DEVELOPMENT OF A DECISION AID FOR EVIDENCE-INFORMED PUBLIC HEALTH POLICY:
A MIXED METHODS STUDY

by

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A thesis submitted in conformity with the requirements for the degree of Masters of Science, Health Services Research
Institute of Health Policy, Management and Evaluation
University of Toronto

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2016

Abstract

This study contributes to the evolving needs of decision support for evidence-informed health policymaking. Its aim was to bring more formal consideration of context and a broader conception of evidence into public health policymaking, giving due prominence to all relevant types of evidence. A sequential mixed methods approach was used to undertake the development of a decision aid to support evidence-informed public health policy. A meta-narrative review and focus group were conducted to inform the initial development of the proposed aid. Key informant interviews followed, providing preliminary feedback for refinement of the tool. The final deliverable was a beta-version of a decision aid designed to assist policymakers with making evidence-informed public health policy decisions, ready for pilot testing and further development.
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Chapter 1
Introduction

Advances in healthcare, public health policy, and social policy have led to dramatic improvements in health worldwide. However, health systems remain under severe pressure. Prevalent trends among high-income countries, including decreasing economic growth, escalating costs, aging populations, and elevated public expectations feed concerns about sustainability, cost-containment, quality improvement, and accountability (Lian, 2003). Decision-makers charged with the responsibility of apportioning healthcare services face difficult choices about service delivery and resource allocation.

In response to these pressures, governments and health organizations are increasingly relying on evidence-informed approaches to justify practices and policies. The World Health Organization (WHO) has highlighted the need to develop mechanisms to support the use of research evidence in creating clinical practice guidelines and health policy (Bosch-Capblanch, 2011; World Health Organization, 2004). Health technology assessments are one of several important examples that the WHO has advocated for the use of towards a greater focus on evidence in health policy (World Health Organization, 2014). Underlying this trend is the positioning of scientific research as a means of enhancing the legitimacy of decision-making processes, as established in evidence-based medicine (EBM). In the late 1990s, the influence of evidence-based principles began to spread throughout various non-clinical areas, such as education and public health. Its growing prominence as an approach for improving policymaking was demonstrated by its first major application by the Blair government’s modernisation agenda in the United Kingdom, termed ‘evidence-based policymaking’ (EBPM) (Klein, 2000).

The introduction of EBPM marked the shift towards a more ‘legitimate’ approach to policymaking that was based on research evidence rather than traditional methods grounded in popular support, common sense and political ideology (Behague et al., 2009). Policies developed through those latter methods – lacking good evidence and analysis – are believed to more likely suffer costly mistakes from unintended consequences (Banks, 2009). Thus, EBPM strives to increase the use of research evidence for driving forward decision-making processes, where evidence can inform policy-makers, government officials and program managers of "what works and why and what types of policy initiatives are likely to be most effective" (Blunkett, 2000). The approach can be applied to different policy problems, including various programmatic challenges, such as those related to the organizational efficiency of clinics and hospitals, resource allocation, and management of health human resources across a health system (Hornby & Perera, 2002; Nutley et al., 2000).
Within EBPM, there is an increasing realization that the question of 'what works and why' cannot always be answered by scientific evidence but requires value judgements and other context-sensitive information not traditionally recognized as evidence within EBM (Eddy, 1996; Hayward et al., 1996; Nutbeam, 1996; Sackett et al., 1996; Tunis, 2007). As we come to a fuller appreciation of the complexities of modern inter-dependent public policy, it becomes clear that there are multiple forms of policy-relevant knowledge that are vital to understanding the issues and prospects for the success of a policy intervention (Davies, 2004; Elliott & Popay, 2000; Head, 2008; Nutley et al., 2003; Pawson, 2003; Schorr, 2003; Sibbald & Roland, 1997). In this conceptually broader view of evidence, these disparate bodies of knowledge combine to become a more complete set of evidence and considerations that inform and influence policy rather than determine it. The term ‘evidence-informed’ has been used to reflect this acknowledgement of the need for a broader conceptualization of evidence and consideration of context in the use of the best available evidence (Hayward et al., 1996; Nutbeam, 1996; Sackett et al., 1996). Within evidence-informed policymaking, evidence, as suggested by policy analysis theory, can be defined as information or knowledge “that affects existing beliefs of important people about significant features of the problem under study and how it might be solved or mitigated” (Bardach, 2000).

In a systematic review to explore different conceptualizations of evidence by those involved in the production and use of evidence for health policy decisions, Lomas et al. (2005) expand the scope of consideration beyond scientific evidence. Three types of evidence are outlined for health system guidance: "scientific evidence on effectiveness ('what works'), scientific evidence on context ('how or whether it works' in a particular circumstance), and colloquial evidence" (Lomas et al., 2005). The first two types recognize evidence obtained through systematic and replicable methods of analyzing conditions and trends, and the causal inter-relationships that explain them (Head, 2008; Lomas et al., 2005; Parsons, 2002). Scientific evidence on context covers knowledge surrounding attitudes, implementation, organizational capacity, forecasting, economics/finance, and ethics (Lomas et al., 2005). This includes evidence about broad trends and explanations of social and organizational phenomena, as well as specific evidence generated through performance indicators and program evaluations (Nutley et al., 2002; Oakley et al., 2005). It is about efficiency, effectiveness and economy in delivery, separated from individual values and ethics (Parsons, 2002). Colloquial evidence consists of political knowledge and practical implementation knowledge through the expertise, views, and realities of stakeholders "about resources, expert and professional opinion, political judgment, values, habits and traditions, lobbyists and pressure groups, and the particular pragmatics and contingencies of the situation" (Lomas et al., 2005). Political knowledge is the know-how, analysis and judgement of political actors. These include vital elements impacting evidence-informed policymaking – such as consideration and adjustment of strategies or tactics; agenda- and priorities-setting; persuasion and advocacy; communication of key messages and
ideological spin; shaping and responding to accountability issues; coalitions building; and negotiation of
trade-offs and compromises (Head, 2008). Making contextual judgements about the possible and the
desirable are inherent in this form of knowledge.

The way in which these different facets of policy-relevant knowledge are combined is key to
understanding the meaning and use of evidence in health policy development and practice. However, a
lack of experience in combining research- and non-research-based evidence can lead to the omission of
some relevant evidence when considering a complex health policy decision, especially given the vast
array of evidence that is applicable. For example, current literature on evidence-based healthcare is often
limited by inadequate consideration of context (Baltussen & Niessen, 2006; Daniels, 1999). Borrowing
from literature on support tools for evidence-based decision-making in other health disciplines can help to
support the inclusion of all types of evidence within evidence-informed policymaking.

Decision aids/support tools (hereafter grouped together and referred to as decision aids) to
support evidence-informed decision-making have been developed in a number of health disciplines and
have been shown to improve decision-making processes and outcomes. Extensive development of clinical
practice guidelines used to influence clinical decision-making (e.g., www.guidelines.gov) is one example.
A systematic review in the Netherlands found that evidence-based clinical guidelines helped to improve
processes and structures of care and patient health outcomes (Lugtenberg et al., 2009). Another example
is patient decision aids, increasingly used as an effective way to improve patients’ understanding of
treatment options within a ‘shared’ clinician-patient decision-making process. O’Connor and colleagues
demonstrated that patient decision aids for those facing decisions concerning cancer screening and
treatment have a positive effect in improving patients’ understanding of the determinants of decisions
(i.e., better knowledge of options, benefits, or risks; more realistic expectations; value-based)(O’Connor
et al., 1999).

In contrast to clinical contexts, decision aids to support health policy processes and structures are
less well developed. Policy contexts have different complexities and uncertainties than clinical contexts,
requiring different approaches for identifying, interpreting, and applying various types of evidence to
support decisions (Black & Donald, 2001; Bowen et al., 2009; Dobrow, 2010; Greenhalgh & Russell,
2009; Klein, 2000). A series of articles edited by Oxman and Hanney contributed to filling this gap within
evidence-informed health policymaking, introducing a series of tools to support various aspects of health
policymaking related to research evidence, from the identification of research evidence needs and the
search for and assessment of such evidence to its translation into policy decisions (Fretheim et al., 2009a,
2009b; Lavis et al., 2009a, 2009b, 2009c, 2009d, 2009e, 2009f, 2009g; Lewin et al., 2009a, 2009b;
Oxman et al., 2009a, 2009b, 2009c, 2009d, 2009e, 2009f). The tools also brought to attention some broad considerations other than research evidence (e.g., windows of opportunity, use of policy dialogues). While this work is comprehensive in its approach to the integration of research evidence into policy decisions, particularly systematic reviews, the focus remains on research evidence rather than aiming to support health policymaking in general (Oxman et al., 2009d) and adequately representing the full set of considerations needed to make policy decisions and a broader conception of evidence therein. This focus may be underpinned by the awareness that current policymaking processes tend to already be driven by factors other than research evidence (e.g., personal values and goals of powerful actors) that may or may not align with the set of options derived from the best available research. However, the reality is that policymaking is a context-sensitive and value-laden decision process. The values of research- and non-research based evidence may shift for specific decision contexts; thus, a realistic and balanced view of the importance of both research- and non-research-based evidence is necessary for a decision aid meant to assist decision-making more broadly across different decision contexts.

Rather than emphasizing the need to insert and expand the influence of research evidence into the policymaking process, it may be helpful to extend the systematization of evidence beyond that of scientific research findings to other sources of evidence and policymaking considerations. The WHO's *Handbook for Supporting the Development of Health System Guidance: Supporting Informed Judgements for Health System Policies* (Bosch-Capblanch, 2011) has been one effort to do so. The handbook provided detailed instruction for the entire process of developing health system guidance, from needs assessment to dissemination of WHO policy recommendations. Guidance was described as a "systematically developed body of knowledge, integrating research evidence and descriptions of the types of other considerations needed to inform decision making about appropriate health system arrangements in specific settings" (Bosch-Capblanch, 2011). Throughout various stages of guidance development (i.e., problem definition, assessment and presentation of evidence, issuing of recommendations), the handbook encouraged the inclusion of policy considerations related to both research- and non-research-based evidence. For example, the section on assessing and presenting evidence on implementation issues covered evidence on values and preferences, facilitators to implementation (e.g., resources in relation to tasks and workload, the continuity of team members), and compatibility of an intervention with perceived needs and policy priorities. Despite a more inclusive approach towards evidence and other policy considerations to guidance development, this handbook was designed for a global health perspective. It was not meant to support decision-making about which public health programs or drugs a government should fund or deliver, for example. As such, the policy considerations presented in the handbook exclude more specific considerations pertinent to local decision contexts. A decision aid to support policymakers in managing
the vast array of evidence (both research- and non-research-based) and considerations relevant to their local public health policy context is still needed.

Developing interests and efforts in the consideration of context within health policymaking can also be seen in the adaptation of the Appraisal of Guidelines for Research and Evaluation tool for health system guidance (AGREE-HS)(Ako-Arrey, Brouwers, Lavis, & Giacomini, 2016) and one of the WHO's workbooks on contextualizing health system guidance (http://www.optimizemnh.org/Annexes/Annex_8_Contextualizing_Workbook.pdf), found as an annex to their recommendations for optimizing health worker roles to improve access to key maternal and newborn health interventions (Lewin et al., 2012). A lack of guidance for users at the national (or sub-national) level for combining global health system guidance with local assessments of a healthcare issue has been noted, including health system arrangements and political system considerations (Lavis et al., 2012). The WHO workbook contends that if these contextual factors can be addressed during the policy development process, then the resulting policy recommendations/decisions should be designed to fit the specific needs of policymakers and stakeholders within their countries, which in turn should facilitate decision-making and implementation steps (Lewin et al., 2012). The systematic inclusion of contextual considerations in health policymaking is an evolving area that requires further input and development.

1.1 – Research Aim and Questions

The present study aims to bring more formal consideration of context and a broader conception of evidence into policy decision-making, giving due prominence to all relevant types of evidence in contributing towards evidence-informed public health policy.

Based on the above considerations, this study will address the following research questions:

1. What should be the purpose of a decision aid for evidence-informed public health policy decisions?

2. How should decision aids for evidence-informed public health policy decisions be conceptualized, constructed, and operationalized (i.e., designed and used)?

Answers to these questions will inform the development of a decision aid designed to assist in making evidence-informed public health policy decisions made on behalf of populations. Its initial refinement through preliminary feedback from this study will offer as a final deliverable, a beta version of the proposed aid that is ready for piloting and further evaluation and development.
1.2- Situating the Study

The proposed study is part of an overarching project that examines how evidence from various sources, research-based and otherwise is incorporated into colorectal cancer (CRC) screening policy decisions in five Canadian provincial health systems. Previously conducted key informant interviews with clinical leaders, screening experts, regional/local administrative leaders and government officials from these five provinces helped to evaluate and compare the policymaking processes, including the use of evidence, when making decisions of whether or not to implement population-based CRC screening programs. Given a common research evidence-base to inform the provinces’ policy decisions, inter-provincial variation was apparent in both policy decision processes and outcomes. The present study seeks to build upon those findings by developing a decision aid that will assist in prompting all pertinent considerations in informing a decision to implement a population-based cancer screening program.
Chapter 2
Research Methodology

Development of the proposed decision aid was guided by a sequential mixed methods design. This approach will allow each study phase to build upon findings of the previous one, towards a greater depth of understanding and the expansion of the study's scope and breadth towards a more meaningful tool. Three research methods were employed in the following order: (1) meta-narrative review, (2) focus group, and (3) key informant interviews. Table 1 displays the methods in relation to the research questions and specific objectives for each method.

Table 1. Research methods in relation to research questions and corresponding objectives.

<table>
<thead>
<tr>
<th>Research Method</th>
<th>Relevant Research Questions (1/2)</th>
<th>Objectives</th>
</tr>
</thead>
</table>
| Meta-Narrative Review         | (1) Purpose of the Decision Aid                                                                  | • Review literature across disciplines that describe existing decision-making tools to provide insight into creation of the proposed decision aid. For each identified tool, describe:  
  o purpose/objective  
  o structure, format, and content  
  o influence of its purpose on its construction.  
  • Secondary objective: identify facilitators and barriers to implementation. |
|                               | (2) Conceptualization, Construction, & Operationalization of the Decision Aid                    | Draft proposed decision aid based on meta-narrative review and focus group findings.                                                      |
| Focus Group                   | (1) Purpose of the Decision Aid                                                                  | • Contextualize meta-narrative review findings by soliciting feedback from a range of individuals involved at various stages of policymaking.  
  • Based on their personal experience, solicit opinions from participants regarding the purpose and construction of the proposed decision aid.  
  • Identify how participants envision the tool being used.  
  • Identify facilitators and barriers to implementation of the proposed decision aid. |
|                               | (2) Conceptualization, Construction, & Operationalization of the Decision Aid                    |                                                                                                                                            |
| Key Informant Interviews      | (2) Conceptualization, Construction, & Operationalization of the Decision Aid                    | • Solicit formal feedback for refinement of drafted decision aid.  
  • Identify how participants envision the tool being used.  
  • Identify facilitators and barriers to implementation of proposed decision aid based on informants' personal experiences. |

Amend proposed decision aid based on key informant interview findings.

2.1 – Phase One: Meta-Narrative Review

The literature on the development and evaluation of decision aids derives from a variety of different areas of study including, for example, clinical (primarily medicine and nursing), educational, decision sciences, psychology and health economics. The frameworks used and major issues of concern to researchers in these different areas vary (Charles et al., 2005). Furthermore, others have noted the
relevance of evidence originating from many different sectors for consideration in healthcare decision-making. As the aim of this study is to create a decision aid to inform public health policy decisions, the scope of the review needs to be able to search the literature across a range of disciplines relevant to healthcare decision-making and the development of a decision aid therein. Due to the diverse terms, criteria and research methods used in these different disciplines, the traditional systematic review is not an ideal method for the present study, with its emphasis on the assessment of evidence quality based on an evidence hierarchy and its use of quantitative analysis. Meanwhile many qualitative approaches to systematic reviews can address the conceptual aspects of the topic, however, the focus of analysis generally remains within a narrower scope, limited to a single, focused research discipline. Moreover, traditional systematic review methods are more apt to be used in answering questions about effectiveness (e.g. clinical effectiveness, implementation intervention effectiveness) and not to develop a concept as is the case here.

While there is not an internationally accepted set of definitions for the various forms making up the evolving landscape of knowledge synthesis methods, Grant and Booth's (2009), Gough et al.'s (2012), and Sandewloski et al.'s (2012) articles discussing the variations, characteristics, and typology of these methods were referenced to help navigate the selection of an appropriate method. These references provided further insight into various methodological characteristics that might prove helpful for the present study.

The meta-narrative review method was chosen and modified to fit within the constraints of the present study, with reference to Greenhalgh's papers on the method (Greenhalgh et al., 2005; Greenhalgh et al., 2004; Greenhalgh & Wong, 2014). Specifically, it was conducted by a single graduate student in consultation with their thesis supervisory committee and external experts (by invitation, Appendix 1) to provide the needed expertise in a range of relevant disciplines to guide the review. An initial exploratory search was conducted to identify potential research traditions relevant to decision aids and respective experts in these fields (e.g., evidence-based medicine, patient decision aids, shared decision-making, knowledge translation/exchange, policy frameworks/tools). This search was carried out through review of traditional healthcare and non-healthcare indexes (e.g., Medline, Embase, Scopus) and a Google Scholar search of the worldwide web. Thesis supervisory committee members provided feedback on the identification of potential research traditions and corresponding field experts. Among those identified, potential external advisors were formally contacted and invited to participate.

Upon acceptance to participate in the study, external advisors were interviewed individually prior to beginning the formal literature search within each research tradition. The number of external advisors
needed to inform the review was determined by the number of relevant research traditions identified through the review process. As noted by developers of the meta-narrative review method, the list of key research traditions relevant to the research questions are likely to evolve as data emerge through the review process (Greenhalgh et al., 2005). Expert advisors were asked to provide guidance on relevant tradition-specific areas of research (e.g., search terms, relevant databases, predominant theoretical bases) and identify both additional experts in the field and seminal articles to support the search and mapping phases of the review.

Within each research tradition, multiple databases were searched, including: Embase (1947 to November 2010), Medline (1950 to November 2010), and any additional research tradition-specific databases recommended by expert advisors (i.e., JSTOR, CINAHL). A combination of keywords and free-text terms were used to search these databases. In conjunction with any specific search terms offered by expert advisors, a general set of terms was used across research traditions, including decision-making, decision support techniques, decision support systems, decision support interventions, decision aids, tools, and instruments. A two-stage process was used to select articles, including an initial screen of titles and abstracts followed by full-text review of those passing the initial screen. In addition, a cited reference search of the Web of Science database (1968 to January 2011) was used to identify articles citing any seminal work identified by respective expert advisors within each research tradition. Inclusion criteria required that articles must explore the development of content and/or structure of a decision aid and be available in English. Bibliographies of all relevant citations identified for inclusion were reviewed.

Comparable studies were grouped together along with key findings in the mapping phase, providing a narrative account that traces the historical development of concepts, theory, and methods within each research tradition, referred to as meta-narratives. In providing meta-narratives for each research tradition, Greenhalgh et al. (2004) note that the heterogeneity of approaches and contradictions in findings can be analyzed systematically as data, from which unifying conceptual models can be constructed.

In synthesizing the findings across research traditions, key themes or dimensions pertinent to the research questions were identified (e.g., purpose, format, content), along with the contribution(s) of each meta-narrative to it. Divergence between meta-narratives with respect to these themes was examined for possible causes arising from the meta-narratives in question. In concluding the meta-narrative review, overall findings were summarized and a series of recommendations made for its practical application to the development of a decision aid to support evidence-informed public health policy decisions. These findings were presented to members of the thesis committee as a formal feedback mechanism. Further, as
highlighted by Greenhalgh et al. (2005), recommendations should be grounded through the context provided by multidisciplinary dialogue and consultation with potential end-users of the review. Thus, the meta-narrative review overlaps and feeds into the next phase of the study, the focus group.

2.2 – Phase Two: Focus Groups

Having explored various decision aids in related fields in phase one of this study, it will then be necessary, as stated by Greenhalgh et al. (2005), to understand the resulting data in relation to the context of present interest – the policy environment wherein public sector health policy decisions are made on behalf of the population. It will be important to survey individuals who are entrenched in the current health policymaking process in order to ensure that the proposed aid is a good fit with current policy practices.

