the work of the WHO are the only two documents that make reference to risk communication. The Quebec framework (INSPQ, 2003) includes information for decision-makers in risk communication. Nevertheless, texts by the World Health Organization and by Vincent Lemieux illustrate cases where the first stages of risk management are carried out by people from fields of expertise different from those people who complete the process; i.e., those who have the power to choose and/or to implement the solutions. Indeed, the very people responsible for making important policy decisions – decision-makers and strategists - may not work in the public health field. This highlights how important it is to develop suitable communication strategies. Knowledge transfer can address this issue.

The transfer of information to decision-makers is often addressed from the standpoint of risk perception. The way decision-makers perceive a risk is worth investigating because it influences the way they interpret information, how they assess the acceptability of risk and how they manage risk. Research about knowledge transfer and appropriate strategies is required. Lemieux and Tremblay (1996) clearly show that a risk has a greater chance of affecting policy if it is constructed politically, i.e. presented as a threat and emergency. Interest groups (including economic interests) play a crucial role. In its report, the World Health Organization warns governments against using political strategies. It points out that the way decision-makers perceive risk will vary according to how risk is presented. The organization recommends that "information should be framed in a variety of different ways so that such complexities are revealed to decision-makers" (WHO, 2002, p.34). Lemieux and Tremblay (1996) add that an ability to establish advantageous power relationships, which implicitly implies good knowledge of policy-making, is a useful quality.

The WHO report provides support for the work of various organizations, such as the National Collaborating Centre for Healthy Public Policy. It stresses the importance of developing all aspects of sharing knowledge of risks with decision-makers—and notably options for reducing risk—while firmly situating knowledge-sharing within policy considerations: "If policy-makers are to be more effectively engaged in applying measures that have proven benefits in risk reduction, the political context of knowledge transfer and risk management needs to be better understood and utilized" (WHO, 2002, p.164). For the World Health Organization, effective communication includes showing results in terms of social inequalities and sustainable development, as well as informing about ways to prioritize risks.

5.2.5 Gaps and issues in risk assessment

In this paper, we have pointed out a number of gaps that exist in the field of risk management research. Some of the gaps concern the basic ways of conceptualizing risk management. For example:

- The concept of risk assessment goes by a number of different terms and this leads to confusion;

- The approaches, methods, and subjects related to risk assessment are still too often subdivided by speciality. The result may be a fragmented, compartmentalized approach, as opposed to common understanding and interdisciplinary sharing. Efforts are underway to alter frames of reference for risk management.
- Conceptual and methodological links need to be established between knowledge transfer and risk communication activities.

Other gaps related to methodology:

- Exact measurement of risks is limited and neglected, yet measurement provides a basis for policy action.
- Use of qualitative data is still an issue in the area of health policy, which accords more value to quantitative data.
- Local knowledge and experience are not sufficiently taken into account, despite the fact that these factors alter risk perception and risk assessment.
- It is necessary to develop scientific databases on several risk factors, many of which are poorly documented, especially in the poorest countries.
- There are not enough research centres, training programs, and sources of information about risk intervention. Risk perception, using a comparative approach, should be the first priority for these centres; data on risks and intervention assessment are also needed (WHO, 2002).
- There is a lack of coordination of research on the subject of risk. This needs to be developed at the national level.

Finally, some of the field's challenges involve relations with decision-makers:

- The management of uncertainty remains a serious issue that can lead to public disputes and political indecision. This may be remedied by applying the precautionary principle, but this requires a common understanding. Citizen participation is an avenue to be developed.
- Choosing and implementing options for risk management often take us beyond the sphere of public health. It is necessary to consider decision-makers and policy-makers. Their risk perception is of paramount importance because their perception influences the way they interpret information and the choices they make to manage risk. How information is presented is a key factor in shaping this perception.
- Research and information about health problems and risks are not always or sufficiently considered by decision-makers in non-health-care sectors.
- Recognizing a risk is not enough to make leaders act. Many other interests are also at stake. Thus, it is useful to understand decision-making within its larger context.
- Media and pressure groups often disseminate scientific information. This information is not always reliable.

- Not enough is known about the way managers and decision-makers take uncertainty into account, about how the precautionary principle should be applied, and about how risk assessment contributes to political decisions[42]. Demands from civil society, notably during public consultation, must also be studied in greater depth.