The focus group is a qualitative research method that is in essence, a group interview. Typically, its objective is to gain a greater understanding on a particular topic from the perspective of the selected group of participants (Liamputtong, 2009). This method was chosen for its emphasis on insights gleaned through group interactions (Kitzinger, 1995), which is significant for this study, given that policymaking is a complex process comprising interactions between a wide range of actors at multiple stages with different roles and responsibilities. Focus group discussion can provide an understanding of what that range of actors perceive the purpose, conceptualization, and construction of an ideal evidence-informed public health policy decision aid to be. Further, it can provide insight into both the requirements of a health policy decision aid and for supporting the concerted efforts across individuals and stages of policymaking. In addition, similar to the use of focus groups as a field research tool for survey item development (Nassar-McMillan & Borders, 2002), it can be used in this study to adapt or translate the meta-narrative review findings into equivalent concepts and more appropriate terminology for the present context.

As one part of an overarching study exploring how evidence is incorporated into CRC screening policy decisions in Canadian provincial health systems, this study uses the decision to implement a population-based cancer screening program as a sample policy decision context for the basis of discussion. This helps to demonstrate the type and level of decision-making that the proposed aid intends to support. As such, members of Canada’s National Colorectal Cancer Screening Network (NCCSN) were selected as a pool of potential focus group participants. The network acts as a national forum for review, discussion, and action on matters of mutual interest or concern related to CRC screening (http://www.partnershipagainstcancer.ca/colorectalNet), 2008). Network membership comprises key
decision-makers (including clinicians and political leaders at provincial and territorial levels) and cancer control community partners across Canada.

Members were presented with an overview of the study and the opportunity to participate in the focus group at a regular network meeting. Individuals whom expressed an interest submitted their contact information at the end of the presentation and were then sent a study invitation via email, outlining the purpose, methods and expected findings/deliverables of the research study, expectations for study involvement, potential risks associated with study participation, and measures taken to ensure the confidentiality of responses (Appendix 2). Informed consent was obtained from all participants before conduction of the focus group session (Appendix 3). The objective of the focus group was to elicit the expertise and experience of participants in public sector population-based health policymaking and screening decisions, specifically, their needs and preferences for the content and format of the proposed aid. The intent was to focus discussion around construction aspects (e.g., decision domains and information representation), with participants providing guidance as to how the recommendations of the meta-narrative review could be applied in the development of the proposed aid within the health policy environment.

The focus group was conducted with one moderator. Participants were asked questions while being guided through a slideshow presentation. The slideshow, included as Appendix 4, presented participants with the background and intent of the study, findings of the meta-narrative review, and related questions as a starting point for discussion. Feedback from the thesis supervisory committee about meta-narrative review findings shaped the line of questioning for discussion within the focus group. Participants were first asked to respond to questions relying on their personal knowledge and experience. The meta-narrative review findings were then presented, followed by a discussion of the relevance and adaptability of those findings in the current health policy context and an opportunity to offer additional insights triggered by participant discussion. The focus group was conducted via web conference, using Microsoft LiveMeeting.

2.3 – Development of an Initial Working Draft (Alpha Version) of the Proposed Decision Aid for Evidence-Informed Public Health Policy

Following the focus group, an initial working draft – the alpha version – of the proposed aid was created based on findings from study phases one and two. Content for the proposed aid was largely drawn from meta-narrative review findings – a consolidation of the decision considerations amassed through the review. It also provided a basic framework for the proposed aid. Focus group findings were used to adapt and supplement the meta-narrative review findings for greater applicability to the intended decision-
making context: the healthy policymaking environment. The focus group also provided more specific considerations for the construction of the proposed aid. The thesis supervisory committee was presented with multiple iterations of this initial working draft prior to submitting it to a more formal feedback mechanism in study phase three.

2.4 – Phase Three: Key Informant Interviews

The third phase of this study provided the initial opportunity for formal feedback and refinement of the developed tool. Phase three sought to reflect on the appropriateness/soundness of the proposed aid's conceptualization and construction with respect to the intended context for use – health policymaking environment and the type and level of health policy decision. Further, data were obtained on issues surrounding the operationalization of the proposed aid in its initial drafted form. For the purposes of the present study, operationalization of the proposed aid relates to its functionality and organizational fit within a practical health policymaking context.

The Delphi technique was considered as a potential research method for refinement of the proposed aid, given its use in healthcare research for a similar objective of developing quality and performance indicators. However, the interview method was chosen instead, allowing more freedom for participants to express their experiences and opinions on health policymaking and the proposed aid, and for researchers to subsequently refine the drafted decision aid. Interviews are the most frequently used qualitative research method in the healthcare setting (Hollway & Jefferson, 2000; Pope & Mays, 2013).

Key informant interviews were employed using a semi-structured approach, using key open-ended questions to help define the areas of interest, whilst allowing the interviewer or interviewee the freedom to deviate in pursuit of an idea or the elaboration of a response (Gill et al., 2008; Patton, 2005; Britten, 2013). This flexibility is important for the present study, enabling both feedback about the proposed aid, as well as the discovery and understanding of information not yet grasped through the meta-narrative review and focus group phases. Furthermore, given the complexity of public health policy decisions, the proposed aid was anticipated to cover a lot of material; conducting one-on-one interviews gives each participant more time and opportunity, in comparison to other research methods, to express their opinions and reflect on their experiences.

Key informants were not expected to be an expert in all areas of health policymaking – spanning the entire scope of decision considerations for a population-based public sector healthcare policy – however, the collective expertise of study participants was intended to be comprehensive. Extending from the focus group, the decision to implement a population-based cancer screening program again served as
the policy decision context for framing the interview discussions. This helped to demonstrate the type and level of decision-making that the proposed aid intends to support and also help to narrow down the pool of potential key informants. Purposive sampling was used to identify potential participants, targeting senior leaders of provincial health ministries and/or respective cancer care organizations. Potential key informants were identified through public sources (e.g., reported professional position or membership on committees contributing to CRC screening policy decisions) and recommendations by the thesis supervisory committee. Participants from phase two of this study (focus group), expressing an interest in reflecting on the working draft of the proposed aid were also extended an invitation. Eligibility criteria included participation in the policymaking process as a member of a provincial expert advisory group or as a contributor in the development of CRC screening policy in Canada.

Potential key informants received an email invitation outlining the study's details (Appendix 5). All participants were required to provide informed consent prior to initiating the interview (Appendix 6). Following informed consent, participants were emailed a URL link to a web-based version of the initial working draft of the proposed aid for review before the interviews took place. Guided by an interview script (Appendix 7), participants were asked for their opinions about the proposed aid, including opinions about its content and structure and their perceptions of its use within what they have experienced and know of the health policymaking process. The thesis supervisory committee reviewed and provided input for the interview script prior to its use. In addition, it was piloted with a research peer who is experienced with conducting research with the population of interest and is familiar with the health policymaking process. All interviews were intended to be recorded, transcribed, and coded. Pre-set codes were used for the initial review of transcripts, determined based on research questions (i.e., decision aid content, structure, operationalization) and phase one and two findings (e.g., identified decision domains). In addition, each interview transcription was analyzed for new emerging themes that arose during the initial review. All interview transcripts were then reviewed a second time to ensure consistent usage of codes (particularly new themes). Interview findings relating directly to the construction of the proposed aid were applied for its refinement. The amended version of the proposed aid was then presented to the thesis supervisory committee in conjunction with overall interview findings.
Chapter 3
Study Findings

3.1 – Phase One: Meta-Narrative Review Findings

The initial exploratory search, in consultation with the thesis supervisory committee, identified 7 potential research traditions for review, including: patient decision aids, shared decision-making, knowledge translation/exchange, decision analysis, principles of screening, health technology assessments, and policy frameworks/tools. An additional 5 candidates for inclusion in this review, identified through the search and mapping phase (by suggestion from expert advisors and through the literature) included multi-criteria decision analysis, organizational learning, clinical decision aids, policy analysis (ideas, interests, and institutions), and program budgeting and marginal analysis. Due to the inclusion criteria that articles for review explore the development, content, and/or structure of a decision aid, rather than those that only demonstrate its usage, a majority of the 12 research traditions identified were excluded.

Of the 12 potential research traditions identified, 5 research traditions – patient decision aids, health technology assessments, principles of screening, program budgeting and marginal analysis, and policy analysis (interests, ideas, and institutions) – were included in this meta-narrative review. In addition to the 5 identified research traditions, a few evidence-informed health policy decision aids that arose in consultation with expert advisors were also included in this review. Although these tools do not fit into a research tradition as defined by this method, upon the advice of the thesis supervisory committee, these tools were included and grouped into a single research tradition, given their direct relation and potential contributions to the development of the proposed aid.

The following section presents separate meta-narratives for each of the 6 research traditions included in this review. With the intent to examine how as a collective, these research traditions could inform the development of a decision aid for evidence-informed public health policy decisions, the key elements of each are outlined below. Following the meta-narratives, an overview of the similarities and differences found between the research traditions is provided, as well as summative recommendations for development of the proposed aid based on those findings.

3.1.1 – Meta-Narrative: Principles of Screening

A total of 32 articles relating to principles of screening were reviewed. Relating to the overarching study exploring policy decision-making towards CRC screening, the principles of screening
was an obvious starting point for exploring decision aids that might provide insight into the development of a decision aid to assist with evidence-informed public health policymaking.

Screening decisions are made at multiple levels: the system-level, delivery-level, and patient-level (Health Council of Canada, 2014). They involve a trade-off between benefits and harms, and between health outcomes and fiscal costs. Screening is based on an assumption that an intervention or treatment is available that can more effectively be applied at an earlier stage of the disease in question. However, screening does not come without risk (e.g., false positives, false negatives, risks associated with the screening procedure, overdiagnosis). At the system-level, screening may sometimes result in harm to many more than the benefit of early detection for a few.

The principles of screening by Wilson and Jungner (1968) was commissioned by the WHO in 1968, in response to a rise in the development and implementation of screening procedures and in recognition of the trade-offs inherent to screening decisions (Andermann, Blancquaert, Beauchamp, & Déry, 2008). The principles comprised a set of 10 criteria to guide the identification of conditions amenable to the implementation of screening procedures. While the principles highlighted criteria applicable to almost any screening decision, they were particularly relevant at the system-level, where governments, private insurers, and disease-specific agencies must determine the need for and ability to implement various screening options.

Screening policy decisions require decision-makers to consider a wide array of evidence, including but not limited to research on the effectiveness of a particular screening procedure. They must take into account a myriad of contextual factors – including "the local health system’s organization, structure, and resource capacities; commercial and other stakeholder interests; and prevailing values and beliefs" (Health Council of Canada, 2014) – that interact in complex ways to influence how evidence is identified, interpreted, and applied (Dobrow et al., 2006; Raffle & Gray, 2007). Due to the complexity of screening policy decisions, many advocate the use of criteria for decision-making. Wilson and Jungner's (1968) principles of screening has played an important role in screening policy decisions, particularly regarding cancer and genetic testing. They remain relevant (Andermann et al., 2008; Dobrow, 2014; Hall & Stewart-Brown, 1998; Health Council of Canada, 2013; Raffle & Gray, 2007) and have been considered a gold standard as a general guide for screening policy decision-making (Burke et al., 2001; Goel, 2001; Linnane et al., 1999; Zimmern & Cook, 2000).

Despite the integrity and relevance of the principles of screening, attempts have been made to modify and build upon the original criteria. Two literature reviews exploring the evolution of screening principles since Wilson and Jungner's seminal work revealed that a majority of the criteria subsequently
proposed were variations of and overlapped with the original principles of screening (Dobrow, 2014), especially where there exist effective interventions to improve health outcomes at an early stage, compared to standard care (Andermann et al., 2008). Nevertheless, a growing number of approaches to screening policymaking are in use. In the field of genetic testing, many of the adaptations are a reflection of the growing interest and developments in genetic screening. Anderman et al. (2008) provided examples, such as the importance of rare, serious genetic conditions and the implications of genetic information for family members. More broadly, emerging criteria have highlighted a need for more focus on program-/system-level issues pertaining to operational and implementation issues for screening programs (Dobrow, 2014; Health Council of Canada, 2014), reflecting broader trends in Western healthcare systems (Andermann et al., 2008). For example, there has been increasing interest in assessing resource capacity, improvement of follow-up care and compliance, and ongoing performance and quality management, assessment, and monitoring (Andermann et al., 2008; Dobrow, 2014; Raffle & Gray, 2007; Wilson & Lavis, 2013).

Some critiques have also been made about the screening principles proposed to date, particularly, the lack of objectivity and detail prompted by most sets of criteria (Pollitt, 1999; Pollitt, 2006; Raffle & Gray, 2007; Woolf, 2002), posing a challenge towards consistency of assessment (Grosse et al., 2004). For example, Pollitt (1999) stated that principles of screening often arrive at ambiguous endpoints and require subjective value judgements. He later adds that "there seems no generally accepted way of using these principles, or derived criteria, as objective decision tools" (Pollitt, 2006). Future development of these principles of screening will benefit from further exploration of which criteria most adequately and accurately represent the evolving field of screening technologies.

3.1.2 – Meta-Narrative: Patient Decision Aids

A total of 56 articles relating to patient decision aids were reviewed. Patient decision aids were included in this review as an example of a decision aid that has been acknowledged as being helpful to users in improving the understanding of decisions and satisfaction of the patient decision-making process. While the focus of patient decision aids on decision-making at the individual level potentially limited its contribution towards the development of a decision aid intended for system-level decisions, they effectively capture a value-based trade-off that faces patients and policymakers, alike.

The growing development and use of patient decision aids can be attributed to the culmination of several trends. With the rise of consumerism in some nations, individuals are opting for informed choice over the more traditional avenue of paternalistic prescription for treatment. This movement has been supported by the growing influence of EBM and practices, where a plethora of information and evidence
is not only available to health practitioners but to the general public also. This has especially been the case with the growing literature of systematic reviews and other overview types of studies providing estimates of outcomes, enabling patients to make decisions regarding diagnostic, treatment and preventive health interventions that involve value-based trade-offs (O’Connor et al., 1999). This is reflected in the growing number of patient preference-oriented health policies that reserve the decision for use of an intervention to those who consider the treatment benefits to outweigh the risks.

A good decision is considered to be one that accurately reflects patients’ values in making these trade-offs (Dolan & Frisina, 2002; O’Connor et al., 1998). Others have added that a good clinical decision is one that reduces uncertainty, improves knowledge, sets more realistic expectations, clarifies values, and increases the satisfaction with the decision-making process (O’Connor et al., 1998). Providing accurate and relevant information is an important step in ensuring that these decision characteristics are met. However, improving the general understanding of the benefits and risks for a health intervention may not help individuals to evaluate their own values and likelihoods associated with the health intervention within their personal context (O’Connor et al., 1998). As a result, an increasing number of practice guidelines encourage more patient involvement within the clinical decision-making process. A growing number of decision aids have been developed to facilitate this, serving as adjuncts to patient counselling (Clancy et al., 1988; Kasper et al., 1992; Levine et al., 1992; Llewellyn-Thomas et al., 1991; O’Connor et al., 1999; O’Connor et al., 1998; Pauker & Pauker, 1987; Rothert et al., 1997).

3.1.3 – Meta-Narrative: Program Budgeting and Marginal Analysis

A total of 11 articles related to program budgeting and marginal analysis were reviewed. Program budgeting and marginal analysis (PBMA) provided important insights as a tool that is used for priority setting, often at an organizational level. Also dealing with high-level resource allocation issues, it mirrors many of the dilemmas facing policymakers of population-based health policy concerns.

Program budgeting is the cost-accounting system that details the costs of every activity or program that is to be carried out within a budget, including objectives, outputs, expected results and the associated resource costs. The underlying assumption behind the development of program planning and budgeting (PPB) was that over time, bureaucratic activities often developed separately from the original objectives that they were meant to achieve. Thus, the aim of PPB was to specify programmes within these activities in relation to well-defined objectives that allowed a comparison between programs' costs and effectiveness towards these objectives (Pole, 1974). This system was first introduced by the United States Department of Defense in the 1960s to track the distribution of resources, categorized by their specific military objectives rather than by conventional budgetary headings such as tanks, staff or missiles. It
enabled comparisons between resource allocation changes based on their relative contribution to those objectives (http://www.medicine.ox.ac.uk/bandolier/painres/download/whatiscpbma.pdf).

Use of this approach in the health setting was first seen in the 1970s (Pole, 1974). Instead of seeing investment on the level of a hospital or drug budget, the focus switched to specific health objectives such as reducing maternal mortality and improving indicators of child health. Pole (1974) further noted that programme budgets could be suggestive in themselves and form a basis for further analysis, including marginal costs in identifying costed options for resource allocation. This was first demonstrated in the United Kingdom (Mooney et al., 1997; Mooney et al., 1986; Mooney, 1978). Since then, PBMA has commonly been used together as a tool for priority setting and has been used in different forms, for different purposes, and in different locations. While this priority setting activity can be used at both the micro-level (within health programs) and at the macro-level (across programs)(Peacock & Edwards, 1998), the majority of its applications in the last thirty years have been at the micro-level, within service areas (Mitton & Donaldson, 2001). Examples of PBMA have been noted in England, Australia, New Zealand, and Canada (Bohmer et al., 2001; Donaldson et al., 2001; Miller et al., 1997; Peacock, 1998; Ruta et al., 1996).

PBMA is based on the fundamental economic principles of opportunity cost, the margin, (Mitton & Donaldson, 2004) and allocative efficiency (Peacock, 1998). Allocative efficiency is understood as the theoretical measure of benefit derived from a proposed distribution of resources. It utilizes both the concepts of opportunity cost and the margin to determine the most efficient use of limited resources. Opportunity cost refers to the potential benefit that is forgone by making one decision over another, such as investing resources in one way instead of another. Essentially, an opportunity cost exists for any decision that involves choice between two or more options and is therefore useful in evaluating the cost and benefit of choices. Used within the concept of the margin, which refers to shifts in the resource mix (Mitton & Donaldson, 2004), the expression of opportunity costs enables a comparison of marginal costs and marginal benefits for alternative distributions of resources.

The underlying principle is that choices between different resource distributions yield different marginal costs and marginal benefits that contribute to different allocative efficiencies, for which some are better than others. The goal then is to maximize allocative efficiency. In the context of healthcare, the goal is to maximize the health-related benefits for a group of individuals through an intervention or set of interventions within the optimal distribution of health services (Peacock & Edwards, 1998). PBMA assists decision-makers with this goal by examining how and where resources are currently invested; the
level of effectiveness of those investments, and the marginal health gains and costs of change (Brambleby et al., 2008; Donaldson & Farrar, 1993).

3.1.4 – Meta-Narrative: Policy Analysis

A total of 26 articles related to policy analysis were reviewed. Unlike the other types of decision aids that are discussed within this meta-narrative review, this set of tools is more conceptual than it is an explicit and guided framework to proactively assist in decision-making. However, given that the attributes discussed in the following section are cited in the political science literature as having due influence on the decisions that are made in the policy arena, it was important to consider its contributions to the development of a decision aid aimed at guiding decisions in that same context.

Policy analysis is an applied and multi-disciplinary field, borrowing concepts from a wide range of disciplines, though based largely in the social sciences, including: political science, public administration and history, sociology, and economics (Gilson & Raphaely, 2008; Walt & Gilson, 1994). For example, the field of economics has offered important techniques and insights into policy option appraisal based on efficiency and equity (Sharpe, 1975). It is an established field of inquiry in the United States and Europe (Fischer, 2003; Gilson & Raphaely, 2008; Parsons, 1995). From an academic perspective, it is an activity often conducted retrospectively (Buse, 2008). However, the notion of applied or prospective policy analysis is gaining attention, integrating and applying many of the more traditionally retrospective approaches but in a prospective manner (Glassman et al., 1999; Reich, 1995; Roberts et al., 2003; Walt & Gilson, 1994). The latter has been particularly relevant to policy planning activities. Prospective policy analysis assists with systematically organizing political data for analyzing and managing political strategies for healthcare reform (Glassman et al., 1999).

In the 1990s, health policy analysis was criticized for being too focused on the technical content and design of policy (Barker, 1996; Reich, 1995; Walt & Gilson, 1994). Its critics argued that approaches to health policy analysis until then had neglected to account for the role and impact of the decision-making context and the actors and processes involved in the development of policy and its implementation. They believed that focusing so intently on the policy content hindered proper understanding and explanation of how and why certain policies failed or succeeded. This type of analysis was unable to assist policymakers in making strategic decisions about future policies or their implementation (Gilson & Raphaely, 2008). Increasingly, policy reform was being recognized as a political process, where policy was a product of and constructed through political and social processes, such as the interaction between policy content, the decision-making context, and the processes and actors involved in policymaking (Fischer, 2003; Gilson & Raphaely, 2008; Reich, 1995; Roberts et al., 2003;
Walt & Gilson, 1994). Proponents called for the application of new analytic paradigms, drawing attention to "how problems are defined, agendas are set, policy is formulated and re-formulated, implemented and evaluated" (Parsons, 1995). Particularly relevant for prospective policy analysis, greater understanding of the policy context in which decisions are being made will enable policymakers to survey whether the conditions and capacity for successful policy implementation are in place (Grindle & Thomas, 1991). Formal tools developed to assist with prospective policy analysis combine the technical features of the content of health policy reform with the policy context and its actors.