These issues and knowledge gaps lead us to conclude that, although it is a well-established field in public health, risk assessment needs further development in order for it to be better integrated into the public policy process.

5.3 CONCLUSION

Public health policies are at the crossroads of several fields of knowledge. On the one hand, policies concerning public health belong to the sphere of public policy in general. It is essential to understand public policy processes and instruments for implementing policy. On the other hand, health policy is an aspect of public health. Health policies rely on information from this sector, developed by public health methodologies. Risk and health-impact assessments are particularly relevant tools. Risk assessment documents health risks and proposes policies as a means to manage risk. Health-impact assessment addresses the processes initiated by political decision-makers, and seeks to assess the impacts with the aim of improving health outcomes. Finally, knowledge sharing makes it possible to decide which conditions are most conducive to the consideration of health data in public policy circles. The field of knowledge sharing puts a focus on bridging the two worlds of researchers and policy-makers in order to create effective links between them. Indeed, despite their distinct natures, risk assessment, health impact assessment, and knowledge sharing have common concerns that cut across a broad spectrum of public health policies.

The issue of data is as central to knowledge sharing and the public policy process as it to risk assessment and health-impact assessment. Data quality raises an immediate question: Which data can be considered reliable and appropriate? To answer that question, one must conduct assessments. Moreover, decision-makers and planners require that data quality be assured. In addition, decision-makers and planners require that data be based on practical usage criteria, hence the need to provide measures and matrices to this end. Another question remains: Given the preference for data produced by quantitative methods, what place is there for qualitative research? Data results produced by qualitative research are still poorly known and too little used. Consequently, some fields of health remain little understood for lack of adequate studies of complex social factors. The question of data quality leads inevitably to questions of the value of research information gathered from non-scientific sources, grey literature, local expertise, and contextual knowledge. How should one evaluate such information and what is its place in developing policy? These are questions that cut across all fields, especially when information from qualitative research competes with scientific data.

Availability of data is another issue. Risk assessment can give us information about the availability of data. But risk assessment does not always take place, and many areas of

[42] Daniel Bolduc, personal interview, November 7, 2005.

public health and public policy are not adequately documented from the point of view of risk. What options does that leave? What can be done in the absence of reliable and appropriate data to assess the impact of public policy? Should one make do with preliminary data? The question of uncertainty management is raised by all of the fields of activity discussed in this paper. This is a concern that is scientific, ethical, and political. How does one make a decision despite these uncertainties, and how does one take these uncertainties into account when assessing information from many different interests and weighing possible options? This is a major source of divergence between different actors. The precautionary principle should answer these questions in part, but that principle remains open to interpretation. Moreover, the precautionary principle is more commonly applied within the framework of risk management than within the conceptual frameworks of HIA and knowledge sharing. On the other hand, the knowledge sharing process is fundamental to each framework. It is both the context in which data is described and the filter through which it is disseminated.

Contextual factors and local knowledge are also paramount to this subject. Risk assessment and health impact assessment seek to incorporate these aspects, each in its own way, notably because they influence risk perception and risk management. Such data are of basic importance, especially in a context of knowledge sharing, because they bring the user point of view to bear on discussions focused on knowledge. When it comes to risk assessment, there is wide support for the use of citizen participation. This generally takes the form of townhall meetings. All approaches raise questions both about the relative weight one should give to information gathered this way and about the very process of consulting citizens.

Finally, beyond the question of scientific data, knowledge sharing, risk assessment and health impact assessment need to be developed in relation to the public policy process. All concerned actors must take account of this reality and design their activities so that their data will have the maximum impact. This is especially important at a time when health has to compete with other matters that demand the public's attention.

Finally, in the different fields of public health and risk assessment, there are major issues that unite experts no matter their professional field. In comparison, the minor differences that may present themselves are of less importance and relate more to the scientific approaches that are specific to each field. The differences between risk communication and knowledge sharing should be documented, if only to identify to what extent they are actually similar. For now, the two fields tend to be viewed as separate and unconnected. Yet beyond their immediate audiences they remain interrelated, at least in terms of the issues and concerns for which they gather their data.

BIBLIOGRAPHY

CCNPPS. (2007). Centre de collaboration nationale sur les politiques publiques et la santé. [Powerpoint Presentation]. Quebec.