While the literature on policy analysis is highly variable, containing many different definitions and theories (Heclo, 1972), there are three concepts that commonly pervade this literature: ideas, interests and institutions. In the 1990's, public policy scholars began to examine the impact of ideas on policymaking (Campbell, 2002; John, 2003). Ideas may be considered as socially shared knowledge about the origins and solutions to public problems (John, 2003). Ideology provides a normative framework for interpreting both present realities and idealistic social, economic, and political conditions. Ideas include "everything from normative and ontological beliefs to perceptions about the disposition of other actors to understandings of causal relationships" (Poteete, 2003). They form the basis of understanding about causal relationships and guide interests. Interests are rather straightforward and speak simply to policymakers' personal stakes and involvement in policy. As Poteete (2003) stated, "[p]eople strive to promote their interests when attempting to influence decisions about policy."

Institutions refers to the literature on institutionalism, which posits that formal structures and embedded norms affect human behaviour (John, 2003). In the broadest sense, institutions are rules that form the foundation of all political behaviour (Steinmo, 2001). Lowndes (1996) provides a useful baseline definition; they are a meso-level concept that has both formal and informal components, legitimacy and show stability over time. Institutions are created by individuals but shape human action through the supply of constraints and opportunities. In addition to formal rules and laws, human behaviour is influenced by informal norms and customs that are part of collective habitual action. Finally, institutions have legitimacy over individual preferences, given their stability over time or their connection with a "sense of place"(Lowndes, 1996). Institutions structure politics by determining who has the authority to participate in a particular political arena, the interests of political actors and consequently, their political strategies towards the development and implementation of policies (Poteete, 2003; Steinmo, 2001). For example, the structure of incentives of a political institution will impact the attention given by political actors to certain types of ideas (Poteete, 2003).
These three concepts have been theorized as drivers of policy change both independently and interdependently, though more recent accounts have been focused on the latter. A number of international studies and comparative politics have examined the relative importance of ideas, interest, and institutions in this regard. Ideas have received strong support as a major driving force, framing the perceived set of feasible policy options from within which bureaucratic and political institutions then constrain the choice of policies (P. A. Hall, 1989, 1993, 1997; Hirschman, 1982; Walsh, 2000; Weir & Skocpol, 1985). In contrast, some have suggested that a better understanding of policy would result from the analysis of the interaction between interests and ideas (Campbell, 2002; P. A. Hall, 1993; Jacobsen, 1995; Ropp & Sikkink, 1999; Suchman, 1997). In essence, ideas, interests, and institutions expand the scope of policy analysis beyond that of policy content. They offer description and understanding of the policy process and the actors therein, providing a broader framework for analyzing policy outcomes, both retrospectively and prospectively.

3.1.5 – Meta-Narrative: Health Technology Assessments

A total of 13 articles related to health technology were reviewed. Health technology assessment (HTA) is highly relevant to the present study, as a decision aid designed to assist with priority setting decisions surrounding the implementation of new health technologies. The decision about which health technologies to implement are an important facet of the many decisions facing policymakers at the population-based health policy level. As a tool that assists with decisions at the same level as intended with the proposed aid, the evolution of HTAs provides great insight into the types of considerations that are pertinent to the intended users of the proposed aid.

Innovation in technology has been considered one of the major drivers of rising healthcare costs (Lubitz, 2005). Particularly with the rapid pace in the development of new health technologies, regulators and providers of healthcare services have been forced to take greater care and responsibility in decisions to implement new technologies (Cappelen & Norheim, 2006). Underlying the usage of HTAs is the notion that decision-making about the implementation of health technologies should be evidence-informed (Hunter et al., 1994) and geared towards selections compatible with a "value for money" approach (Sendi et al., 2003). The field of HTA is often traced back to the early 1970s, when the United States Social Security Act mandated that prior approval precede acquisition of new equipment and capital improvements in order for hospitals to receive reimbursement from Medicare (Jonsson, 2002; Office of Technology Assessment, 1976). The United States Department of Health and Human Services Office of Technology Assessment (OTA) was established to assist in this process by providing an independent source of information and analyses about the complexities of the scientific nature of these acquisitions.
Drawing from a variety of disciplines (e.g., health policy, biomedical engineering, management of technology, economics/health economics, clinical epidemiology), this field has since grown into a multidimensional approach used at all levels of decision-making in healthcare for assessing the implementation of novel solutions for improving the diagnosis and treatment of illness. Battista (2006) has demonstrated this evolution of HTA by chronicling three distinct phases: machine, clinical outcomes, and delivery models. The machine phase describes HTA in its initial form as first used by the OTA. The focus of such assessments was to examine the technical performance of new health technologies. While these technologies promised innovative and effective interventions for improving health, they often came at a high price, which placed an impetus on the assessment of their efficacy and safety. For example, imaging technologies, such as computed tomography, were the subject of many assessments given their potential and promise for breakthroughs in the diagnosis and treatment of many illnesses through drastically improved visual scanning results (Battista, 2006).

The next phase of evolution for HTAs was brought on by the rise of EBM and with that, the emphasis on finding the safest and most efficacious technology (e.g., equipment and drugs) yielding the most health benefits as supported by the literature. The focus of HTAs then shifted from looking solely at the machine itself, to the disease conditions and clinical outcomes impacted by the machine (Battista, 2006). In effect, HTAs were now used to assess not only the safety and efficacy of a single health intervention but to provide a broad comparison between interventions in order to determine the ‘best’ technology supported by the evidence. The comparison of interventions opened up the field of inquiry to include the efforts of economists, ethicists, epidemiologists, and social scientists (Battista, 2006).

The third phase of HTA is ongoing. It emerged from the increasing complexity of HTA products and subsequent potential for contribution towards decision-making at all levels of healthcare. This phase builds on the OTA’s inclusion of delivery systems in the definition of ‘health technology,’ noting the importance of the context within which a health intervention is distributed. Battista (2006) adds the increasing influence of knowledge transfer as a contributing factor to the onset of this phase of HTA development. There was a growing recognition that many health service delivery and resource allocation decisions are made beyond government policy, at the level of regional health authorities, hospitals, departments, clinic offices, etc.

HTAs were seen as a way to increase knowledge translation by providing synthesized evidence for use by decision-makers at these various levels of healthcare decision-making. However, the needs and practices of decision-makers at these different levels of decision-making vary. Macro-level HTAs generally deal with health policy decisions, meso-level with institutional management decisions, and
micro-level with practice guideline decisions (Battista & Hodge, 1999). Thus, it was a natural progression for HTAs to shift their focus of assessment towards much broader and multidimensional analyses to assist decision-makers at all levels.

Battista (2006) illustrates three distinct phases in the development of HTA, where the focus of analysis has shifted to meet the needs and contexts of its users. However, he describes its evolution as an additive sequence where different versions of HTAs have been adapted out of its expansion for use by a wider audience. More often than not, these various HTAs are used in conjunction in the complex reality of healthcare decision-making.

3.1.6 – Meta-Narrative: Evidence-Informed Health Policy Decision Aids

A total of 5 articles related to evidence-informed health policy decision aids were reviewed. Evidence-informed health policy decision aids encompass too vast a grouping of studies that don’t necessarily build upon each other or evolve from the same theoretical foundations to be grouped or collectively referred to as a single research tradition. Rather, while some evidence-informed health policy decision aids may draw components from various scientific disciplines, others have no clear theoretical underpinnings, concepts, or assumptions to ground the tool. However, given the direct relevance of these tools to the present study subject, it would be imprudent to exclude them from this review. Thus, an exception was made to include these tools in the meta-narrative review, in order to benefit from any insights that might contribute to the development of the proposed aid.

Five tools were identified that specifically support evidence-informed health policy: SUPPORT Tools for Evidence-Informed Health Policymaking (Oxman et al., 2009d); the WHO's Handbook for Supporting the Development of Health System Guidance (Bosch-Capblanch, 2011); the Evidence and Value: Impact on DEcisionMaking (EVIDEM) framework (Goetghebeur et al., 2008); the Appraisal of Guidelines for Research and Evaluation for Health Systems (AGREE-HS) tool (Ako-Arrey et al., 2016); and the Evidence-Informed Policy Practice Pathway (Bowen & Zwi, 2005). While there are additional tools that support the assessment of evidence for informing health policy (e.g., Grading of Recommendations, Assessment, Development and Evaluation tool, AGREEII, Critical Appraisal Skills Programme tools), they don't necessarily capture all of the nuances and contextual factors of a population-based healthcare sector policy decision and were not included in the review. A noteworthy tool that was excluded from the present review is the Interactive Evidence to Decision framework by the DECIDE consortium. Access to this tool was limited to its introduction through the website (http://ietd.epistemonikos.org/#/login) and was therefore excluded at present. Its purpose is to assist in the use of evidence in a structured and transparent way for informing a range of healthcare decisions,
including public health recommendations. With publications forthcoming, this tool should be revisited to ascertain what might further be learned for the development of this study's proposed aid.

The evidence-informed health policy decision aids identified through this review share the common goal of aiding in evidence-informed health policymaking, however, they differ greatly in their approaches to decision support and use different methods and approaches for incorporating evidence. For example, the SUPPORT tools (Oxman et al., 2009d) provide specific directions for what the policymaking process should entail, outlining and supporting the policymaking process from finding and using evidence about local conditions (Lewin et al., 2009b), to organizing and using policy dialogues (Lavis et al., 2009c), all the way to using evidence to balance the pros and cons of policy options (Oxman et al., 2009b). The WHO's *Handbook for Supporting the Development of Health System Guidance* (Bosch-Capblanch, 2011) is similarly prescriptive about the guidance development process. It is a good example of how the identified set of tools brings together other tools and frameworks designed to assist with specific components of policymaking (e.g., tools for evidence retrieval, appraisal and synthesis). On the other hand, the WHO's *Handbook for Supporting the Development of Health System Guidance* (Bosch-Capblanch, 2011) also differed slightly from the rest of the identified tools as it explores healthcare policy from more of a global perspective. It is geared more specifically to inform the subset of "decisions about how to organize health systems and how to get effective programs, services and drugs to those who need them; not about which public health programs or drugs to fund or deliver" (Bosch-Capblanch, 2011). Similarly, the AGREE-HS tool is designed to support health system guidance development and reporting from global, national, and regional perspectives by way of assessing the quality of guidance (Ako-Arrey et al., 2016). The other three tools are designed to support the plethora of decision types facing public health policymakers. Together, these tools provided important insight into different facets of considerations facing healthcare policymakers that can be built upon.

### 3.1.7 Areas of Convergence and Divergence Between Research Traditions

While the various research traditions explored pertain to decision aids from different contexts and support a wide range of decision types, a number of similarities and differences were found. The most striking similarities included shared purpose and many overlaps in terms of the structure and content of the identified decision aids. Areas of divergence between the meta-narratives were mainly concerned with the level of prescription regarding the decision-making process as a whole, the stage/phase of decision-making that the aid was designed to support, context-specific content of the decision aids, and the specific methods used to support decision-making. The following section outlines these similarities and differences found between the research traditions. In addition, as per meta-narrative review methodology,
an attempt is made to explain the identified differences in terms of the developed meta-narratives of the research traditions in question.

Naturally, each of the decision aids explored was designed with the broad purpose of supporting decision-making in specific contexts and by specific users. For example, patient decision aids were designed to support patients in making specific and deliberative choices among options relevant to the person's health status (O'Connor et al., 2009). Aside from this blanket purpose of assisting with decision-making, which is expectedly the purpose of any decision aid regardless of the context, some more specific objectives were also presented. For example, patient decision aids were primarily concerned with improved decision-making and with decision outcomes. O'Connor et al. (1999) identified the following as objectives focused on improved decision-making:

- Improve knowledge of the clinical problem, options, outcomes, and variation in patient or practitioner opinions and practices.
- Create realistic expectations of outcomes, consistent with available evidence.
- Clarify personal values for outcomes and promote congruence between patients’ values and choice.
- Reduce patients’ and practitioners’ decisional conflict (uncertainty) about the course of action to take.
- Promote implementation of choices.
- Improve patients’ or practitioners’ satisfaction with decision making.

While these objectives are stated in context-specific terms (through patient and practitioner perspectives), some of these objectives also applied to other research traditions in more general terms. The most common aim across all of the research traditions was to provide information or an overview of the alternative options and further, to evaluate and choose among those alternatives based on multiple criteria. PBMA provides users with the necessary information for identification of the most efficient manner of providing services and consideration of health system objectives (Mooney et al., 1986). Similarly, Glassman et al. (1999) stated that "[a]pplied political analysis can be helpful in organizing political data in a systematic way, in analyzing the political risks of health sector reform... ." The aim to clarify stakeholder values and expectations was also present across all research traditions. Though this aim was not explicitly stated as a purpose for most of these tools, it was present in the inputs for consideration
towards decision-making. Some tools provided explicit methods for assisting in the weighing of such values and expectations, discussed later.

All of the decision aids included in this review were also similarly structured around three common activities of decision-making: problem definition, environment mapping, and identification and evaluation of options. The only exception was the absence of problem definition in PBMA due to the nature of the decision context. Rather than a specific problem that requires attention, PBMA deals with priority-setting activities that are relatively routine and that are not necessarily a response to a problem. The goal of PBMA is simply to maximize the benefits achieved from a given set of resources, while aligning with system objectives (Mooney et al., 1986).

The three decision-making activities are elaborated in the decision aids through prompts that elicit the information relevant to each activity, further categorized into decision domains that emerged from the literature. Each decision domain is made up of a group of decision elements that capture a unique dimension of decision-making. Most decision aids provided explicit categorization of the decision elements into relevant decision domains, though some simply listed all decision elements for general consideration under the tool. A total of 11 decision domains were identified in the review (grouping together overlapping dimensions across tools) and are described below, along with each research tradition's contributions. The 11 decision domains included: characteristics of the healthcare issue, local contextual characteristics, stakeholder characteristics, ideational characteristics, characteristics of the proposed healthcare initiative, clinical/health characteristics, health system and population impact characteristics, implementation – planning characteristics, implementation – impact management characteristics, economic characteristics, and evidentiary characteristics. Though the language and specific items detailed by each research tradition varied based on the decision context of interest, similarities across research tradition contributions were found within each identified decision domain. For example, within the 'Stakeholder Considerations' domain, regardless of how they were referred to within a given research tradition, decision elements prompted consideration of that entity's perspectives, experiences, and value judgments that might influence the decision-making process.

The first decision domain had to do with the activity of problem definition. The 'characteristics of the problem' domain had to do with understanding the problem or issue at hand, for which each decision aid is meant to support decision-making for. As previously stated, PBMA did not include a problem definition aspect to its decision support and therefore had little to offer to this decision domain. Otherwise, as can be seen in Table 2, there is much overlap between the contributions of the other research traditions.
Table 2. Research tradition contributions to decision elements relating to the 'Characteristics of the problem domain'.

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements related to ‘characteristics of the problem domain’</th>
</tr>
</thead>
</table>
| Principles of Screening  | • Importance of the health problem posed by the disease/condition  
                          |   o Appropriateness of the disease/condition’s incidence and prevalence  
                          |   o Significance of the morbidity or mortality caused by the disease/condition  
                          |   • The natural history of the disease/condition  
                          |   o Whether the disease/condition is clearly definable  
                          |   o How well the natural history of the disease/condition is understood  
                          |   o Whether the natural history includes a preclinical phase  
                          |   ▪ The length of the preclinical phase and whether it’s sufficient for detection by screening at reasonable intervals |
| Patient Decision Aids    | • Description of disease/condition  
                          |   o Cause of illness/diagnosis  
                          |   o Severity/stage  
                          |   o Demographic characteristics  
                          |   o Physical/social/emotional impact of disease  
                          |   • Patient characteristics: age, gender, education, ethnicity, occupation, locale, diagnosis and duration of condition, health status (physical, emotional, cognitive, social) |
| Health Technology Assessments | • Mechanisms of disease  
                          |   • The course, prognosis and consequences of the health condition  
                          |   • Burden of illness: incidence, prevalence, other measurements of impact of an illness on population health |
| Program Budgeting & Marginal Analysis | • Program area and objectives of interest |
| Policy Analysis          | • Broad conditions facing society, potentially warranting government attention  
                          |   o Magnitude of and changes in severity of a condition  
                          |   o Focusing events that bring attention to a policy issue (e.g., disasters, social protests, feedback on operation of existing programs)  
                          |   o Situational or transient status/context of the condition  
                          |   o Socio-cultural determinants related to the condition(s) (social class, ethnic and religious divisions) |
| Evidence-Informed Health Policy Decision Aids | • Description of problem  
                          |   o Determinants of health and health status (i.e., demographic profile)  
                          |   o Jurisdiction, health system (i.e., rural/urban; primary, secondary, tertiary)  
                          |   o Population and health system events  
                          |   o Disease progression/duration  
                          |   o Pathophysiology  
                          |   o Affected population (i.e., population participants and health system participants)  
                          |   o Clinical presentation  
                          |   o Disease severity  
                          |   o Magnitude of the problem or issue that the policy aims to address and stakeholders' views on it  
                          |   ▪ Size of population affected  
                          |   ▪ Identify indicators that can be used or collected to measure progress in addressing the issue  
                          |   ▪ Comparisons that can be made to establish the magnitude of the problem and to measure progress in addressing it  
                          |   • Comparisons against what policymakers and/or stakeholders predicted or wanted  
                          |   • Comparisons over time within a country  
                          |   • Comparisons between countries and other appropriate comparators |
• Comparisons against plans
  o Foreseeable consequences of ignoring problem
• Manner in which problem came to attention and subsequent influence on prospect of it being addressed
  o A focusing event
  o A change in an indicator
  o Feedback from the operation of current policies and programmes
• Framing of problem
  o Motivations of different groups
• Likely cause(s) of the problem
  o Causal chain between health systems problems and users' needs
• Visibility of problem in international community

Environment mapping was related to three decision domains: contextual considerations, stakeholder considerations, and ideological considerations. Contextual considerations contain decision elements related to contextual factors (see Table 3) that condition the limits of the alternative solutions to the problem, through formation of opportunities and constraints. All the research traditions, with the exception of principles of screening, contained explicit decision elements pertaining to this domain.

Table 3. Research tradition contributions to decision elements relating to ‘Contextual considerations’ domain.

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Screening</td>
<td>N/A</td>
</tr>
</tbody>
</table>
| Patient Decision Aids | • Sociopolitical context
  o Institutional traditions
    • Clinical, practice characteristics
    • Referral patterns
  • Information on others:
    o Cases of different choices
    o Statistics on variation in patients’ decisions or practitioners’
  • Patient access to personal and external resources for information, advice, emotional support, instrumental help and health and social services needed to implement the decision |
| Health Technology Assessments | • Proposal by whom (i.e., hospital, department, person)
• Mechanisms of disease
• Priority for department/hospital
• Current treatment alternatives
• What are the course, prognosis and consequences of the condition?
• What is the burden of illness: incidence, prevalence, other measurements of impact on an illness on population health
• Previous instances/implementation elsewhere
• Legal, ethical, social standards of care
  o Medico-legal or bioethical issues |
| Program Budgeting & Marginal Analysis | • Current activity information:
  o Services currently offered
  o Organization and administration of services
  o Effectiveness of current services
  o Objectives of current services
• Resource inputs:
  o Total resources are available
  o Current distribution of resources amongst programs
• Guidelines from professional bodies |
The stakeholder considerations domain identifies relevant stakeholders and their relationships to the decision-making process and to the problem in question, presented in Table 4. PBMA was the only research tradition that did not explicitly acknowledge the value judgements of stakeholders as a consideration in decision-making. It is possible that this is due to the strong influence of economic principles in this research tradition. Rather than prompting consideration of stakeholder issues, a more quantitative approach was used to integrate their impact into decision support. Stakeholders were actively engaged through PBMA to elicit their value judgements regarding each decision element during the deliberative process, assigning weights that affect its influence on the overall decision. Thus, stakeholders' values, perspectives, and subsequent influence are inherent to the decision-making process for arriving at a decision using this aid.

Table 4. Research tradition contributions to decision elements relating to the ‘Stakeholder considerations’ domain.

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of</td>
<td>• Values and preferences of patients, providers and the public</td>
</tr>
</tbody>
</table>
### Screening

<table>
<thead>
<tr>
<th><strong>Patient Decision Aids</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Patient and practitioner preferences for participation in decision-making (e.g., client-controlled, shared with practitioner)</td>
</tr>
<tr>
<td>• Patient expectations and preferences</td>
</tr>
<tr>
<td>• Patient motivation: readiness and interest in decision making</td>
</tr>
<tr>
<td>• Experience: previous exposure to the clinical problem, alternatives, consequences, decision making process</td>
</tr>
<tr>
<td>• Confidence in one’s abilities in decision making</td>
</tr>
<tr>
<td>• Perspectives of important others (e.g., family, health practitioner)</td>
</tr>
</tbody>
</table>

### Health Technology Assessments

<table>
<thead>
<tr>
<th><strong>Actors and interest groups involved</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reaction in response to proposed technology</td>
</tr>
<tr>
<td>• Acceptability of technology to community members and stakeholders</td>
</tr>
<tr>
<td>• Consistency w/societal and ethical values</td>
</tr>
<tr>
<td>• Societal values regarding appropriate usage and impact of health technology</td>
</tr>
<tr>
<td>• Ethical issues regarding use or non-use of health technology</td>
</tr>
<tr>
<td>• Pressure from physicians</td>
</tr>
<tr>
<td>• Compliance, acceptance, satisfaction, demand, preferences</td>
</tr>
<tr>
<td>• Consistency w/societal and ethical values</td>
</tr>
<tr>
<td>- Societal values regarding appropriate usage and impact of health technology</td>
</tr>
<tr>
<td>- Ethical issues regarding use or non-use of health technology</td>
</tr>
</tbody>
</table>

### Program Budgeting & Marginal Analysis

| **Value judgements** |

### Policy Analysis

<table>
<thead>
<tr>
<th><strong>Primary and secondary actors</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Political bodies (e.g., political parties, the senate, policy communities, regulatory agencies)</td>
</tr>
<tr>
<td>• Economic bodies (e.g., firms, trade unions, family farms, cooperatives)</td>
</tr>
<tr>
<td>• Social bodies (e.g., churches, clubs, athletic associations)</td>
</tr>
<tr>
<td>• Educational bodies (e.g., schools, colleges, vocational training centres)</td>
</tr>
<tr>
<td>• International agencies (e.g., national aid agencies, international NGOs, World Bank)</td>
</tr>
<tr>
<td>• Epistemic communities</td>
</tr>
<tr>
<td>• Interest and coalition groups</td>
</tr>
<tr>
<td>• Actors' positions on the policy (ranging from high support to high opposition)</td>
</tr>
<tr>
<td>• Actors’ level of power and influence (low to high)</td>
</tr>
<tr>
<td>• Potential impact on policy</td>
</tr>
<tr>
<td>• Actors' values and perspectives that might influence their perception of the policy problem and options</td>
</tr>
<tr>
<td>• Other important attributes [e.g., level of policymaking (national or regional), sector (political, commercial, media, governmental), affiliated organization]</td>
</tr>
<tr>
<td>• Actors' interest in the policy decision</td>
</tr>
<tr>
<td>• Relative importance of their interest</td>
</tr>
<tr>
<td>• Relationships exist between actors</td>
</tr>
<tr>
<td>• Alliances</td>
</tr>
</tbody>
</table>

### Evidence-Informed Health Policy Decision Aids

| **Identify primary and secondary stakeholders** |
| **Stakeholder views and experiences** |
| • Leadership |
| • Knowledge and skills |
| - Competency in analysis of information |
| - Assessment and adaptation of skills to local context |
| - Learning and development mechanisms |
| - Procedural knowledge |
| • Resources |
| • Organizational support |
| • Partnership links |
| • Networking |
The ideological considerations domain elicits information on prominent ideas surrounding and/or impacting the problem in question. As demonstrated in Table 5, only two of the six research traditions had anything to contribute to this domain: policy analysis (ideas, interests, and institutions) and evidence-informed health policy decision aids. This is explained by the decision context in which these decision aids are used, the policymaking process. As described in the policy analysis (ideas, interests, and institutions) meta-narrative, policy was seen as a product of and constructed through political and social processes. Within such processes, ideas were theorized as one of the major driving factors of policy change and was therefore an integral aspect of decision support. Also grounded in the policymaking process and subsequently having drawn from policy analysis theories, some evidence-informed health policy decision aids [e.g., Bowen and Zwi (2005)] also incorporated ideological elements in their tool.

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Screening</td>
<td>N/A</td>
</tr>
<tr>
<td>Patient Decision Aids</td>
<td>N/A</td>
</tr>
<tr>
<td>Health Technology Assessments</td>
<td>N/A</td>
</tr>
<tr>
<td>Program Budgeting &amp; Marginal Analysis</td>
<td>N/A</td>
</tr>
<tr>
<td>Policy Analysis</td>
<td>• World views of policymakers</td>
</tr>
<tr>
<td></td>
<td>• Cognitive and normative ideas (founded within values, identities, attitudes,</td>
</tr>
<tr>
<td></td>
<td>and other collectively shared experiences) influence the range of acceptable</td>
</tr>
<tr>
<td></td>
<td>and legitimate policy options</td>
</tr>
<tr>
<td></td>
<td>• Cognitive paradigms and normative frameworks at the transnational level (world</td>
</tr>
<tr>
<td></td>
<td>culture) are relevant to the policy decision</td>
</tr>
<tr>
<td></td>
<td>• Frames applied to presentation of the policy problem and options</td>
</tr>
<tr>
<td></td>
<td>o Manners in which this potentially motivates different groups</td>
</tr>
<tr>
<td></td>
<td>o Potential effects on policy decision</td>
</tr>
<tr>
<td></td>
<td>• Programmatic ideas that can suggest existing instrument and institutions within</td>
</tr>
<tr>
<td></td>
<td>this policy context</td>
</tr>
<tr>
<td>Evidence-Informed Health Policy Decision Aids</td>
<td>• Views of epistemic communities</td>
</tr>
<tr>
<td></td>
<td>• Government's ideological influences</td>
</tr>
<tr>
<td></td>
<td>• Prominent public ideology</td>
</tr>
</tbody>
</table>

The remaining seven decision domains related to the identification and evaluation of alternative options to the problem in question: characteristics of the proposed alternative options, clinical/health considerations, health system and population impact considerations, implementation – planning considerations, implementation – evaluation considerations, economic considerations, and evidentiary considerations. Characteristics of the proposed alternative options was straightforward and contains...
decision elements that describe the details of the alternative options for solving the problem at hand, demonstrated in Table 6.

Table 6. Research tradition contributions to decision elements relating to the 'Characteristics of the proposed healthcare intervention' domain.

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements</th>
</tr>
</thead>
</table>
| **Principles of Screening** | • Objectives of the screening program  
  • Target population for screening  
    o Clearly defined  
    o Identifiable and accessible  
    o Acceptable target age-range for screening  
  • Characteristics of the screening test:  
    o Effectiveness of the test (in preclinical phase)  
      ▪ Sensitivity/specificity of the test  
      ▪ Appropriateness of the positive predictive value  
    o Safety  
    o Simplicity  
  • Timing of screening program (and the following treatment as necessary)  
  • Existence of effective treatment/intervention at improving clinical outcomes (such as mortality, morbidity, and/or quality of life)  
  • Treatment/intervention is more effective when initiated at an early stage of the disease/condition than at a later stage  
  • Treatment/intervention is accessible to patients identified through screening |
| **Patient Decision Aids**   | • Projected treatment details                                                                                                                      |
| **Health Technology Assessments** | • Name/designation of health technology  
  • Type and mechanisms of intervention  
    o If a device, description of technical characteristics and functioning  
    o If a community/system-related intervention, description of its crucial features  
  • Indication on which proposal is concerned  
  • Comparison between new proposal and usual practice  
  • Prior proposal attempts  
  • Description and purpose of adoption  
  • Lifespan of technology  
  • Status of the technology  
    o Diffusion/distribution  
    o Patterns of use  
    o Current indications for use  
    o Current utilization  
    o Regulatory status  
    o Manufacturers and market shares  
  • Proposal by whom (hospital/department/person) |
| **Program Budgeting & Marginal Analysis** | • Brief, clear description of proposed initiative  
  • Main candidates for more resources |
| **Policy Analysis**         | • Major goals and mechanisms of proposed initiative                                                                                               |
| **Evidence-Informed Health Policy Decision Aids** | • Identification of an appropriate set of options to address policy problem (e.g., health system arrangements; provision of a cost-effective program, service or drug; delivery arrangements)  
  o Identify strategies for mitigating/reducing harms  
  • Characteristics of policy option  
    o Indication  
    o Technical characteristics (e.g., interactions, dosing and administration) |
Projected outcomes clearly outlined (communicates what has changed and by when)

- Usefulness of policy option
  - Complexity – easy to understand
  - Compatibility with values, past experiences and current national mood
  - Opportunity to trial and change, as needed
  - Sustainability of policy options and their outcomes

The clinical/health considerations domain was concerned with health-related impacts of the alternative options at patient- and population-levels, depending on the scope of the decision, shown in Table 7. For example, patient decision aids prompted such considerations at the patient-level, as relevant to the individual whose health condition (and treatment of) is in question. In contrast, the principles of screening, which looks at the decision to implement population-based screening procedures, was concerned with both patient-level and population-level considerations. The policy analysis research tradition had nothing to offer in this domain as its scope of decision-making is much broader and not specific to health policy problems.

Table 7. Research tradition contributions to decision elements relating to ‘Clinical/health considerations’ domain.

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements</th>
</tr>
</thead>
</table>
| Principles of Screening | • Level of improvement of clinical outcomes  
• Comparative value of the overall benefits of the screening program (e.g., reductions in mortality and morbidity, improvements in quality of life) and the potential physical and psychological harms (e.g., adverse events resulting from screening and diagnostic tests, harms resulting from earlier treatment and overtreatment, likelihood of erroneous results from screening and diagnosis and the effects of this, social stigma and/or psychological impact, downtradition effects of surveillance)?  
• How broad are the confidence intervals around the estimated size of the beneficial effect, and what are, at each end of the confidence intervals?  
• How many people have to be screened to find one case or prevent one death?  
• What are the expected health benefits?  
• There should be evidence from high-quality randomized controlled trials that the screening programme is effective in reducing mortality or morbidity  
• The overall benefit of the screening program outweighs the potential physical and psychological harms from its application? |
| Patient Decision Aids | • Expected outcomes  
  - Survival times  
  - Timelines  
  - Probabilities of outcomes  
• Tailored probabilities  
  - Emotional, functional/physical and social impacts  
• Associated risks (absolute and relative)  
• Associated benefits |
| Health Technology Assessments | • Impact on burden of illness  
• Population affected: patient demographics  
  - Age of beneficiaries  
  - Gender, social factors, risk factors  
• Associated risks or adverse effects/events  
  - Frequency and severity |
The health system and population impact considerations domain, shown in Table 8, was concerned with non-health-related impacts that may affect the feasibility and acceptability of an alternative option at the system- and population-level. Naturally, patient decision aids had nothing to contribute to this domain given the much narrower scope of decision-making that they are concerned with.

Table 8. Research tradition contributions to decision elements relating to the ‘Health system and population impact considerations’ domain.

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Screening</td>
<td>The complete screening program (test, diagnostic procedures, treatment/intervention) is clinically, socially, and ethically acceptable to patients, health professionals and the public.</td>
</tr>
<tr>
<td>Patient Decision Aids</td>
<td>N/A</td>
</tr>
</tbody>
</table>
| Health Technology Assessments| Regulatory enablers/barriers  
|                             | Will technology assist the institution in moving into managed care marketplace of the future?  
|                             | Will it duplicate a service that already exists within institution/community/marketplace?  
|                             | How will new technology affect technologies already in place?  
|                             | Synergy with existing technology  
|                             | Environmental impact  
|                             | Contribution to professional development, education, training and research  
|                             | Capability to gain image-related benefits  
|                             | Consequences in terms of activities in next couples of years  
|                             | Proposal's affect on cooperation with other hospitals/regions/primary sector/etc.  
|                             | Opportunity for new technology to be of use by multiple services |
| Program Budgeting & Marginal Analysis | • Will technology assist the institution in moving into managed care marketplace of the future?  
• How will new technology affect technologies already in place?  
  o Synergy or overlap with existing technology  
• Impacts on population health  
  o Health status (clinical outcomes and quality of life), prevalence  
  o Health promotion and disease prevention  
• Associated risks (risk of status quo)  
• Compliance screen with relevant laws, regulations, contractual agreements  
• Fit with local context (i.e. strategic situation, healthcare environment, client population, community values  
• Local priorities with reference to national, regional, local objectives  
  o Specified objectives of health system and community  
• Impact on other potential projects  |
| Policy Analysis | • Instability created by changes in political regime  
• Likely impacts on the power and position of major actors  |
| Evidence-Informed Health Policy Decision Aids | • Acceptability in terms of likely political support  
  o Critical mass and incentives  
  o Links to champions  
• Compatibility with national/regional development/priorities and prominent ideologies  
• Equity impacts of a programme following implementation  
• Capacity for implementation - technical feasibility  
  o Identify opportunities and barriers to implementing policy options  
  • Among healthcare recipients and citizens  
  • Among healthcare professionals  
  • At the organizational level  
  • Credibility  
  • Compatibility with guidelines/policy directives  
• Support for and participation in key internal and external groups, networks, communities, and partnerships  
• Technology to support work  
• Skilled and competent workforce  
• Workforce development opportunities  
• Appraisal of skills, work recognized  
• Research evidence and knowledge available  
• Active primary innovator, knowledge broker  
• Organizational and cultural norms: support for innovation, valuation of issue/action, leadership for action, management of change  
• Management support for policy action  
• Accessible, efficient systems to support work (e.g., documentation and reporting, communication, information, decision-making) |

Decision elements exploring the implementation of the proposed alternative options were divided into two separate domains: planning considerations and evaluation considerations. The former explores details surrounding the structure and organization of the proposed alternative and any resulting functional impacts on the health system, as shown in Table 9. Again, patient decision aids had nothing to offer to this domain due to the scope of decision-making. The latter, shown in Table 10, is concerned with surveillance needs surrounding the proposed alternative options. Both patient decision aids and PBMA research traditions had nothing significant to contribute to this domain. This is possibly due to consideration of the decision contexts and intended users of the decision aids, patients (and their health
practitioners) and high-level executives. In both decision contexts, there are often standard protocols already in place for evaluation, which might explain why this area of consideration is not explicitly integrated into these tools.

Table 9. Research tradition contributions to decision elements relating to the 'Implementation – planning considerations' domain.

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements</th>
</tr>
</thead>
</table>
| **Principles of Screening** | • Resource needs (e.g., staffing, facilities, etc.) necessary for testing, diagnosis, treatment, patient support and program management are well understood  
  ○ Identified resources are available such that all components of the screening program can be offered in a timely and equitable fashion  
  • Integrated testing, education, and clinical services  
  • Appropriate screening intervals  
  • Agreed referral methods for organized management of both positive and negative screening test results  
  ○ Clear understanding of who should (and should not) be offered post-screening treatment and/or investigation  
  ○ There is a clear understanding of what are the choices of treatment and/or investigation to be offered  
  ○ There is a clear understanding of what to do in situations where the results of screening are “borderline”  
  • Measures to ensure participant and physician compliance with diagnostic workup and appropriate management of the disease/condition  
  • Measures for protecting participants rights regarding personal data and, if applicable, their cellular material  
  • Effective methods for the recruitment of patients  
  ○ Effective methods for providing patients with informed choice/consent |
| **Health Technology Assessments** | • Change management issues  
  • Implementation timeframe  
  • Description of technology's application, in terms of patient-flow and work processes  
  • Measures to secure continuous control  
  • Physical setting for implementation of technology  
  ○ Transient period to reach steady state  
  • Effects of proposal on staff WRT information, training, work environment  
  ○ Roles and competencies  
  ○ Employee satisfaction  
  • Organizational feasibility  
  ○ Enablers/barriers within infrastructure (i.e. human resources and regulatory aspects)  
  ○ Co-ordination of adoption between administration levels and across units  
  • Control measures for use of technology  
  ○ Establish accountabilities  
  ○ Rules and guidelines for use of technology  
  ○ Structures for co-ordination, payment, control, etc.  
  • Attitude and norms among staff and patients  
  ○ Is it likely that the treatment will be accepted or will it meet resistance?  
  ○ How does the treatment suit the existing routines and traditions in the organization?  
  ○ Are changes in perception and understanding of the treatment needed? |
| **Program Budgeting & Marginal Analysis** | • Capacity: have needed materials, financial, and health human resources to support project now (or in the future)?  
  • Interdependency: alignment with other projects? Depend on completion of other projects?  
  • Risk mitigation strategies |
### Policy Analysis
- Opportunities/obstacles existing within the organization(s) responsible for implementing the policy, in the general organizational environment, and in the broader political environment

### Evidence-Informed Health Policy Decision Aids
- Strategies to facilitate implementation of necessary systems changes associated with policy options
- Strategies to facilitate necessary organizational changes
  - Cultural complacency (resistance or scepticism)
  - Lack of communication
  - Lack of alignment and accountability
  - Passive or absent leadership
  - Micro-management
  - An overloaded workforce
  - Inadequate systems and structures
- Strategies to facilitate necessary behavioural changes among healthcare professionals
  - Lack of awareness
  - Lack of familiarity
  - Lack of agreement
  - Lack of self-efficacy
  - Lack of outcome-expectancy
  - Inertia of previous practice
  - External barriers
- Strategies to facilitate necessary behavioural changes among healthcare recipients and citizens
  - Socio-economic related factors
  - Health system and healthcare-related factors
  - Therapy-related factors
  - Factors-related to the particular health conditions of patients
  - Patient-related factors
- Insights about options, implementation, and monitoring and evaluation from evidence

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements</th>
</tr>
</thead>
</table>
| Principles of Screening | • Defined quality control standards  
• Plan for collecting and registering relevant health data/information  
• Plan for evaluating and monitoring the quality and performance of the screening program |
| Patient Decision Aids | N/A |
| Health Technology Assessments | • Methods for continuous control and evaluation |
| Program Budgeting & Marginal Analysis | N/A |
| Policy Analysis | • Appropriate measurement indicators |
| Evidence-Informed Health Policy Decision Aids | • Need for monitoring and evaluation  
• Development of new monitoring system and indicators, if existing monitoring system is insufficient  
  o Usefulness of findings  
  o Action plan should monitoring and evaluation reveal that things are not going as planned  
  o Clear decision-making flow/structure |
- Timely (e.g., synchronized with the project/programme life cycle, donor or funding flows)
- Integrated (into general management and decision-making structures of an organisation, project or programme)
- In scale (in terms of workforce, time and funding)
- Harmonized – remove duplicate efforts (e.g., data and data management facilities)
- Relation to other relevant initiatives
- User-friendly feedback
- Transparent
- Human capacity and infrastructure to collect, enter, store and analyse data, and to interpret and report it

- Measurement indicators
  - Specific, measurable, realistic, time-bound
  - Explanatory
  - Sustainability of programme effects over time
  - Relevance
  - Effectiveness
  - Efficiency
  - Impact (positive and negative, intended and unintended)
  - Sustainability

The economic considerations domain included decision elements describing the proposed alternative options' value for money and impact on resource use and allocation. Though the policy analysis research tradition has drawn from a number of fields, including economics, the focus of study has been less concerned with economic evaluation, so much as behavioural economics. The decision elements contributed here by other research traditions, displayed in Table 11, are concerned with the financial components of economics.

Table 11. Research tradition contributions to decision elements relating to the ‘Economic considerations’ domain.

<table>
<thead>
<tr>
<th>Research Tradition</th>
<th>Decision Elements</th>
</tr>
</thead>
</table>
| Principles of Screening | • Cost of the screening test/intervention  
  o The cost is inexpensive/acceptable.  
  • Cost-effectiveness screening test/intervention.  
  o All cost-effective primary prevention interventions have been implemented as far as practicable  
  o Cost-effective in relation to other options for managing the condition, and in relation to other healthcare priorities.  
  • The total financial cost of the screening program is economically balanced in relation to other healthcare priorities |
| Patient Decision Aids | • Patient access to sufficient financial resources to implement the decision |
| Health Technology Assessments | • Affordability  
  • Revenues and costs  
  o Start-up costs of equipment, rebuilding, training, etc.  
  o Additional/saved costs for hospital, other hospitals, other sectors, etc  
  o Hidden costs (i.e., construction/structural modification, energy usage, repair/maintenance, technology upgrades, service support, certification/training, etc.)  
  • Efficiency or value for money (economic evaluations)  
  o Cost-effectiveness |
Finally, the evidentiary considerations domain, presented in Table 12, explores factors relating to the quality of evidence used to form the basis for developing the proposed alternative options, discussion and final decision. Three research traditions did not include decision elements related to this decision domain: patient decision aids, PBMA, and policy analysis. The absence of such decision elements in the patient decision aids can potentially be explained by the still relatively paternalistic approach to medicine. In this decision context, healthcare practitioners are expected to be well-informed and knowledgeable about the patient's health condition and to provide accurate, relevant, and timely evidence to their patients. As such, evidentiary considerations are implied and integrated into the healthcare practitioner's role in the patient's decision-making process. In the cases of PBMA and policy analysis, the cause may be the intended users of the decision aid, high-level executives/decision-makers. Similar to patient decision aids, the scope of responsibility for evidentiary quality lies outside of the intended users of the decision aid. As such, the decision aids do not explicitly incorporate such decision elements in their decision support. The policy analysis meta-narrative explains that the focus of such studies (and tools) is on social and political processes, within which evidentiary considerations may play only a minute or insignificant role.