Champagne, F. (Speaker). (2005). *Utiliser la recherche dans la prise de décision : du vœu à la réalité*. [Powerpoint Presentation]. Quebec : Semaine d'utilisation de la recherche FCRSS.

Couturier, Y. (2002). Les réflexivités de l'œuvre théorique de Bourdieu: entre méthode et théorie de la pratique. *Esprit critique*, *4*, 3-15.

Debia, M, & Zayed, J. (2003). Les enjeux relatifs à la perception et à la communication dans le cadre de la gestion des risques sur la santé publique. *Vertigo, 4* (1). www.vertigo.uqam.ca

DeLeon, P. (1999). The Stages Approach to Policy Process: What has it Done? Where Is It Going. In P.A.Sabatier (Ed.), *Theories of the Policy Process, Theoretical lenses on Public Policy* (pp. 19-32). Boulder: Westview Press.

Demers, L., & Lemieux, V. (1998). La politique québécoise de désengorgement des urgences. *Canadian Public Administration/ Administration Publique du Canada*, *41* (4), 501-528.

Fenger M., & Klok, P.J. (2001). Interdependency, beliefs, and coalition behaviour: A contribution to the advocacy coalition framework. *Policy Sciences*, *34* (2), 157.

Fisher, F. (2003). *Reframing Public Policy*. Oxford: Oxford University Press.

Gauthier, B. (2003). *Recherche sociale : De la problématique à la collecte de données*. Quebec : Presses de l'Université du Québec.

Howlett, M., & Ramesh, M. (1995). *Public Policy, Policy Cycles and Policy Subsystems*. Oxford: Oxford University Press.

INSPQ. (2003). *Cadre de référence en gestion des risques pour la santé dans le réseau québécois de santé publique*. Quebec : Sylvie Ricard.

Jobert, B., & Muller, P. (1987). *L'état en action; politiques publiques et corporatisme.* Paris : Presses universitaires de France.

Kiefer, L., Frank, J., DiRuggiero, E., Dobbins, M., Manuel, D., Gully, D., & Mowat, P. (2005). Favoriser la prise de décision factuelle au Canada : Examen de la nécessité de créer un Centre de données de recherche et un Réseau de recherche sur la santé publique et des populations au Canada. », *Revue canadienne de santé publique, 96* (3), 1-20.

Kingdon, J. W. (1995). *Agendas, Alternatives and Public Policies*. New York : Harper Collins College.

Landry, R., Lamari, M., & Amara, N. (2003). The Extent and Determinants of the Utilization of University Research in Government Agencies. *Public Administration Review* , *63* (2), 192-206.

Laurendeau, M.C. (2004). *Compte-rendu de l'Atelier annuel sur le courtage de connaissances (FCRSS)* Personal document.

Lemieux, V. (2002). *L'étude des politiques publiques; les acteurs et leur pouvoir*. (2nd ed.) Quebec: Presses de l'Université Laval.

Lemieux, V. et Tremblay, J.F. (1996). Les coalitions environnementales et la construction politique du risque. *Environnement et sécurité*, *1* (1), 214-220.

Lindblom C.E., & Woodhouse, E. J. (1993).*The Policy–Making Process*. (3rd ed.). New Jersey : Prentice-Hall.

Meny, Y., & Thoenig, J.C. (1989). *Politiques publiques*. Paris : Presses universitaire de France.

Milio, N. (1989). *Promoting Health Through Public Policy*. Ottawa: Canadian Public Health Association.

Ministère de la Recherche, de la Science et de la Technologie. (2001). *Politique de la science et de l'innovation.* Quebec.

Ministère de la santé et des services sociaux. (2002). *Stratégie pour soutenir le développementt de politiques publiques favorables à la santé* : *Document de présentation interne*. Internal document. Quebec.

Ministère de la Santé et Services sociaux du Québec. (2002) *Principes directeurs d'évaluation du risque toxicologique pour la santé humaine de nature environnementale.* Quebec.

Mucchielli, R. (1991). *Les méthodes qualitatives*. Paris : Presses universitaires de France.

Neilson, S. (2001). *Supported Research and its Influence on Public Policy; Knowledge Utilization and Policy Process: a Literature Review*. Ottawa: International Development Research Centre (IDRC).