Table 12. Research tradition contributions to decision elements relating to the 'Evidentiary considerations' domain.

<table>
<thead>
<tr>
<th>Research</th>
<th>Decision Elements</th>
</tr>
</thead>
</table>
| Program Budgeting & Marginal Analysis | • Economic evaluations  
|                                   | • Resource inputs  
|                                   |   - Are there any areas of care that could be provided to the same level of effectiveness but with fewer resources, as to release some resources to fund  
|                                   |   - Are there areas of care that while effective, should receive fewer resources because an investment in a proposal from is more effective (per dollar)  |
| Policy Analysis                   | N/A                                                                |
| Evidence-Informed Health Policy Decision Aids | • Local costs (and savings) of each policy option and price justification  
|                                   |   - Adjusted cost for adapted policy options  
|                                   |   - Costs incurred by individuals, health systems and society  
|                                   |   - Time and opportunity costs  
|                                   | • Value for money, cost-effectiveness  
|                                   |   - Relative cost-effectiveness  
|                                   | • Policymakers and other stakeholders viewpoints adopted for economic analyses.  
|                                   | • Impacts on resource use (other spending)  
|                                   | • Acceptability in terms of policy options’ budget impact  
<p>|                                   |   - Availability of funding  |</p>
<table>
<thead>
<tr>
<th>Tradition</th>
<th>Principles of Screening</th>
<th>Patient Decision Aids</th>
<th>Health Technology Assessments</th>
<th>Program Budgeting &amp; Marginal Analysis</th>
<th>Policy Analysis</th>
<th>Evidence-Informed Health Policy Decision Aids</th>
</tr>
</thead>
</table>
|           | Evidence on screening programme’s effectiveness in reducing mortality or morbidity comes from High-quality randomized controlled trials | N/A | • Level/strength of evidence for:  
  o Efficacy  
  o Effectiveness  
  o Safety  
  o Uncertainty  
  • Ongoing studies  
  • Assumptions and uncertainties regarding economic evaluations | N/A | • Evaluation valued appropriately in terms of true costs and effects  
  • Quality of evidence  
    o Type of study (e.g., systematic review)  
    o Perspective of analysis and its rationale  
    o Adherence to requirements of decision-making body (i.e., methodological soundness)  
    o Completeness and consistency of reporting evidence  
    o Relevance and validity  
      ▪ Studies conducted in same setting or consistent across settings or time periods  
      ▪ Representativeness - Implications regarding evidence on feasibility, effectiveness, and acceptability, given important differences in:  
        • On-the-ground realities and constraints  
        • Health system arrangements  
        • Baseline conditions  
  • Confidence in evidence for impacts on resource use  
  • Potential for misinterpretation of inconclusive evidence as no effect  
  • Confidence about a decision despite a lack of evidence |

While there were many similarities in the structure and content of the decision aids explored in this review, a number of differences were found in the methods used for the decision-making process, both between and within research traditions. As stated previously, all decision aids had a common purpose of providing relevant information for decision-making to the user, however, some provided more specific decision-making methods. For example, PolicyMaker, a policy analysis decision aid provided users with a toolbox consisting of 31 expert-suggested political strategies to assist in policy decision-making (Glassman et al., 1999; Reich & Cooper, 1996). It was the only decision aid identified in the meta-narrative review to incorporate this type of decision support. Another example was the use of a weighting system within some decision aids to help users understand the value judgements they associate with various decision elements in consideration towards a final decision. O'Connor et al. (1999) identified the use of various implicit (Barry et al., 1997; Levine et al., 1992) and explicit (Clancy et al., 1988; Llewellyn-Thomas, 1996; O'Connor et al., 1998; Pauker & Pauker, 1987; Pender & Pender, 1987; Rothert et al., 1997) values clarification exercises in different patient decision aids, including weigh scale
exercises, treatment trade-off tasks, relevance charts, etc. In PBMA, a 'weighted benefit score' is calculated for each alternative option under consideration, based on relevant decision-making criteria. Wilson, Peacock and Ruta (2009) reviewed a number of approaches used within PBMA for calculating a score based on the costs and benefits of a decision option. A similar method was also employed in one of the evidence-informed health policy decision aids (Goetghebeur et al., 2008).

The meta-narratives provide some insight into why some research traditions employed a greater variety of decision support methods. While some research traditions explored the ongoing developments and iterations of a single tool, others referred to a general class or family of tools. Patient decision aids, evidence-informed health policy decision aids, and policy analysis decision aids were all representative of the latter. Though the degree of variation in methods employed for decision support also varied, greater variation was observed within these research traditions. For example, O'Connor et al. (1999) pointed out that at the minimum all patient decision aids should provide information for decision-making to the user. However, additional strategies employed also included values clarification exercises (as previously mentioned) and the provision of guidance or coaching in deliberation, communication, and implementation of the decision. Methods for administration of patient decision aids also varied, such as the use of decision boards, interactive video discs, audio-guided workbooks, pamphlets, and group workshops (O'Connor et al., 1999).

The stage or phase of decision-making that decision aids were designed to support also varied between research traditions. Decision aids designed for use at a national/governmental level were generally more concerned with the decision-making process as a whole; others were more focused on the deliberative component of decision-making. Evidence-informed health policymaking decision aids stood out among the research traditions in terms of the level of prescription for the overall decision-making process. For example, the SUPPORT Tools (Oxman et al., 2009d) provided a broad range of support, from providing guidance on how to improve organizational use of research, to finding evidence, using evidence to clarify a problem or frame options, organizing and using policy dialogues, and to monitoring and evaluation of implemented policies. A possible explanation for this was the central concern for the incorporation of evidence into the decision-making process. Referring back to the demand for evidence-informed policymaking, these decision aids were borne out of a demand for less traditional methods of policymaking, based on popular support, common sense and political ideology. Understood from the policy analysis meta-narrative, policy is a product of and is constructed through social and political processes. Therefore, the level of prescription for the decision-making process within this research tradition may be reflective of its fundamental aim to infuse evidence into the policymaking process itself.
Lastly, differences found between the various research traditions in terms of context-specific content of the decision aids can be seen in Tables 2 to 12, looking at the contributions of decision elements towards the various decision domains. As stated previously and thus, not elaborated here, most of these differences can be attributed to the scope of the decision context and intended users of the decision aids.

The similarities and differences between the research traditions were helpful for producing a more comprehensive image of how decision aids can be organized and what (types of) decision elements are meaningful to decision support.

3.1.8 – Meta-Narrative Review Recommendations

Largely building upon the congruencies found between the research traditions and policy-specific findings, recommendations from the meta-narrative review were centred on providing a starting framework for developing the proposed aid. Firstly, recommendations pertaining to the proposed purpose(s) for the proposed aid included:

- provision of information/overview of alternative options,
- facilitation of stakeholder involvement in decisions,
- achievement of stakeholders’ decision-making goals,
- maximization of benefits while minimizing risks, and
- facilitation of evaluation and choice among alternatives based on multiple criteria using systematic analysis.

Towards the conceptualization and construction of the proposed aid, findings from the meta-narrative review recommend that it be structured around the three decision-making activities of problem definition, environment mapping, and identification and evaluation of alternative options. Further, the proposed aid should include the 11 identified decision domains and corresponding decision elements therein, consolidating the contributions from the 6 research traditions included for review. These recommendations were then presented to focus group participants for review, in order to contextualize and refine its interpretation for the health policymaking context, ultimately contributing to the development of the proposed aid, as seen in Section 3.3.

3.2 – Phase Two: Focus Groups Findings

A focus group was conducted with 7 individuals, across 5 Canadian provinces: British Columbia (n=1), Alberta (n=2), Ontario (n=2), Nova Scotia (n=1), and Newfoundland (n=1). Three members of this
group held managerial-level positions (e.g., program lead) responsible for various aspects (e.g., program implementation) of provincial cancer screening programs; the other four members held executive-level positions (e.g., vice-president) overseeing provincial cancer agencies.

Focus group discussion centred around adapting and translating the meta-narrative review findings for the current health policy context, as well as obtaining participants' personal views on development of the proposed aid. With the reflection on the meta-narrative review recommendations for development of the proposed aid guiding the discussion, the following section presents the findings of the focus group with respect to what the purpose for the proposed aid should be and subsequently, how it should be conceptualized, constructed, and operationalized.

3.2.1 – Purpose of the Proposed Decision Aid for Evidence-Informed Public Health Policy

Although some of the examples for the purposes of decision aids identified through the meta-narrative review were seen as being too specific to be applicable to the broader scope of population-based health policy decisions, overall, participants agreed that these coincided with their own thoughts on what the purpose for a decision aid to guide evidence-informed public health policy should be. Even those that seemed rather specific for a particular level of decision-making and decision context at first glance, were found to be relevant when considered in more general terms. For example, one participant noted that the purpose suggested in the literature of patient decision aids to ‘facilitate patient involvement in decisions’ would be relevant to the proposed aid being developed, if ‘patient’ was more broadly categorized as ‘stakeholder’.

Though participants agreed with the examples from the review findings, as one participant expressed, these are merely common to most decision aids but are not necessarily essential. For example, several participants thought that the provision and communication of relevant information to inform a decision is one element of what a good decision aid should probably include, but that it should not be the main purpose of the decision aid. Greater support among all participants was demonstrated for the decision aid’s role in facilitating the systematic evaluation and choice among alternatives based on multiple criteria.

In addition to those suggested from the meta-narrative review, participants also discussed several other aims that they felt were important given the context for the proposed aid. The group felt that the question of what the purpose of a decision aid for evidence-informed public health policy decisions should be was rather complicated with a multitude of potentially relevant responses. However, among the suggestions that they came up with, there were several key ideas concerning this question that garnered
greater attention: to provide focus to decision elements through a formalized structure, reduce the risk of significant causes due to overlooking important considerations, and greater transparency of the decision-making process.

Building on participants’ agreement that the decision aid should facilitate systematic evaluation and choice, they thought that the decision aid should provide a formal framework to structure the decision and the decision-making process around that would "bring some degree of focus to the types of things that should be considered." The aid should be something where one can see the parameters and assumptions that go into rendering a decision. Several participants reflected on their own experiences in policymaking and related it to putting together a policy paper. One inherently goes through informal steps of thinking through and compiling the relevant information surrounding a policy issue and decision. However, a decision aid would provide a formalized and systematic approach to that process.

Further, participants placed an emphasis on making the tool comprehensive in its approach to thinking about a policy issue. Multiple participants stated that even amongst experienced decision-makers, everyone suffers at one point or another from "tunnel vision or [a] narrow view of a particular issue" and thus, noted the value of having a tool that helps to ensure that all the relevant considerations of a policy issue are considered before moving forward with a decision. For example, one participant said that “too often the decision-making about things looks too heavily at the benefits and doesn’t look at the harms associated with any kind of health program and, you know, we’re seeing that the harm side needs to be looked at as much as the benefits, and more so than it has in the past.” Participants of the focus group viewed the systematic and comprehensive nature of the proposed aid as an important piece for the purpose of minimizing the risk of overlooking important evidence that may lead to significant consequences.

Related to the idea of a formal, systematic and comprehensive structure is the transparency of the decision-making process, which was a prominent part of the focus group discussion. It was viewed as important not only in the sense of making decisions transparent to the public, but also “to the people involved and who are… the stakeholders in [the decision-making] process,” particularly in cases where for example, decision-making occurs under the seal of cabinet confidentiality. Participants stated that use of a health policy decision aid would help make any decision process more transparent by nature of creating awareness about the things that are considered or focused on in that systematic way through the policy decision aid.
3.2.2 – Conceptualization, Construction, and Operationalization of the Proposed Decision Aid for Evidence-Informed Public Health Policy

The focus group identified the intended audience and context for use of the proposed aid as an important design consideration for the tool's development. At the beginning of the session, participants were told that the intent of the focus group was to enlist the help of participants in informing the development of a policy decision aid to guide individuals involved in the different stages of the decision-making process for evidence-informed public health policy. However, this position was challenged during the focus group as being much too broad. Some participants suggested that different people in different positions/contexts would have vastly different requirements for a decision aid. For example, an aid that would help people at the individual program/policy development stage would be quite different from an aid designed to assist ministers at the provincial cabinet level. Thus, participants initially recommended that it was necessary to narrow the context for use to a very specific type of decision, level of decision-making and audience in mind, in order to develop a useful decision aid. This raised a question about whether the proposed aid should focus on guiding a particular level of policymaking (e.g., cabinet level needs versus policy analyst needs), or whether it is possible to address both.

Having said that, a contrasting perspective emerged as the discussion progressed. Participants determined that there are ‘broad brushstrokes or key elements’ of decision-making that are applicable, regardless of what level or context the tool may be used for. Similar to the meta-narrative review recommendations for the purpose of the decision aid, issues of applicability across users and contexts that were regarded as being too specific at first glance, were deemed acceptable by simply broadening its scope. This coincided with the meta-narrative review findings in that though the decision elements identified from the different research traditions did not always present themselves identically (e.g., the scope or perspective highlighted by the research traditions were different), the core of the consideration remained the same. One participant added that “though the tools for the different stages [or levels of decision-making] are going to look different...there might be a lot of similarity in terms of the evidentiary content.”

Along this line of thinking about the implications of the targeted audience and level of decision-making on the design of the decision aid, the ideal length of the tool was discussed. Participants felt that a tool to be used at a higher level (e.g., cabinet) would need to be no more than a 1-page summary. In contrast, a tool to be used for program development is more likely to draw from a "larger piece of work". Overall, a clear consensus regarding the length of the decision aid was that shorter is better and more realistic in terms of its functionality. However, participants recognized the incongruence of this with the proposal that the proposed aid should be comprehensive in its approach to thinking through the policy
problem, which necessitates a longer tool. Further, as one participant stated: “I don’t think the role of the
decision aid would be to highlight which area should be focused on, but it would be to outline all the
major areas that should be considered.” While participants recognized this discrepancy between making
the decision aid comprehensive and keeping the decision aid as short and concise as possible, the
discussion did not indicate a definite conclusion as to which one was more valuable for the development
of the policy decision aid or what the compromise should be. Nevertheless, participants were able to
outline a general format that they felt the decision aid should follow, which coincided with the meta-
narrative review findings. Similar to the decision aid format that was found to be prevalent among the
different research traditions, the focus group discussion naturally revolved around a general process of
decision-making: problem identification, contextualization of the problem, and the identification and
assessment of the alternative solutions and the impacts if they were to be implemented. This overlaps well
with the classic policymaking cycle: problem definition, agenda setting, policy development,
implementation, and evaluation. Discussion surrounding the decision elements that a decision aid should
consider was not elaborated in great detail. Mainly, participants’ suggestions revolved around providing
relevant information to inform the different components of the decision-making process as described
above. However, the discussion did reflect a need for a well-rounded account of the different
considerations surrounding a policy decision, to bring to the surface considerations of health, finance,
value- and context-sensitive areas, and others, that they may be examined in aggregate.

Upon reflection on the use of a valuation system in the meta-narrative review findings, focus
group participants also talked about how the policymaking process is value-laden and that it is important
for that to come across in the proposed aid. One participant stated that the proposed aid should have some
way of eliciting the values going into a decision but that they could not picture what that should look like
in a policy decision aid. Likewise, other focus group members were unable to give any guidance about
how to surface the values influencing a policy decision. In comparison with other topics discussed, much
less information was offered in this area.

Lastly, focus group participants touched on organizational fit as an important consideration
regarding the tool's operationalization. Participants expressed that organizational fit within the healthcare
policymaking context primarily concerned the decision aid’s ability to adapt to the ever shifting balance
between different types of evidence and the other inputs of decision-making that are influenced/mediated
by values and the organizational and political context surrounding a particular policy issue. Participants
noted that if the decision aid is too rigid and prescriptive in those areas, it would have difficulty fitting
into a number of organizations or situations. To ensure that the decision aid is applicable in various
decision contexts, it is necessary that components of the decision aid are flexible, especially in value-
laden areas, and that it acknowledges that the areas that a decision-maker focuses on are reflective of the organizational and political environment that they are in.

In addition to guidance from the meta-narrative review, the focus group findings contributed to the design of the proposed aid through attention to achieving the purposes of providing a formalized structure for organizing and thinking through decision elements, reducing the risk of overlooking considerations that may lead to severe negative consequences, and greater transparency of the decision-making process. Further, focus group findings signaled that development of the proposed aid should take into consideration the intended audience and context, the balance between comprehensiveness and length, and its adaptability towards changing needs and constraints of different policy scenarios. As noted above, findings from the first two phases contributed towards the initial development of the proposed aid, presented in the following section.

3.3 – Development of an Initial Working Draft (Alpha Version) of the Proposed Decision Aid for Evidence-Informed Public Health Policy

Concluding the focus group session, an initial working draft of the proposed aid was created. Development of the structure and content of the proposed aid was guided by findings from the meta-narrative review and focus group, culminating in an initial draft of the tool that intends to prompt thoughtful consideration of a comprehensive set of issues/factors (and related evidence) pertinent to a population-based public sector health policy decision (Appendix 8). Based on both meta-narrative review and focus group findings, there are broad brushstrokes that are relevant across decision contexts, though their scope or conceptualization may vary. The proposed aid is designed around these broad brushstrokes, or core decision domains, that are relevant across health policy decision contexts. The following sections elaborate further about the intended context for use of this initial draft of the proposed aid and its structure and content.

3.3.1 Structure and Content of the Proposed Decision Aid

Table 13 presents an overview of the structure for the initial working draft of the proposed aid, organized into three activities inherent to decision-making – 1) problem definition, 2) mapping of the environment, and 3) definition of the policy option(s). Under each decision-making activity is a set of corresponding decision domains that capture unique dimensions of a health policy decision requiring deliberation. Each decision domain highlights all the relevant decision elements that ought to be considered during the decision-making process.
Table 13. Structure of the initial working draft of the proposed aid - A classification and description of included decision domains.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Decision Domain</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Definition</td>
<td>a) Characteristics of the healthcare issue</td>
<td>A concise description of the healthcare issue of interest.</td>
</tr>
<tr>
<td>Environment Mapping</td>
<td>b) Contextual considerations</td>
<td>Description of contextual factors (local/provincial/national/international) that condition the limits of policy change through the formation of opportunities and constraints.</td>
</tr>
<tr>
<td>Environment Mapping</td>
<td>c) Stakeholder considerations</td>
<td>Identification of relevant stakeholders and their relationships to the policymaking process and to the healthcare issue in question.</td>
</tr>
<tr>
<td>Environment Mapping</td>
<td>d) Ideational considerations</td>
<td>Identification of prominent ideas surrounding/impacting the healthcare issue in question.</td>
</tr>
<tr>
<td>Policy Options</td>
<td>e) Characteristics of the proposed healthcare intervention</td>
<td>A concise description of the proposed healthcare intervention.</td>
</tr>
<tr>
<td>Policy Options</td>
<td>f) Clinical/health considerations</td>
<td>Identification of health-related impacts at patient- and population-levels.</td>
</tr>
<tr>
<td>Policy Options</td>
<td>g) Health system and population impact considerations</td>
<td>Identification of non-health-related impacts that may affect the feasibility and acceptability of the healthcare intervention at the system- and population-level.</td>
</tr>
<tr>
<td>Policy Options</td>
<td>h) Implementation - planning considerations</td>
<td>Details surrounding the structure and organization of the proposed healthcare intervention and its functional impact on the health system.</td>
</tr>
<tr>
<td>Policy Options</td>
<td>i) Implementation - evaluation considerations</td>
<td>Description of surveillance needs surrounding the proposed healthcare intervention.</td>
</tr>
<tr>
<td>Policy Options</td>
<td>j) Economic considerations</td>
<td>Description of the proposed healthcare intervention’s impact on resource use/ allocation and value for money.</td>
</tr>
<tr>
<td>Policy Options</td>
<td>k) Evidentiary considerations</td>
<td>Factors relating to the quality of evidence used to form the basis for developing the policy options, discussion and the final decision.</td>
</tr>
</tbody>
</table>

Of the decision elements identified in the previous study phases, some were relevant to multiple decision domains or dependent upon those in other domains. For example, prompts about the quality of evidence are relevant to multiple decision domains (e.g., economic considerations and clinical/health considerations). This posed the question of whether these decision elements would be more appropriately placed in one decision domain or another, or both. Opting to minimize the length and redundancy of the proposed aid, as suggested by focus group participants, the decision domains were treated rather discretely; decision elements were placed only in the decision domain of the most direct relevance. In addition, decision elements about evidentiary quality were grouped into its own domain, which also serves to acknowledge its importance in describing the overall policy context.