OMS. (1986). *Ottawa Charter for Health Promotion.* Ottawa.

OMS. (1998). *Adelaide recommendations on Healthy Public Policy*. Adelaide.

OMS. (2002). *Rapport sur la santé dans le monde. Réduire les risques et promouvoir une vie saine*. Geneva.

Ostrom, E. (1999). Institutional Rational Choice. In P.A.Sabatier (Ed.),*Theories of the Policy Process, Theoretical lenses on Public Policy* (pp. 51). Boulder: Westview Press.

Presidential/Congressional Commission on Risk Assessment and Risk Management. (1997). *Risk Assessment and Risk Management in Regulatory Decision-Making*. Washington.

Pyra, K. (2003). *Knowledge Translation : A Review of the Literature.* Halifax: Pyra Management Consulting Services.

Ride, V. (2005). Kingdon à Bamako : conceptualiser l'implantation d'une politique publique de santé en Afrique. *Politique et Société*, 183-202.

Rosenbaum, P., Law, N., Dobbins, M., & Plews, N. (2003). *Information Transfer: What do Decision-makers Want and Need from Researchers*? McMaster University: Canadian Child Centre for Childhood Disability Research.

Sabatier P.A., & Jenkins-Smith, H. C. (1993). *Policy Change and Learning: An Advocacy Coalition Approach*. Boulder: Westview.

Sabatier, P.A, (Ed.). (1999). *Theories of the Policy Process, Theoretical lenses on Public Policy*. Boulder: Westview Press.

Santé Canada. (2000). Cadre décisionnel de Santé Canada pour la détermination, l'évaluation et la gestion des risques pour la santé. Ottawa.

Shortreed J., Hicks, J., & Craig, L. (2003). *Basic Frameworks for Risk Management. Final Report, prepared for the Ontario Ministry of Environment*. Waterloo : NERAM.

St-Pierre, D. (2003). *La Politique culturelle du Québec de 1992 : continuité ou changement?* Quebec : Les Presses de l'Université Laval.

Sutton, R. (1999). *Working Paper: The Policy process: an overview*. London: Overseas Development Institute.

Walter, I., S. Nutley et H. Davies (2003). *Developing a Taxonomy of Interventions Used to Increase the Impact of Research.* St. Andrews (U-K): Research unit for research utilisation, Department of management, University of St. Andrews.

Zahariadis, N. (1999). Ambiguity, Time and Multiple Streams. In P.A.Sabatier (Ed.),*Theories of the Policy Process, Theoretical lenses on Public Policy* (pp. 73-93). Boulder: Westview Press.

APPENDIX I

USER COMMUNITY MEETINGS: FALL 2006

AGENDA

Appendix 1: User community meetings: Fall 2006 — Agenda

National Collaborating Centre for Healthy Public Policy
Building Meetings of the Atlantic / Western Provinces User Community

Mount Allison University Sackville, NB	Delta Hotel, 550 West Hastings Street Vancouver, BC, V6B 1L6
October 4, 2006 10:30AM-3:30 PM	September 25, 2006 10 AM – 3 PM

10:30 Opening and Introductions

10:45 Introduction to the NCCHPP and to the topic of the day
Presentation by Denise Kouri, NCCHPP Lead, followed by discussion

11:15 Round-table on healthy public policy efforts of participants
Each participant, in 2 to 5 minutes, will be asked to share with others their experience, plans and/or hopes for promoting healthy public policy.

Noon Working Lunch

1:00 Group Discussion
General question: Given what has been said, how can the NCCHPP best support the public health community's efforts in promoting healthy public policy?
Specific questions: At least the following, plus others emerging during the meeting:
(1) Are there common themes or public policies on which we should focus?
(2) Should we focus on research syntheses of specific interventions or on building understanding of public policy processes?
(3) How should we continue to interact with users?
(4) Should and how could we support collaboration among participants?

3:00 Planning for future exchanges

3:30 Closing remarks

APPENDIX II

USER COMMUNITY MEETINGS: FALL 2006

PARTICIPANTS

Appendix II: User Community Meetings: Fall 2006 — Participants

Monique Allain	Director, NB Wellness, Culture and Sport
Ted Bruce	Executive Director of Population Health, Vancouver Coastal Health Region (BC)
Olive Bryanton	Coordinator, PEI Centre for Health and Aging
Phillip Burke	Project Team Leader, Population Health Strategies, Alberta Health and Wellness
Kim Capri	Councillor, Vancouver City Council and member, UBCM Healthy Communities Committee
Christina Chociolko	Project Manager, NCC Environmental Health (BC)
Sharon Davis-Murdoch	Senior Policy Analyst, NS Health
Dr. Keith De'Bell	Special Advisor to the President and Vice-President, Health Care Education and Research, University of New Brunswick; NCC-DH
Ron Duffell	Executive Director for Intersectoral and Strategic Initiatives, BC Ministry of Health; Lead, ActNowBC
Margaret Fast	Regional Medical Health Officer, Winnipeg Regional Health Authority (AB)
James Froh	Senior Policy Analyst, Aboriginal Policy and Operations, Government of Saskatchewan
Doris E. Gillis	Principal Investigator, Health Literacy in Rural Nova Scotia Research Project; Associate Professor, St. Francis Xavier University; NCC-DH (NS)
Susan Green	Director of Advocacy, Kids Eat Smart Foundation (NL)
Trevor Hancock	Public Health Consultant. BC Ministry of Health
Randy Hatfield	Executive Director, Human Development Council (NB)
Joel Kettner	Provincial Medical Health Officer, Manitoba Health
Murray Knuttila	Chair, Regina Qu'Appelle Health Region; Professor of Sociology, University of Regina (SK)
John Jacobs	Director, Canadian Center for Policy Alternatives (NS)
Dr. Wayne MacDonald	Chief Medical Officer of Health, NB Health
Barbara McGill	Vice President, Community Programs; Chief Nursing Officer, Atlantic Health Sciences Corporation (NS)
John McLaughlin	Councillor, City of Mirimichi; Chairperson, Regional Action Group for Social Determinants (NS)
Alison McNeil	Senior Associate, Policy and Programs, Union of BC Municipalities (UBCM); Member, UBCM Healthy Communities Committee
Don Mitchell	Community Development Officer, Regional Intersectoral Committee (RIC), and Former Mayor, Moose Jaw
Richard Musto	Deputy Medical Officer of Health, Calgary Health Region (AB)
Cory Neudorf	Regional Medical Health Officer, Saskatoon Heath Region (SK)
Maureen O'Connell	Planning and Development Officer, NS Advisory Council on the Status of Women
Greg Predy	Regional Medical Health Officer, Capital Health Region, Edmonton (AB)
Jeff Scott	Chief Medical Officer of Health, NS Health
Sheila Sears	Primary Health Care Manager, Guysborough Antigonish Strait Health Authority (NS)
Robert Strang	Medical Officer of Health, NS Capital Health Region
Geraldine Thompson	Consultant, Public Health Capacity, NL Health and Community Services
Shannon Turner	President, BC Public Health Association
Patricia Williams	Associate Professor, Department of Applied Human Nutrition, Mount St. Vincent University; Adjunct Professor, Atlantic Health Promotion Research Centre, Dalhousie University (NS)

APPENDIX III

USER COMMUNITY MEETINGS: FALL 2006

HEALTHY PUBLIC POLICY THEMES

Appendix III: User Community Meetings: Fall 2006 — Healthy Public Policy Themes

- In the fall of 2006, the National Collaborating Centre for Healthy Public Policy (NCCHPP) held consultations with its users in the Eastern and Western provinces, respectively. During the workshop's discussion and its aftermath, participants highlighted major themes that they would like the NCCHPP to focus on.
- In the survey associated with the workshops, participants were asked "*What topics in healthy public policy would you like the NCCHPP to focus on?"*
- The themes highlighted have been classified below, but are generally cross-cutting in nature. Footnotes include additional information. Tools and frameworks, which were also suggested by the participants, are not fully reviewed in this summary.

Healthy Public Policy Themes Highlighted by Participants:

- Best practices in public policy[43]
- Business approach[44]
- **Community level**[45]
  - Community and municipal level programs
  - Community engagement, collaboration and consultation[46]
  - Healthier communities
  - Engaging providers
- Culture of departments
- Environment[47]
- Healthy lifestyles[48]
- Injury reduction
- Institutional policy approaches
- **Intersectorial and cross-government approach**[49]
- Mental health
- Obesity[50]
- **Policy Process**[51]

[43] "Best practices" or equivalent (eg. comparative healthy public policy, "what works and what doesn't") was mentioned several times; however, this is more of a tool/methodology than a topic to focus on.