3.3.2 – Context for Use of the Proposed Decision Aid

The proposed aid is designed to assist policymakers and those supporting them, including those with the power to make or influence policy decisions (e.g., cabinet members) and those who facilitate by informing those decisions (e.g., advisory groups and civil servants). It is meant to help individuals think
about (and clarify) all potentially relevant factors of complex health policy decisions without preconceived notions of what is correct. The proposed aid provides a comprehensive series of decision elements that help identify the appropriate types of evidence pertinent to the policy decision. It is not expected that all prompts within the aid will be relevant to any and all decision contexts, nor is it expected that the prompts will identify the same types of evidence or employ the same process(es) for obtaining that evidence in different contexts, but that the risk of overlooking potentially important considerations is minimized by systematically reviewing the prompts. The intent of this decision aid is not to prescribe a policy solution or to yield uniform recommendations across jurisdictions. Use of the proposed aid for different policymaking processes may arrive at different decisions based on evidence and factors specific to their decision-making contexts. However, the decision aid should facilitate more transparent policy decisions that incorporate broader and more appropriate types of evidence.

Use of the proposed aid is not intended for a single individual but rather is meant to support the collaborative and interdependent efforts that comprise complex policymaking processes. Its use does not suppose that all considerations identified through the proposed decision aid will be relevant for each policy decision or at each stage of policymaking. The proposed aid may be used in various capacities, at different levels of decision-making and by individuals with different roles in the policymaking process, seeking answers to very different questions about the same health policy issue. For example, it may be used by some to help decide whether or not a policy change is needed, while other times, that decision has already been made and the proposed aid is used to determine the optimal approach to implementing that decision.

The proposed aid was designed with the flexibility that it might be used as a whole or in parts, as needed, and with the expectation that it will be adapted for different contexts and users to accommodate individual needs and constraints. For example, a service planner might use it to inform or examine a policy's implementation strategy in detail, looking closely at each decision element in relevant domains of the proposed decision aid, such as ‘Implementation – planning considerations’ and ‘Implementation – evaluation considerations’. In contrast, upon receipt of a briefing note that seems to require further examination of some particular areas, a deputy minister of health might use corresponding parts of the proposed aid as a sort of checklist, or more indirectly, refer document contributors to re-examine certain areas with particular mind to specific areas of the proposed aid. While an appropriate governing authority ultimately responsible for the health policy decision would ideally initiate use of the proposed aid, it is expected that various individuals and groups with different skills and expertise will be tasked with assessing and contributing to relevant decision domains as prompted through the decision aid.
The proposed aid can be used to assist with selecting and organizing appropriate information-seeking and decision-making processes, especially those that may be complementary. Decision elements highlighted by the proposed decision aid can help to structure discussion between policymakers and stakeholders such as multi-disciplinary and multi-professional advisory groups. The aid may also be used by health services researchers to support knowledge translation efforts between various expert groups (e.g., between epidemiologists and economists) as well as with policy communities, providing more specific methodological guidance towards conducting and presenting research in conjunction with other types of evidence required for decision-making. The proposed aid may be used as a template for creating policy briefs and ultimately, form the basis for a policy decision, ensuring that all relevant issues are taken into account in a way that describes the decision made and provides insight into the rationale for them.

3.4 – Phase Three: Key Informant Interview Findings

Of 18 potential key informants invited to participate in the study, 10 consented to participation and finally, key informant interviews were conducted with 9 individuals, across 5 Canadian provinces: British Columbia (n=1), Alberta (n=3), Manitoba (n=1), Ontario (n=3), and Nova Scotia (n=1). Participants represented a range of roles within the health policymaking process, from senior managers of provincial cancer agencies to deputy health ministers of provincial health ministries.

The last phase of this study provided an opportunity to verify the findings from the previous two phases. The following section presents findings collected through key informant interviews about issues surrounding the operationalization of the proposed aid and agreement between the conceptualization and construction of the proposed aid and informants' experiences with health policymaking.

Overall, informants viewed the proposed aid as something to help break down what one needs to be thinking about in a very clear and systematic way. Reflective of multiple key informants' responses, the decision elements included in the proposed aid, as one informant expressed, "are the kinds of questions that [one] more or less already know[s] in [one's] head but the aid really organizes the thought process and saves a lot of time, especially when you need to come up with a quick and dirty report." One informant said that the tool would be useful for framing a policy issue; another stated that it would be "helpful for sorting out what would be the best thing to do within, what are sometimes, wildly limited approaches." Among informants' responses, a number of constructive criticisms and comments were offered for refinement of the proposed aid. Recommendations for further improvement of the proposed aid for use within a health policymaking setting included the removal of two decision domains, the addition and modification of a number of decision elements, the reorientation of several decision
elements, and revision of some of the language. Table 14 provides a more detailed list of these recommendations along with informants' supporting comments. Presented in the following section, interview discussions about the proposed aid covered a number of topics, including: comprehensiveness, representation of evidence, structure and flow, placement of decision elements, missing decision elements, language, a weighting system for decision elements, and characteristics of the health policymaking process.

Table 14. Key informant interview recommendations for refinement of proposed aid with corresponding interviewee comments.

<table>
<thead>
<tr>
<th>Decision Domain of Interest</th>
<th>Recommendation Actions/Modifications</th>
<th>Supporting/Related Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>• Simplify the language and consider the audience that will be using it. • Ensure that the language is consistent throughout.</td>
<td>• “Speak their language a bit better, for example, Ideational Considerations is not straightforward enough for the people who will be using this tool.” • E.g., “Ideation is a terminology that won’t speak to the audience you’re aiming at.” • E.g., “The way you address the healthcare intervention should be more consistent, whether the intervention is a technology, drugs or a program, similar to the way you’ve done with ‘healthcare issue’.”</td>
</tr>
<tr>
<td></td>
<td>At the beginning of each domain, change ‘questions to ask yourself’ to reflect and highlight that the prompts are questions that need to be answered before making a decision but not at an individual level.</td>
<td>• “Prompts are in some ways trivialized. These questions aren’t the type that a decision-maker would think about themselves.”</td>
</tr>
<tr>
<td></td>
<td>Add linkages between related prompts in different domains.</td>
<td>• &quot;Cross-referencing to try and encourage thoughts between domains might be helpful.&quot; • &quot;Others working on a different part of the policy but still need to understand these aspects in order to plan, for example, so these things need to be explicit and communicable to those others.&quot;</td>
</tr>
<tr>
<td>Ideational Considerations</td>
<td>Eliminate this domain heading and redistribute prompts into other appropriate domains.</td>
<td>• “Other domains are very clear, succinct. This one, not so much, not sure what the focus of this section is.” • “This domain doesn’t make sense to me. These prompts look like they belong in the contextual section. Ideas can't stand by themselves, they allude to the bigger picture.” • “[Prompt n]umber 4 is more relevant to the stakeholder section. This is really an analysis based on how the stakeholders will frame the problem from their perspective.” • “I see that [prompt] more as posing of the healthcare issue... gets back to the idea of being sure that this is the right thing to do first. I would put this under contextual or characteristics of healthcare issue.”</td>
</tr>
<tr>
<td>Contextual Considerations</td>
<td>Add prompt to clarify what is still lacking in existing strategies (if any) for</td>
<td>• &quot; It's not a vacuum. We're stepping into an issue that has been well-recognized a long time ago. People have probably already attempted to address it. On top of</td>
</tr>
<tr>
<td>Health System &amp; Population Impact Considerations</td>
<td>Move example of incentive structures from prompt #1 to #7 in this domain.</td>
<td>“The example of incentive structures is more fitting under #7.”</td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
</tr>
<tr>
<td>Move prompt #2 before #1 in this domain.</td>
<td>&quot;It might make more sense if the prompt about timelines for implementation come before questions about service delivery and governance...&quot;</td>
<td></td>
</tr>
<tr>
<td>Add prompts that address how to deal with outdated policy or interventions.</td>
<td>“If something is going to supersede something, how do you withdraw the previous? ...something we often miss.”</td>
<td></td>
</tr>
</tbody>
</table>
| Add prompts that identify whether a prescriptive or suggestive strategy for implementation (or both) is appropriate and a corresponding strategy for engagement of critical stakeholders. | “Policy change can happen in different ways: prescriptively (regulatory, requires thinking about how to reinforce) or suggestive or maybe both and thus have a combo of strategies.”
“Whether it’s a passive versus active strategy to policy, prescriptive versus suggestive, you should be explicit about which, or both you’re aiming for.”
“If looking more at suggestive policy, need... something pretty deliberate in [implementation planning] about who needs to be engaged, to lead or champion the influence of early adopters uptake, ongoingly for full penetration of implementing a particular policy. How’s that gonna be done? Who is that gonna be?” |
| Implementation – Planning Considerations and Implementation – Evaluation Considerations | Add prompts that identify a clear entity that is accountable for the proposed healthcare intervention. | “…if there's clearly a level of accountability...closer to where the actual problem is being addressed and dealt with, then thinking around that may give you earlier warning on whether your policy needs to be reviewed or modified.”
“…in order to administer accountability well, you have to have very clear governance structure. Who's role is what, who is ultimately responsible and accountable for the implementation. And for monitoring or overseeing and seeing that it actually achieves the end aim. The stronger or clearer your governance structures are or at least aligned to what it is that you're trying to resolve, the better you'll be able to deal with the back end of a policy decision.” |
| Add prompts that inquire about what evaluation measures are needed to ensure resolution of | "Instead of simply asking who this information should be reported to... need to ask more into the future about once this information has been reported, what evaluation..." |
any negative deviations from planned outcomes. | measures are needed to ensure that any deviance from the planned outcomes has been resolved."

Modify prompts to highlight the differences between the proposed healthcare intervention and the status quo. | • "It's important to not only know what has or is being done [to address the policy issue] but how it's different from what you're proposing...as well as the anticipated differences in the results from current performance."

Implementation – Evaluation Considerations | Remove prompt #1 in this domain. | • “This seems to be unnecessary. If you need this kind of guide, pretty much you're going to need to do evaluation.”

Modify prompts to reflect needs of both process evaluation and outcomes evaluation. | • “Often there are two kinds of evaluation: 1) process evaluation, for example, how did implementation go? ...even if it’s some kind of retrospective brief, and 2) outcome evaluation, which is what the current guide seems to be focused on.”

Modify prompts to tease out more details about the evaluation strategy (i.e., when things can be measured and how often). | • “What data is needed? ...data inputs into indicators...what is a minimum dataset that is needed in order to give indicators?”

• “When can stuff be measured? How long before you can obtain meaningful data? Often these things, like mortality rates, take time, years.”

Evidentiary Considerations | Clarify definitions of what is meant by scientific and more importantly, non-scientific evidence. | • “…fix examples of non-scientific evidence. ... These are examples of data sources for evidence.”

Add prompts about evidence, particularly relating to its quality. | • E.g., “Where did this information come from? Who’s done this evidence? ... It may be biased.”

• "The issue of the quality of evidence...is an important aspect of being convinced that this is the right thing to do.”

Dissolve Evidentiary Considerations domain and distribute prompts | • "No, don't highlight evidence on its own, there are highly individualized contexts and styles of (assessing evidence)."

3.4.1 – Comprehensiveness

The majority of the informants expressed that they liked how the proposed decision aid covered a wide array of evidence and information, which one informant noted needs to “reflect what really goes on in the healthcare setting.” In particular, the stakeholder considerations domain and the decision elements relating to political drivers and governance structures were highlighted as items that are often missed or that lack due attention in the policymaking process. As stated by one informant and echoed by others, the tool gave the sense that "if used, one could be confident that they have considered everything that needs to be considered" in making a complex health policy decision.

Although the comprehensive approach taken with the drafted decision aid was considered a valuable contribution towards health policymaking, for some informants, it was also a cause for concern with regards to its functionality in a real-world setting. Informants thought that though use of the proposed aid for grounding a health policy decision would be thorough, some also cautioned that in the likely very lengthy product, some critical issues might be lost amongst the more germane ones. As one
informant voiced, though the proposed aid may help to identify all relevant information when it comes to making a health policy decision, "you need to come back to some thicker branches, otherwise, you're in danger of getting bogged down and not actually being able to make a decision and act on it." It may be difficult to hone in on the decision elements that have the greatest consequences for a health policy decision due to the potentially overwhelming breadth of considerations presented in the proposed aid.

A further sentiment regarding the informant's comment about “...com[ing] back to some thicker branches...” was the concern about the proposed aid's comprehensiveness and the challenge it may pose for its usage by more senior-level decision-makers. Of concern to some informants was that along with different information needs, intended users also face separate and often distinct sets of constraints associated with their role in the policymaking process. Informants expressed that senior-level decision-makers did not have sufficient time to go through the proposed aid in its entirety and suggested that it might be helpful if it could be distilled into something simpler. When asked what they envisioned "something simpler" should look like, several informants referred to Table 13, describing the overview of the structure and content of the proposed aid. However, none of the informants were able to provide a concrete idea or specific guidance on how this piece should be presented. This is discussed further in Section 4.

Nevertheless, though senior level decision-makers may only have time to review a one- or two-page policy brief, informants agreed that these individuals want to know that by the time they have received this "one-pager", that all of the decision elements (outlined in the proposed aid) have been carefully considered. With regard to creating this brief, one informant noted that for the most senior level of decision-makers, "[i]t's about distilling what's most important to them, which is often tied to some strategic work that's been done or the values of a particular government or what they're looking to achieve or some of what their overall goals are." They added that "this tool identifies those drivers and can help to determine which aspects of this tool you actually end up using to help you do that informing piece of work, as it moves through the various levels of decision-making." This informant suggested that while both the process and the product can be labour- and time-intensive, the proposed aid has utility in complex health policymaking processes.

3.4.2 – Representation of Evidence

Several topics dominated the discussion around the presentation of evidence in the proposed aid: the inclusion of different types of evidence, evidence quality, and the placement of prompts relating to evidence.
Overall feedback regarding the evidence prompted by the proposed aid was positive with informants expressing their appreciation for the inclusion of different types of evidence. They felt that the proposed aid identifies types of evidence that might not traditionally be noted when developing and deciding on policy but that are explicit and/or implicit factors of decision-making. One informant shared that their conception of evidence typically comprises three types: 1) scientific, 2) operational, and 3) political. They regarded scientific evidence as what many people first think of upon hearing the word ‘evidence’ and generally examines the safety and efficacy of an intervention in a controlled setting, using robust methods of study. Operational evidence referred to different aspects of whether the intervention can be implemented effectively in a practical setting. Lastly, political evidence was conveyed as that which reveals how an intervention will be perceived by various stakeholders (e.g., general public, press) and is driven by social, cultural and personal convictions. Other informant responses also mirrored this opinion.

One informant stated that “a lot of evidence that is not scientific is still important and that the prompts in the decision guide get to that.” Multiple informants expressed a similar sentiment that the information pertinent to making a policy decision may not necessarily be the most scientific or the most sound. Informants expressed that the critical information will be based on who is making the decision and who they are trying to influence, which fluctuate depending on a number of variables. Using their personal framing of evidence, several informants highlighted that while considerable amounts of scientific and operational evidence are needed to implement policy change, it can take very little political evidence (e.g. one negative press clipping that gets raised in provincial legislature) to derail a very worthwhile initiative. Conversely, policy change can be driven by a perceived health system issue that is based on an individual experience. One informant described, as an example, the scenario where politicians react to improve public favour by proposing some type of policy change in response to the "death of a person waiting for ambulances or emergency department care [that] paint[s] a terrible picture of the healthcare system." The overall opinion of the informants was that different policy decisions require varying amounts of different types of evidence and individual pieces of evidence will influence a policy decision more than others, which the proposed aid acknowledges through its inclusion of many types of evidence.

Another item relating to evidence that was brought up during the interviews was the influence of evidence quality on a policy decision. For instance, informants discussed the notion of good and bad evidence as indicated by a hierarchy or continuum of evidence (based on the rigour of study methods) as well as the need to be informed about evidentiary sources in association with the potential biases represented. Without knowing the quality of evidence being considered and whether it may be inaccurate
or misleading, one may unknowingly make a poorly informed decision. One individual expressed a strong belief that there could not be enough emphasis given to the role of evidence quality in decision-making. Others also noted the importance of being informed about evidence quality upfront, as an informant shared from their personal experience how there is often “a skewing of the evidence that occurs over time that has no relation to the particular problem at hand. ...it’s good to have the prompts [in the proposed aid] for people to be clear, to always ask themselves as they're going through a policy decision: where is the evidence coming from, how sound is this evidence and to what extent should it be weighing on the decision being made.” In contrast, most of those informants also voiced that, as one informant articulated: “at some point in time, the purpose of the proposed aid and its ability to guide the broadest considerations – what needs to be considered – might be deluded, if you spend too much time around assessing the quality of the evidence.”

Overall, informants felt that it was important that the proposed aid acknowledge and bring attention to the issue of evidence quality and its implications for decision-making. Still, there were mixed opinions about the role that the proposed aid should take on with regards to addressing the quality assessment of evidence prompted. The individual who had strong views about the importance of evidence quality suggested the addition of a ranking system (with detailed instructions on how to assess evidence quality) to help users keep track of the quality of each piece of evidence. Most other informants did not support the addition of such a component to the proposed aid, referring back to personal experiences demonstrating that critical considerations of decision-making are not always supported by the most scientific or most sound evidence. These informants added that some types of evidence, while equally important, cannot easily be assessed in the traditional sense of using a scientific hierarchy of evidence, where evidence obtained through the most rigorous study methods are regarded as being of the highest quality - the best evidence. For example, a number of informants highlighted the significance of political and operational evidence based on individually accrued experience and knowledge, such as expert opinions. These informants were wary about the inclusion of a ranking system for evidence quality as it might suggest to users that evidence of higher quality should necessarily be weighted more heavily within the policymaking process.

This set of informants suggested that a minimalist approach be taken, where the proposed aid prompts users to assess evidence quality and think about its potential impact on the policy decision in general, but does not actively track or provide guidance on how to assess the quality of each piece of evidence elicited. One informant offered that it would be “helpful to people to simply have something to direct you to where to find out more about assessing evidence as this will have value for some people more than others.” Further, another informant suggested that rather than being concerned with providing
instructions for quality assessment of evidence in the proposed aid, sometimes it is a question of whether the right person with the right qualifications has been employed for the position, reflecting that:

“you have all kinds of people who have all kinds of experience involved in the decision-making process. With respect to assessing the quality of evidence, you might have a policy analyst who has no background in any statistical analysis or in reviewing articles and understanding the methodology for the conclusion that they’ve used…”

From this perspective, the informant felt that it was a matter of hiring a qualified person for the job; the inclusion of decision elements in the proposed aid that remind the user to be mindful of evidence quality should be helpful and sufficient.

The discrepancy in these views about the need for a ranking system for evidence quality and the provision of detailed instructions for quality assessment might be explained by the different backgrounds of informants. The individual who strongly recommended the addition of a ranking system and detailed instructions for assessing evidence quality has a background in academics, which might explain the conviction towards the importance of evidence quality in the ranking and weighting of evidence for policymaking. In contrast, those who shared the opposing view generally had more experience with applying evidence at different stages of policymaking and with the flow of evidence between individuals at different stages and levels of health policymaking. It might be of value in the future to evaluate the need for detailed guidance on quality assessment from the perspective of individuals involved in different stages of policymaking and who are less experienced with the policymaking process.

3.4.3 – Structure and Flow of the Decision Aid

Informants responded positively to the way that the proposed aid was structured into three decision-making activities (i.e., problem definition, environment mapping, identification and assessment of the policy options) and their corresponding decision domains. Informants felt that the aid took them through a methodical and systematic way of thinking about health policy decisions. It was also noted that these three activities are common for approaching many types of decisions and that other tools or frameworks that informants had encountered in various facets of decision-making similarly referenced these three activities. Informants expressed an appreciation for this familiarity, particularly in light of the fact that the proposed aid explores a large breadth of decision elements. An informant also noted that it helps to “set the tone…you talk about the issue and the need, then what you’re proposing… [It] gives a platform for why you want to plan this way.”
Several informants expressed appreciation for how the proposed aid gathers the different decision domains into one tool, representing important areas of consideration that individuals working in their own groups of expertise aren’t always cognizant of. Informants felt that this allowed users to maintain a sense of the bigger picture and how the different pieces fit together. One informant shared their experience with facing the challenge of coordinating different pieces of a health policy decision in their own work: “you need a whole complete analysis….but sometimes what happens where we are is that you have focused but disparate analyses for some areas of policy but completely forget about the financial aspect, for example, until it gets to the back end.” Informants responded positively to how the proposed aid pulls those “focused and disparate analyses” together into one framework. However, it was noted that the communication and integration of the various decision domains relevant to a particular health policy decision would be an important part in the success of the proposed aid; a majority of the informants suggested piloting its use in a practical setting to get feedback on this aspect. Further, two informants expressed that it might benefit from more clarification as to how it may be adapted for use in different decision contexts.