[44] Strong interest in "business" approach and equivalent eg. GAP Analysis, Economic impact and cost assessments. However, more of a tool/methodology than a theme.

[45] Strongly emphasized in both discussion groups.

[46] Eg. Collaboration on implementation of healthy communities initiatives. Communities are often the first to identify gaps and needs, and the first to mobilize.

[47] Eg. environmental sustainability (linked to transportation, alternative energy sources); urban issues.

[48] See also "Food", which could be considered a sub-theme of healthy living.

[49] ActNowBC, Quebec's *Article 54*.

[50] Obesity is a multifaceted topic with linkages to other themes and social determinants – ex. healthy lifestyles, food issues, poverty, inequities and so on. The diabetes rates associated with obesity were a concern among Atlantic Provinces.

[51] Respondents emphasized the need for information on policy *process*, rather than specific themes for policy. Eg. Meta-analysis, meta-policy, knowledge on process of successful policy development, establishment & evaluation, public and private policy, etc.

  - Policy development, establishment/acceptance and evaluation
  - Enablers (ex. role of population health observatories)
  - Funding for public health[52]
- Political culture[53]
- Private sector policy[54]
- Provincial level
- Quality of life
- Regionalization[55]
- Tobacco reduction

Themes related to the Social Determinants of Health:

- Aging & end of life issues[56]
- Alcohol & drug abuse
- Health literacy
- Political culture
- Social engagement
- Workplace[57]
- Violence, abuse and sexual abuse
- **Inequities** [58] - includes Aboriginal (First nation, Métis, Inuit), disabled people, age, ethnicity, language, gender, sexual orientation, spirituality, rural and urban, language etc.
  - **Food – *see footnotes*** [59]
  - **Poverty – *see footnotes*** [60]
    - Income
  - Living wage
  - Taxation[61] and social assistance policy

[52] The NCCHPP cannot act on this directly, as this would involve advocacy. However, it can make available information on the best means by which to effect such changes in policy (*see *policy process*).

[53] Could be considered a social determinant of health, but does not fit into defined "categories". See also *institutional policy approaches*.

[54] Context of "private policy" and health interaction (eg. food); *how* to persuade private sector to change policies (see process).

[55] Special mention of the "downloading effect" of services on communities.

[56] Especially emphasized during the Atlantic region meetings.

[57] Specifically family-friendly workplaces; culture of departments and organisations.

[58] Inequities is a major theme. Debate between use of "disparities" or "inequities" because of the connotations of each term.

[59] Within Western provinces, food was highlighted in terms of **access to food** –**poverty, hunger**, **food security**, **food charter policies** and **healthy diets** (role of private sector, vending policies). Respondents from the Atlantic provinces highlighted the links to healthy eating – **obesity, policy**, and the impact on health at **community and population levels**. The two major theme groupings are thus issues related to poverty and access, on the one hand, and healthy eating and obesity on the other.

[60] Poverty was a major theme. Respondents highlighted the linkages between **poverty** and areas such as **food**, **income**, **hunger**, **homelessness**, **aboriginal health, policies against poverty** (social assistance, minimum wage, employment initiatives, earning supplements) and the role of the private sector. Specific attention was brought to **inequities**.

  - Homelessness[62]
  - Food security and accessibility[63]
  - See also*; urban issues; health literacy; inequities (especially aboriginal) etc*.
- **Urban themes**
  - City planning / design
  - Transportation[64]
  - Housing[65]
- Childhood and Youth
  - Early Childhood Development
  - Daycare
  - Youth at risk
  - Teen pregnancy
  - Education
  - School readiness & drop-out rates
  - Lifelong learning & ongoing education
- Family
  - **see* Poverty – taxation and social assistance policy
  - Single parent families

61 Eg. National child tax benefit (NCTB).

62 Related to housing but also, in a broader context, to poverty and inequity.

63 Strong linkages with inequities, hunger, food policies and obesity.

64 Related to environmental issues, urban issues; ex. bike lanes, traffic rules (linked injury prevention).

65 Housing was brought up in several different contexts, including homelessness and poverty, quality of life and various social determinants of health.

APPENDIX IV

PUBLIC HEALTH MODELS AND STAKEHOLDERS INVOLVED IN HEALTHY PUBLIC POLICY IN EIGHT CANADIAN PROVINCES:

INTERVIEW GUIDE

Appendix IV: Public Health Models and Stakeholders Involved in Healthy Public Policy in Eight Cnadian Provinces: Interview Guide

INTRODUCTION:

Background information about the NCCHPP:

- Who I am (from INSPQ)
- Who I represent (NCC for Healthy Public Policy)
  - What are the NCCs (if required)
  - Focus of our NCC is healthy public policy
- Reason for my call:
  - Environmental scan of public/community health in each province
  - Focus on current status regarding the level of integration of "healthy public policy" outside the formal health sector, having an impact on health (for instance: determinants of health, inequalities).
  - Role of public health with respect to the promotion and implementation of healthy public policy in (name province).
  - Needs assessment for the public health community across the country that will drive further research/action from the Centre, with regards to healthy public policy.

QUESTION 1: Current state of provincial infrastructure of public health

1.1 We understand from our preliminary literature review that the public health infrastructure of your province in currently comprised of the following elements:

1.1.1 For each province, restate/name the key elements (Act, department, RHA, other levels, programs, etc.).

1.1.2 Validate with the informant that our preliminary understanding is reflective of reality and up to date.

1.1.3 Are there any pieces missing?

1.2 According to you, what have been the key/major events in public health in (name province) in the past few years (from 1995)

1.2.1 Major/important policy shifts

1.2.2 Changes to the Public Health Act

1.2.3 Organisational changes

1.2.4 Other events

QUESTION 2: Healthy public policy in (name province)

2.1 According to your experience, and in light of current Public Health Act, would you say that public health is involved in promoting healthy public policy outside the health sector *per*

se? For instance in the social, economic, education, housing, food, environment or other sectors?

2.2 If **yes**:

2.2.1 In what particular areas?

2.2.2 Since when?

2.2.3 What are, if any, the formal, or informal, processes/mechanisms in place to promote and adopt healthy public policy?

2.2.3.1 Interdepartmental consultation?

2.2.3.2 Intersectoral policies?

2.2.4 What are the leading organisations/units within the provincial government driving this process?

2.2.4.1 Particular role of Ministry of Health?

2.2.4.2 Other ministries or organisations involved?

2.2.5 Are there some leading regional health agencies (RHA) involved in the promotion and implementation of healthy public policy?

2.2.6 What are (would be), among your public health partners/stakeholders outside the government, the organisations interested and/or involved in the promotion and implementation of healthy public policy in your province?

2.2.6.1 NGOs

2.2.6.2 Research and academia

2.2.6.3 Municipalities

2.2.6.4 Federal government

2.2.7 How would you qualify the current degree of integration of healthy public policy in your province?

2.2.8 How would you describe the extent to which public policies are assessed with respect to their impact on health, in your province?

2.2.9 Are there one or two current policies or issues outside of the health sector in your province that, in your opinion, have a strong potential or actual negative impact on health and would therefore require intervention?

2.3 If **no** :

2.3.1 Are you aware of any provincial policy development process, or project, on the issue of healthy public policy? (both the political and/or administrative aspects)?

2.3.2 Has there been any healthy public policy promotion process in the past?

2.3.3 How would you describe the extent to which public policies are assessed with respect to their impact on health, in your province?

2.3.4 Are there one or two current policies or issues outside of the health sector in your province that, in your opinion, have a strong potential or actual negative impact on health and would therefore require intervention?

2.3.5 What are (would be), among your public health partners/stakeholders (NGO) outside the government, the organisation interested and/or involved in the promotion and implementation of healthy public policy in your province?

QUESTION 3: Key contacts/NGO/stakeholders in public health in (name province)

3.1 Would you recommend other key people in public/community health who are (would be) involved or particularly interested in the issue of healthy public policy? In :

3.1.1 Ministry of Health or other ministries

3.1.2 NGOs

3.1.3 Municipalities

3.1.4 Research and academia

3.1.5 Regional health agencies

QUESTION 4: Interest in participating in conference or focus group

4.1 Would you be interested in participating in a conference or focus group on the issue of the promotion and implementation of healthy public policy in your region?

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