A majority of the informants interviewed liked the current format of the proposed aid and felt that it was logical, following much the same thought process that they themselves observe when making a decision. Informants also liked that the proposed aid does not necessarily need to be used in the order that it appears, highlighting this as an important factor in whether the tool will ultimately be useful in a practical setting. Despite general agreement with the layout of the proposed aid, a couple of informants made some suggestions for refinement of its structure and flow. These were related to the step-by-step way of thinking through a health policy decision. Suggestions included the removal of two decision domains (i.e., ideational considerations and evidentiary considerations) and the reorientation of others. Informants felt that the ideational considerations domain, while relevant, lacked cohesiveness and focus. The prompts in this domain were adapted from its origins in the policy analysis literature, as identified through the meta-narrative review and were grouped together based on their common inspection of different aspects of ideas and ideologies affecting policy decision-making. Informants appreciated that the proposed aid took these decision elements into consideration but pointed out that in the context of health policymaking, these prompts are only given meaning when linked to other concepts. As one informant very aptly put it, “[i]deas can’t be described in isolation; ideas are attached or tied to something... Ideas can’t stand on their own, they allude to the bigger picture.” Overall, informants suggested the removal of this domain but that the decision elements should be redistributed under other domain headings. For example, one informant felt that the decision element looking at different ways that a policy problem can be framed by stakeholders is “more relevant to the stakeholder section. This is really an analysis based on how the stakeholders will frame the problem from their perspective.”
The evidentiary considerations domain contained prompts inquiring about the quality of evidence identified through the proposed aid. Informants disagreed with the grouping of these prompts into their own domain, separate from decision elements eliciting the evidence for which the quality needs to be assessed. A majority of the informants expressed that the separate organization of these two types of prompts was neither intuitive nor functional, raising concern that it might render considerations about evidentiary quality as an afterthought or void. One of these informants expressed that in organizations where there is already a very clear understanding of roles and responsibilities, "[this] probably might not be a big problem. But where there's less certainty about who's in charge of gathering evidence, assessing its quality and when, this is where you might see some breakdowns and run into problems of 'who's gonna do what' and end up with missing pieces of information." Additional recommendations for changes to the structure and flow of the proposed aid are presented in Table 14.

3.4.4 – Placement of Decision Elements

As discussed in the chapter on the initial development of the proposed aid, the placement of some decision elements was a challenge, particularly those that were relevant to or dependent upon decision elements in other decision domains. The decision was made to keep the decision domains relatively discrete with the intention of group collaboration in the integration of relevant information from different domains into the health policy decision. Informants generally expressed agreement with this approach and the placement of decision elements in the proposed aid and felt that it made sense to them at the level of reading and reflection. One informant encouraged that there was no need to “be worried about whether people will realize that there are linkages between decision domains. People generally know what pieces need to be linked together to get the work done.” Another informant shared this notion and added that:

“…being clear and focused around some of the [domains] the way you’ve laid it out helps… I think that just because this is domain J, it doesn’t mean that people more focused on Domain G, shouldn’t think about stuff in domain J too. But I think if you repeat some of the questions from Domain G in Domain J too, they’ll get lost, the focus around [questions in domain J] will get lost.”

Informants highlighted that if the prompts in multiple decision domains overlap with each other too much, then the responsibilities for gathering and analyzing the relevant evidence for each domain get muddled.

It was also suggested that the proposed aid be piloted within real and/or hypothetical health policy decision scenarios, stating that “when you get your sleeves rolled up and you’re using it, it might occur to you, ‘Hey, it might work better if we group this [decision element] with that.’” Thus, while the
current placement of decision elements in the proposed aid appear valid, further research is needed to determine what changes might be needed to improve its utility in a practical setting.

3.4.5 – Missing Decision Elements

While navigating through the individual decision domains, informants noticed several decision elements that they felt were missing or required more elaboration. One of the more substantial areas of decision-making identified as not having been adequately accounted for is the different ways that policy change can happen. Specifically, informants highlighted passive versus active strategies of policy implementation. Passive strategies were described as seeking to encourage individuals to voluntarily take on a desired change (e.g., a new behaviour), while active strategies are more prescriptive and involve various means of enforcing that change (e.g., regulations). For example, one informant described that an active policy implementation strategy would be employed for the implementation of a standard in personal care homes, where a minimum requirement is necessarily met through enforcement by legislation. In contrast, passive policy implementation strategies can be employed to encourage physicians to change their referring patterns through the introduction of a tariff for physician remunerations. Informants noted that this was an important aspect for consideration in developing a strategy for implementation and should be made explicit about which, or a combination of both, should form the basis of that strategy.

Generally, the intention of a policy is to impact some kind of change; informants’ comments reflected a need to understand how that change is going to happen and its implications for what one needs to think about upfront when examining and planning the policy. Informants noted that this step is of particular importance for policies of a passive or more suggestive nature, where the desired change can only be influenced rather than enforced. In addition, they pointed out that of significance, particularly for passive types of policy implementation, it is often necessary to identify a champion who has a high degree of influence and leadership to influence the behaviour change, an entity that can and will advocate for the desired change. Informants emphasized that these strategies needed to be very well thought about. Some of the decision elements suggested by informants were missing from the proposed aid and needed to be added. Informants also pointed out some decision elements from the proposed aid that required elaboration, as one informant stated, "[s]ome of these might be embedded in some of the prompts but not overtly. There needs to be more upfront consideration of these…”.

3.4.6 – Language

The majority of informants interviewed felt that the language used in the proposed aid was easy to understand, however, a few suggestions were made in relation to the simplification and consistency of
language used. Several informants voiced that the proposed aid would benefit from translation of terminology to better suit the health policy context with the end-user in mind. One example given referred to the ideational considerations domain: "[i]deation is a terminology that won't speak to the audience you're aiming at." Rather than singling out this concept as a unique dimension of consideration under the term "ideational", the informant suggested that a more practical way for a policymaker to think about the decision elements within this domain would be in relation to other contextual considerations regarding a policy decision. Another aspect regarding language included comments directed at ensuring the consistency throughout the proposed aid. One informant felt that "the way 'healthcare intervention' [is addressed] should be more consistent, whether the intervention is a technology, drugs or a program, similar to the way you've done with 'healthcare issue'." This individual pointed out that the proposed aid is very consistent with referencing 'healthcare issue' as such, rather than referring to different types of healthcare issues; reference to 'healthcare intervention', on the other hand, is less consistent. Other recommendations related to the simplification and consistency of language in the proposed aid are outlined in Table 14.

3.4.7 – Weighting System for Decision Elements

The weight of individual decision factors was identified as an important consideration in the policymaking process. Informants expressed that it is an extremely intuitive process in most government settings. There were mixed opinions about whether or not an explicit valuation system was needed as part of the tool, for instance, a component in the proposed aid that allows users to rank the relative importance of each decision element with regards to the health policy decision. There was one proposal to include a system where the weights may vary according to the issue examined and where weighting may be applied differently in different jurisdictions. This suggestion was made as a future ongoing endeavour, as the informant perceived utility in the current form of the proposed aid and stated that much more research would be needed for determining the methodology of assigning the weights in different jurisdictions and decision contexts. The majority of informants, however, felt that the addition of a weighting system was unnecessary. The main supporting argument against inclusion of a weighting system, as expressed by an informant, was that "sometimes when the whole picture is painted, everything can end up towards the middle of a grey zone because of conflicting issues identified and weighted differently by different groups, even when something should be boldly approached or soundly rejected." Further, informants cautioned against letting the complexity of the methodology for decision-making obscure the clarity of the issue in question. As one informant expressed:
"...what is needed is not more fine tuning of methodology but more emphasis on decision-making and instead of trying to subdivide the branches into smaller and smaller twigs but to ask what are the absolutely key determinants among the multitude of information relevant to the policy decision at hand."

In conclusion, informants felt strongly about the need for an awareness of how different decision factors are valued in the decision making process and that this should be represented in the tool. However, rather than explicitly adding a valuation system to the proposed aid, informants recommended that a more passive approach should be taken where this notion is presented as a reminder for users; no specific solutions were identified for addressing this issue.

3.4.8 – Characteristics of Health Policymaking Process - Variable Requirements of Decision Contexts and Non-Linearity

One topic dominated the discussion, across interviews, about successful operationalization of the proposed aid within health policymaking – its adaptability for use in various manners toward different ends. The proposed aid needs to be flexible and robust enough to meet the information needs of unique decision-making scenarios and assist individuals with different roles and at different levels of decision-making.

Two major aspects about the health policymaking process were commonly raised by informants as having a significant impact on the use of the proposed aid: 1) different decision contexts lead to variable approaches to policymaking and 2) the non-linearity of the policymaking process. As one informant expressed, “[y]ou’re going to have all kinds of variation in the way decisions are made and programs are mandated, which really don’t follow the textbook-type academic structure.” One informant shared how “[i]n the real world, it might be a politician saying, ‘I want a program for [x]’ and it comes down to the people in service planning who have to implement it, even when there’s been little or no known consideration of the evidence [to date].” In other instances, "depending on what you’re implementing, some domains [of the decision aid] will be greatly detailed out..., where a lot is already done or known, you may only want to detail out some specific domains or pieces.” Several other informants reflected upon similar experiences, explaining that the context within which a health policy decision is made will determine the actors, informational needs, and stages of policymaking involved that consequently demand different requirements of a decision aid intended to assist the process.

In addition to different uses for the proposed aid between different policy issues, its use may also vary for the purpose of informing different types of decisions within a single policy issue. For instance, there may be overarching questions, such as whether or not to go forward with a policy, as well as a set of more specific questions for teasing out the details of an optimal approach to the policy's implementation.
The focus of high-level decision-makers often falls into the former category and entails different information requirements than if their focus were the latter. One informant offered that some of the broader considerations needed by a deputy health minister, for example, to determine whether or not to pass a policy should primarily highlight the most relevant elements from the characteristics of the proposed intervention, economic considerations and clinical/health considerations domains, while other decision elements would be regarded as secondary considerations. In contrast, a service planner might be more interested in a detailed examination of the more practical components of the decision aid, including the implementation – planning considerations and implementation – evaluation considerations decision domains (among others), in order to provide a more senior policy decision-maker with potential policy options or solutions. These questions represent different stages of the policymaking process and signal different uses of the proposed aid at these respective stages.

Further, a majority of the interviewees commented on the non-linearity of the health policymaking process – how the various stages of policymaking may occur in a different order, at times repeating or omitting stages, depending on the decision context. These informants reiterated the importance of flexibility in the proposed tool. They highlighted a need for the proposed aid to be modular in a way that its whole or parts may be relevant and used as the requirements of a policy context change or evolve. Several informants made similar comments, stating that policy developers should have a solid understanding of all types of evidence regarding a policy issue but that they need to constantly reassess what evidence is relevant to the current time and context throughout the policymaking process, as it often changes.

Overall, informants felt that the proposed aid fit the variable requirements of changing decision contexts and the non-linear process of policymaking that they described. They perceived the structure to be adaptable for use at different stages of the policymaking process, whether some of those stages occurred simultaneously, iteratively, or not at all, where “you don’t necessarily need to answer the domains in order…you can pick what you need, when you need,” as one informant described. A majority of the informants did feel, however, that an important next step for contributing to the proposed aid's successful implementation would be to test its robustness under various circumstances that would require piloting its use in a range of different policy decision contexts.

3.4.9 – Summary

Overall, key informant interview informants supported the construction and conceptualization of the proposed aid in its present form, while offering some recommendations for improvement. A number of the recommendations made were adopted and are elaborated in Chapter 4. Informants also identified
various considerations in terms of its operationalization, including the importance of assigned value of
decision elements and its adaptability for use in changing policy contexts.

The topic most discussed with regards to the fit of the proposed aid with the health policymaking
setting was its adaptability for use in different policy contexts. Having identified different uses (and
consequently different requirements) of the proposed aid for different contexts, interview informants each
expressed a favourable outlook on its perceived value for the health policymaking setting. One informant
stated that it should have a high degree of value for branches of government, Minister's offices, etc.,
especially for newer or less-experienced governments. Another informant commented that "the decision
aid is relevant to everyone involved in healthcare policymaking", adding that "sometimes it is hard to get
people to change their behaviour and pick up new tools but [that] this is something [they] could see
people eventually starting to use."
Chapter 4
Discussion

This chapter summarizes key findings of the study, culminating in the development and initial refinement of the proposed aid. Implications of this research are then presented, followed by a discussion of study limitations and a consideration of potential areas for future research.

This study was designed to answer the following questions:

1. What should be the purpose of a decision aid for evidence-informed population-based health policy decisions?

2. How should decision aids for evidence-informed population-based health policy decisions be conceptualized, constructed, and operationalized (i.e., designed and used)?

A discussion of the major findings are summarized and discussed below.

4.1 - Purpose of the Proposed Decision Aid for Evidence-Informed Public Health Policy

Two key topics were generated through the research with respect to the purpose of a decision aid for evidence-informed public health policy decisions: the systematization of the decision-making thought process and increased transparency.

When asked to describe what the purpose of a decision aid for evidence-informed public health policy should be, focus group participants immediately converged upon the idea that the proposed aid should assist the user with systematically evaluating and choosing among alternative solutions for a health policy issue. The rationale for this recommendation is likely due to the vast quantity of information that must be gathered, sorted, and deliberated upon during the decision-making process within public health policymaking. To that effect, several key informant interview participants described how it is easy to occasionally get bogged down by the sheer volume of information that needs to be processed, wherein some germane items might get lost among more extraneous ones. The vast majority of study participants voiced that it was helpful to have the decision elements all laid out in a framework that helps organize and allows one to work through them methodically. In this way, the chances of overlooking something important are minimized.

The systematization of the decision-making process is also linked to the second purpose proposed by study participants, transparency. This aligns well with the current trend in health policymaking as
described in this study's introduction – that is, a general call for greater transparency. The present study approaches transparency in what may be considered a relatively passive manner compared to some other decision aids. For example, the EVIDEM framework explored in the meta-narrative review is a tool that similarly seeks to promote transparency as well as efficiency in healthcare decision-making through systematic assessment. In this framework, decisions are a direct product of the cumulatively ranked values assigned by decision-makers to each piece of evidence in consideration. A key difference between the EVIDEM framework and the proposed aid is that the former approaches transparency by explicitly presenting decision-makers' assigned values for evidence on which decisions are based. In comparison, the proposed aid makes no attempt to reveal and/or document individual users' assigned values for decision elements, nor does its use directly result in a health policy decision. The approach towards transparency suggested by study participants is simply to provide a systematic framework for users to think through and organize the decision elements considered within a complex health policy decision. In general, study participants posited that if during the policymaking process a decision aid is followed, you can see the parameters that go into rendering the decision and implicitly get a sense of the various assumptions contributing to that policy decision. This has certain implications for the proposed aid's conceptualization and construction and is described in the following section.

It is difficult to say whether this approach to transparency is sufficient or effective. More research is needed to determine what level of transparency is appropriate, necessary, or responsible. Depending on how the proposed aid is used and to whom the products of its usage are accessible to, it may or may not contribute to the goal of transparency. If during the health policymaking process, the proposed aid is used by individuals privately without any collaboration or communication of the considerations prompted by the tool, then it is unlikely that any sort of transparency will be achieved. On the other hand, if the proposed aid is used as envisioned – collaboratively throughout the policymaking process – from the identification and definition of a health policy issue through to the gathering of relevant information and the informing of the deliberative process, centralizing the gathered evidence under consideration for all involved to see, then a degree of transparency may be achieved among the group of individuals involved in that process. Several key informant interview participants stated that this was an important facet of transparency. If the compiled set of decision elements under consideration leading up to a health policy decision is made accessible to the general public, then an even greater degree of transparency may be achieved.

Rather than attempting to modify the policymaking process itself, the proposed aid aims to complement and operate within existing health policymaking practices. During both the development of the proposed aid and its initial evaluation, study participants generally felt that the tool had definite value
for contributing to transparency in its current form. There is perhaps a limit to the transparency that can be achieved without making more drastic changes to the health policymaking process itself. However, this may be getting at a bigger question relating to the transparency and operations of government bodies, or their responsibilities to and relationship with the public. The proposed aid is at the very least, a step in the right direction. The proposed aid's impact on increased transparency is discussed further in the subsequent section on study implications.

Based on study participants' responses, the purpose of the proposed aid should be twofold. Firstly, the proposed aid should help to bring focus to key decision elements by providing a framework for systematically thinking through a health policy decision and thusly, inspire confidence that important considerations have not been overlooked that may lead to negative unintended consequences. Secondly, by nature of having a systematic and methodical framework for organizing the large volume of multi-faceted decision elements that should be considered towards a health policy decision, some degree of transparency should be achieved through use of the proposed aid.

4.2 – Conceptualization and Construction of the Proposed Decision Aid for Evidence-Informed Public Health Policy

Despite quickly coming to an agreement during the focus group (with reinforcement from key informant interviews) about the purpose for the proposed aid, less straightforward was the determination of how it should be conceptualized, constructed, and operationalized based on the intended purposes. Though the structure and content of the proposed aid were informed by the meta-narrative review findings and generally conceded by focus group and key informant interview participants, other responses to this question were much more varied. The main topics of discussion included: comprehensiveness, intended audience and context for use, evidence, instruction for data collection and appraisal, and organizational fit within health policymaking process. (Specific recommendations for modifications to the proposed aid were amended in a subsequent draft of the aid directly, presented in Section 4.3.)

4.2.1 – Comprehensiveness

In line with the first purpose identified for the proposed aid – to bring focus to key decision elements through a systematic framework – one of the major topics of discussion regarding its conceptualization was comprehensiveness. Though focus group participants expressed some initial reluctance towards a comprehensive decision aid, they reflected that regardless of experience and knowledge, everyone is vulnerable to overlooking some decision element on occasion, that is perhaps pertinent to the policy decision. It is precisely for such occasions that a systematic framework, as found in the proposed aid, has value for helping to organize and think through a complex health policy problem.
The focus group emphasized the importance of the systematic and comprehensive characteristics of the proposed aid in minimizing the risk of overlooking an important decision element that may lead to significant, unintended consequences, for which the additional resources required to reform that policy may in fact be more burdensome. Key informants generally felt that the alpha version of the proposed aid did a good job of being comprehensive.

One point to consider regarding the focus group's initial reluctance towards a more comprehensive inclusion of decision elements is that participants tended to approach the proposed aid from the perspective of personal use. Rather than multiple individuals or groups gathering relevant evidence prompted by the proposed aid for deliberation, their responses reflected a single individual's efforts. This was not necessarily the intention for the proposed aid and was stated as such at the beginning of the focus group. However, as this perspective became prominent during the discussion, participants were reminded that the intended use of the proposed aid was as a collaborative effort, each informing the decision domains within their areas of expertise. This allowed focus group members to move past the perceived insurmountable challenge of individual resource constraints. Further, it is not the comprehensiveness of the proposed aid, per se, that poses a challenge on resources but the policymaking process and complexity of the health policy issue itself. Without use of the proposed aid, a similar set of resources is likely required to gather all the relevant information for policy consideration. Moreover, one informant contradicted this viewpoint entirely, suggesting that the proposed aid may in fact save time, especially in time-sensitive cases, as it lays out everything that must be considered in an organized and systematic manner. In addition to resource constraints, some participants noted that it was also important to keep the proposed aid brief and concise in order to not lose sight of decision elements of critical consequence among the vast quantity of evidence available for consideration. However, several participants voiced that it is not the job of the proposed aid to determine which considerations are of utmost importance for any given policy decision but simply to ensure that all relevant evidence is present for consideration. Nevertheless, it was clear that a balance needed to be struck between being on the one hand comprehensive and thorough, and on the other hand compact and concise. Thus, the proposed aid contains a high-level table that lists and describes the relevant decision domains for those with limited time, as well as more detailed tables that break down the various decision elements to be considered within each decision domain. Both focus group and key informant interview participants were asked what the high-level table or 1-page checklist might look like but little guidance was gleaned from the discussions. Further research may be required in this area.
4.2.2 – Intended Audience and Context for Use

Various decision aids from related research traditions were explored through the meta-narrative review. Some decision aids were focused on very specific and localized decisions, whereas others were aimed at broader or more generalized decisions; some decision aids were geared towards high-level decisions, impacting a large population or organization versus person-level decisions, impacting a single individual. Despite the very different contexts and intended purposes of the decision aids explored in the meta-narrative review, many of the items appearing on the decision aids could be distilled into core decision elements that were present across all of the decision aids explored. This led to the initial notion of having a generalizable health policy decision aid that could assist with a variety of types of health policy decisions, rather than specific decision types.

The topic of generalizability was elaborated upon during the focus group as participants discussed the intended context for use of the proposed aid – level and stage of policymaking and decision type. An initial concern of the focus group was that a generic guide would be too broad to be useful for varied health policy decision contexts. However, focus group participants also discussed a set of overarching decision elements that seemed applicable to all health policy decisions and at all levels of policymaking. The presence of both of these perspectives begged the question of whether to create a very specific decision aid for a particular context for use or a more general decision aid for a much broader application across a multitude of contexts.

Given the focus group's agreement about the applicability of a set of broad brushstrokes across health policy decisions, the choice was made to create a health policy decision aid that is generalizable across different health policy decision contexts, for different types of decisions and different levels and stages of policymaking. Although described as "broad brushstrokes", these decision elements are not so broad that they lose their meaningfulness towards the purpose of ensuring that all decision elements of potentially significant consequence are accounted for. The overarching decision elements that the focus group referred to were not merely a list of super-categories that subsume a plethora of decision elements of greater detail. This would be akin to solely identifying the decision domains of the proposed aid, contributing little to the aforementioned purpose. There needed to be enough detail to spark thoughtfulness of the full spectrum of decision elements surrounding a complex health policy decision.

The contents of the proposed aid not only took into consideration the categorization level of the decision elements, careful not to include those that are highly context-specific, but also their representation. As demonstrated in the meta-narrative review, though similar decision elements were presented differently in decision aids for diverse decision contexts, many could be boiled down to the
same core considerations. As such, where applicable, decision elements for the proposed aid were
designed to represent the simplest understanding of health policy-related concepts and phenomena, using
layman's terms for a general audience.

Having recognized the "broad brushstroke" decision elements as being transferrable from one
context to the next, it might conversely be argued that the deliberate positioning of the proposed aid for
more general purposes was unnecessary. There is merit in this argument in that effort is required
regardless of whether a context-specific or a more generic decision aid is being adapted for a separate
context. However, a context-specific decision aid is more likely to contain decision elements, representing
concepts and using language that are highly specialized or even unique to that context. The advantage of
the generic decision aid is that one less step is needed to move from a generic understanding to a more
specialized context, rather than having to first decipher and determine the usefulness of components from
another context-specific tool. The added effort is not always significant but does open up greater
possibilities for decision elements to become lost in translation, which is of importance considering the
proposed aid's purpose is to ensure that all relevant decision elements are considered prior to making a
health policy decision. Thus, the more generalizable approach was taken with the proposed aid for wider
application across varying health policy contexts. Further, the more generic aid also allows for the
versatility that is needed in order to link it with the changing needs of decision contexts and the non-linear
nature of existing health policymaking practices. However, piloting and further evaluation of the
proposed aid will provide greater insight into whether the generalizability of this tool is truly desirable
and sufficient for satisfying the needs of a variety of decision contexts.

4.2.3 – Evidence

While feedback about the way that the proposed aid addresses evidence did not require intensive
revision, an important suggestion was to revise the examples that were provided in the introduction page
of the proposed aid and to clarify the definition of non-scientific evidence. This suggestion was
significant because one of the goals of the proposed aid is for users to acknowledge that there are different
types of evidence and to facilitate their integration and use in policymaking. As such, it is important that
the proposed aid is able to clearly articulate what ‘evidence’ is in the context of the proposed aid. To
address key informant suggestions about the proper portrayal of non-scientific evidence, a categorization
of colloquial types of evidence from Lomas et al.'s (2005) report was adapted and inserted into the
introduction of the proposed aid: colloquial evidence pertains to the views, expertise, and realities of
stakeholders – values (e.g., political judgment), practical operational considerations (e.g., resources,
habits/traditions), and interests (e.g., pragmatics/contingencies) – not obtained through rigorous scientific
methods.
4.2.4 – Instruction for Data Collection and Appraisal.

This study acknowledges the critical importance of data collection and appraisal for successful use of the proposed aid; it is only meaningful if supported and informed by relevant data that has been appropriately retrieved, evaluated, and synthesized. If these conditions are not met, it would be equivalent to not having fully considered all relevant decision elements of a health policy issue prior to decision-making, rendering it useless towards fulfilling its purpose. Further problematic, use of the proposed aid may result in a false sense of confidence in having thoroughly and thoughtfully considered all the encompassing decision elements of a health policy issue, when in fact that is not the case, potentially leading to significant, negative, unintended consequences.

Having said that, while important to the results of using the proposed aid, instruction on how and where to obtain and appraise data is not its purpose. In the context of this study, it is a separate (though not mutually exclusive) aspect of the same process in which the proposed aid is used. It assists users in determining the types of data that need to be obtained and appraised, as well as provides a framework for organization of such data in a systematic manner for thoughtful consideration. Further, a number of tools and guides already exist within the health policy field (and its subsets) that assist in data retrieval and appraisal. Nevertheless, though the instruction of individuals in this aspect of policymaking is not the purpose of the proposed aid, a compromise was offered by including a list of resources that reference common data sources/assessment techniques/etc. (see Appendix 11).

The proposed list of resources should be used as a starting point from which to broaden or complement one's data search and review process. It is important to note that data sources and quality appraisal techniques are context-specific; different contexts will have different evidence available, of which a randomized controlled trial, for example, may or may not be necessary or available. Data sources are subject to jurisdiction and the health policy issue in question, while different quality appraisal techniques may be required for various types of data. It is important that those who use this resource list remain cognizant of their own decision context and choose resources accordingly. Although data sources are context-specific, the resources provided on the proposed list might act as a reference for finding a similar resource in one's own context.

4.2.5 – Organizational Fit Within Health Policymaking Process - Adaptability

Findings from all three phases of the present study emphasized a need to ascertain and ensure the proposed aid's organizational fit within its intended context for use and associated constraints therein. Both focus group and key informant interview participants commented that within the healthcare policymaking context, organizational fit is concerned primarily with two items: 1) relevance of the
decision aid's content (i.e., decision domains and elements) and representation for health policymaking, and 2) adaptability of the decision aid to accommodate for the variable requirements of differing decision contexts and the non-linearity of the policymaking process.

Both of these items have already been touched upon in previous sections, as the conceptualization and construction of the proposed aid are driven by the manner in which it is intended for use. Initial feedback from key informant interviews resulted in the removal, addition, and modification of a number of decision elements. Participants' suggestions paid close attention to missing or irrelevant decision elements and language. The proposed aid was reviewed line by line, with attention to the simplification of language, where possible, and ensuring consistency of terminology used. Also, the addition and modification of several prompts were made in the implementation – planning considerations domain of the proposed aid that address, in a more explicit manner than in the previous draft, strategies for engaging key stakeholders and influencing behavioural change that are key to successful and full penetration of a particular policy. A similar strategy was utilized for addressing other suggestions of this nature.

Adaptability of the proposed aid for application in differing health policy decision contexts was determined to be a crucial aspect for its operationalization. More specifically, key informants' suggestions for improvement of the proposed aid to meet the requirements for organizational fit of the tool resulted in the removal of two decision domains, the addition and modification of a number of prompts, the reorganization of several prompts and domains, and some minor language changes. An amended version of the proposed aid, taking into account these changes, is presented in the next section.

4.3 - Research Deliverable: A Decision Aid for Evidence-Informed Public Health Policy - Beta Version

The final deliverable resulting from the present study is a refined draft, or beta version, of the health policy decision aid designed to assist policymakers and those supporting them in thinking about and clarifying all potentially relevant factors of a complex health policy decision. The beta version of the decision aid is accessible online at https://sites.google.com/site/policydecision/home. Figure 1 displays a screenshot of the online tool's homepage. A copy of the proposed aid, either in full or select decision domains of interest, is available for download from this website. Table 15 presents the final set of decision elements encompassed by the 9 decision domains of the proposed aid.
Figure 1: Screenshot of Proposed Decision Aid for Evidence-Informed Public Health Policy.

Decision Aid for Evidence-Informed Public Health Policy

Introduction

What are the objectives of this decision aid?

- To help individuals think about and clarify all potentially relevant factors of complex health policy decisions without preconceived notions of what is correct.
- To facilitate more transparent policy decisions that incorporate broader and more appropriate types of evidence.
- To support the interdependent efforts and communication between policymakers, stakeholders and expert groups (e.g., between epidemiologists and economists) throughout the policy-making process.

The decision aid is not meant to prescribe a policy solution or to yield uniform recommendations across jurisdictions.
- Use of the decision guide by different policy making groups engaged in different policy making processes will likely result in different decisions in different contexts according to the available evidence and factors specific to each decision making context.

Who is this decision aid for?

The decision aid is designed to assist policymakers and those supporting them:
- Those with the power to make or influence policy decisions (e.g., cabinet members)
- Those who facilitate by informing those decisions (e.g., advisory groups, civil servants, etc.).

Use of the decision aid, as a whole, is not intended for any single individual.
- While an authority responsible for the policy decision may initiate use of the decision guide, the task of contributing and assessing the relevant evidence as highlighted by the decision guide’s prompts of the decision domains will be delegated to a mix of individuals and groups with different skills and expertise.

What does the decision aid do?

The decision aid provides a comprehensive series of prompts that help identify the appropriate types of evidence relevant to the policy decision.
- By systematically using the provided prompts, the risks of overlooking evidence related to significant consequences can be minimized.
- However, all prompts may not be relevant to all specific decisional contexts.
- Furthermore, the prompts may not identify the same types of levels of evidence nor employ the same processes for obtaining evidence in different contexts.

What does the term 'evidence' include?

Evidence refers to both scientific (on effectiveness or context) and colloquial types. Colloquial evidence pertains to the views, expertise, and realities of stakeholders - values (e.g., political judgement), practical operational considerations (e.g., resources, habits/traditions), and interests (e.g., pragmatic/contingencies) - not obtained through rigorous scientific methods.

*The Decision Aid for Evidence-Informed Population-Based Health Policy is a work in progress. Note that because it is a work in progress there are parts that are either missing or will be revised. This website will be updated progressively.*
Table 15. Final set of decision elements and encompassing decision domains.

<table>
<thead>
<tr>
<th>Decision Domains</th>
<th>Decision Elements</th>
</tr>
</thead>
</table>
| Characteristics of the healthcare issue | 1. State a clear description of the healthcare issue.  
  a. Does the policy problem address an important and/or significant healthcare issue?  
     i. What is the magnitude (e.g., disease severity) of the health care issue within the local context?  
  b. Is the issue well understood?  
  c. What is the (likely) cause(s) of the issue?  
  d. Who is impacted by the issue?  
  e. What specific aspects of the issue require action?  
  f. How did the problem come to attention and has that influenced the prospect of it being addressed? |
| Contextual considerations | 1. What is the current political environment (local/regional/provincial/federal) surrounding the healthcare issue in question?  
  2. Are there any current or upcoming political events that might influence the policy decision?  
  3. What relevant international trends are related to the healthcare issue?  
  4. What overarching public policy ideas/ideologies relate to this healthcare issue?  
     a. How do these influence potential policy options for addressing the healthcare issue?  
  5. What is known about the current strategy/activity for addressing this healthcare issue?  
     a. What services are offered?  
     b. What are the objectives of services offered?  
     c. How are services administered and by whom?  
     d. Who has authority over these services (at the policy, organizational, commercial and professional levels)?  
     e. What is known about the effectiveness of these services?  
     i. In which areas or in what ways do current outcomes warrant additional attention to the healthcare issue?  
     f. Are there any major/critical gaps in evidence?  
     i. What is the best way to address these gaps?  
     g. What should be done where there is poor, unreliable or no data?  
  6. What formal institutional arrangements at the level of government are relevant to the healthcare issue? (E.g., administrative hierarchies, legislative and decision-making procedures, budget mechanisms and legal systems.)  
  7. What formal institutions, or rules, at organizational- and healthcare system-levels are relevant to the healthcare issue (e.g., legislation, contractual agreements, standard operating procedures and ethical standards)?  
  8. What informal institutions, or rules, at organizational- and healthcare system-levels are relevant to the healthcare issue (e.g., soft-laws, norms, cultures, routines, duties and traditions)?  
  9. What values do the society at large (e.g., public opinion or public mood) hold toward the healthcare issue?  
  10. What objectives of the healthcare system are related to the healthcare issue (e.g., Health gain, access, innovation, sustainability, client-focus, community engagement, equity and efficiency)?  
     a. How is the healthcare issue portrayed in the media? |
| Stakeholder considerations | 1. Who are the primary/critical and peripheral stakeholders involved in the policy (e.g., political bodies, economic bodies, social bodies, educational bodies and professional/regulatory bodies)?
| | 2. How is the healthcare issue framed from different stakeholders’ perspectives?
| | a. Are all relevant stakeholder perspectives accounted for?
| | 3. What level of priority is assigned to the healthcare issue by different stakeholder groups?
| | 4. What are stakeholders’ positions on the policy (ranging from high support to high opposition)?
| | 5. What is known about the interests held by stakeholders regarding the healthcare issue?
| | a. What is the relative importance of their interest(s)?
| | 6. What level of power and influence do they have (low to high)?
| | a. What is their potential impact on policy development?
| | 7. What other attributes might affect the influence that various stakeholders have on the policy decision (e.g., level of policymaking, such as national or regional; sector, such as political, commercial, media, governmental; what type of organization)?
| | 8. Does a consensus or conflict of interests exist between stakeholders?
| Characteristics of the proposed healthcare intervention | 1. Clear description of proposed healthcare intervention(s).
| | a. What are the objectives of the intervention?
| | i. Through which mechanisms of the intervention are these objectives achieved?
| | b. What is the target population of the proposed healthcare intervention?
| | c. Is this population clearly identifiable and accessible?
| | i. What is the size of the population?
| | d. What are the different elements (e.g., technical characteristics) involved with implementing the intervention?
| | i. Which elements of the intervention are critically important (and hence need to be retained), and which could be excluded or modified?
| | e. In which way(s) is the intervention new compared to the status quo?
| | f. What is the anticipated duration or lifespan of the proposed healthcare intervention?
| | g. What are its indications for use?
| | h. What is its level of distribution/diffusion in other jurisdictions?
| | i. Is there any local data on its use?
| | ii. Are there patterns of its use?
| | iii. Is it possible to be confident about a decision despite a lack of evidence?
| | i. What other jurisdictions have implemented the proposed healthcare intervention?
| | i. What implementation strategies for the proposed healthcare intervention have been used in these jurisdictions?
| | ii. How do these jurisdictions compare to the local environment? For example, in terms of governance structures or population demographics?
| | iii. What is known about the impact of the proposed healthcare intervention implemented in these jurisdictions (e.g., patient outcomes, public acceptance or health system efficiency)?

iv. What is the source for this evidence?
v. What assumptions were made in assessing the impact of the proposed healthcare intervention in these jurisdictions?
j. How do these factors impact the adaptation of the proposed healthcare intervention for the local environment?

<table>
<thead>
<tr>
<th>Clinical/health considerations</th>
<th>1. Safety: Are there any associated risks or adverse effects/events associated with the proposed healthcare intervention for individuals/organizations/private sectors/etc.?:</th>
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<tbody>
<tr>
<td></td>
<td>a. Frequency and severity?</td>
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<tr>
<td></td>
<td>b. How do these compare to the risks or adverse effects/events associated with alternative options (including the status quo)?</td>
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<tr>
<td></td>
<td>c. Are these more or less acceptable/tolerable compared to the alternative options (including the status quo)?</td>
</tr>
<tr>
<td>2. Efficacy/effectiveness:</td>
<td>a. What are the anticipated health-related and satisfaction-related benefits at the patient-level (for instance, in terms of prevention, rehabilitation, symptom relief, survival, quality of life and convenience)?</td>
</tr>
<tr>
<td></td>
<td>i. What is known about the value of these benefits for those affected by the proposed healthcare issue/intervention?</td>
</tr>
<tr>
<td></td>
<td>ii. How do these compare to the benefits associated with alternative options (including the status quo)?</td>
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<td></td>
<td>b. How will the proposed healthcare intervention impact population health, in terms of:</td>
</tr>
<tr>
<td></td>
<td>i. Burden of illness: incidence, prevalence, other measurements of impact on an illness on population health?</td>
</tr>
<tr>
<td></td>
<td>ii. Health promotion and disease prevention?</td>
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<td></td>
<td>c. How do the benefits associated with the intervention compare with those of alternative options (including the status quo)?</td>
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<tr>
<td>3. Are there substantial differences between study contexts and the local context (e.g., differences in health system arrangements or baseline conditions) that might affect its generalizability for local application?</td>
<td></td>
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<tr>
<td>4. Does the evidence represent particular biases?</td>
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<td>5. What or who are the sources of the evidence?</td>
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<td>6. What assumptions is the evidence on safety and efficacy based upon?</td>
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<tr>
<td>7. What uncertainties or critical gaps in evidence exist surrounding the proposed healthcare intervention?</td>
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<tr>
<td>8. Are there any ongoing studies or new important studies with results expected shortly that should be considered or could impact decision-making?</td>
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</table>

<table>
<thead>
<tr>
<th>Health system and population impact considerations</th>
<th>1. What is known about the proposed healthcare intervention’s impact on the health system’s performance (e.g., access, quality, sustainability and integration)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. How would the proposed healthcare intervention contribute to professional development, education, training and/or research? How important would those contributions be?</td>
</tr>
</tbody>
</table>
| Implementation - planning considerations | 1. What is the timeline for implementation?  
| | a. Does the intervention require a transient period to reach steady state? Is it acceptable?  
| | 2. What service delivery and governance structures are needed to implement the proposed healthcare intervention?  
| | 3. What are the various areas and/or levels of accountability related to implementing the proposed healthcare intervention?  
| | a. How are these organized into a hierarchy or chain of accountability?  
| | b. Who is accountable for each of these, respectively?  
| | 4. Can barriers or bottlenecks for implementation and strategies for resolving them be identified?  
| | 5. In what ways will the proposed healthcare intervention affect those involved in implementation with respect to information, training, work environment (e.g., Roles and competencies and employee satisfaction)?  
| | 6. How should cooperative efforts between administration levels, across units and different sectors be coordinated?  
| | 7. Does the proposed healthcare intervention comply with applicable rules and institutions (e.g., contractual agreements, medical guidelines, privacy laws, organizational cultures and routines)? (Responses from the ‘Contextual Considerations’ domain may be a helpful reference for informing this.)  
| | a. If not, what can be done to resolve issues of non-compliance?  
| | 8. What opportunities/obstacles exist within the organization(s) responsible for implementing the proposed healthcare intervention, the general organizational environment, and the broader socio-political environment that might affect its feasibility? (Responses from the ‘Contextual Considerations’ domain may be a helpful reference for informing this.) |

2. Does the proposed healthcare intervention align with or impede other healthcare interventions (existing and projected) and/or depend on the completion of other healthcare interventions?  
3. Does the proposed healthcare intervention align with short- and long-term objectives for addressing the healthcare issue? Healthcare system objectives?  
   a. If not, are there acceptable countermeasures to resolve the conflict?  
   b. What should be done if short- and/or long-term objectives have not yet been set?  
4. Is the level and nature of risk(s) associated with the healthcare intervention acceptable?  
   a. Have any feasible mitigation strategies been identified?  
   b. Does the risk(s) of the proposed healthcare intervention outweigh the risk(s) of continuing with the status quo?  
5. Is the healthcare intervention clinically, socially and ethically acceptable to relevant stakeholders and the society at large?  
6. Does the current healthcare system have the necessary resources – human resources, technical capacity, infrastructure, and equipment (financial resources addressed in a separate domain) to support the healthcare intervention now (or in the future)?  
7. How will the proposed intervention affect other healthcare services, hospitals, regions, sectors, etc.?  
   a. Is there an opportunity for the proposed healthcare intervention to be of benefit to multiple groups?  
   b. Is it synergistic with existing technologies/programs/services?  
   c. Will it duplicate a service that already exists?
9. What strategies should be considered in order to facilitate the necessary behavioural changes among healthcare recipients, the public, healthcare professionals, healthcare organizations and the healthcare system (e.g., incentive structures)?

10. Are there any elements of the healthcare intervention that can be modified or excluded to improve its acceptability and feasibility?

11. Which primary/critical stakeholders’ involvement is crucial for full penetration of the target population and successful implementation of the proposed healthcare intervention?
   a. Based on what is known about these stakeholders (see Stakeholder Considerations domain), what engagement strategies can be used to gain their support?
   b. Are any of these stakeholders suitable and/or willing to champion the proposed healthcare intervention, particularly where the desired behavioural change will be voluntary?

12. How should information regarding implementation be communicated in order to engage stakeholders?
   a. How should enquiries regarding the healthcare intervention be handled? Who will be responsible?

13. What should be done with the current intervention(s) related to the healthcare issue in order to accommodate the proposed healthcare intervention?
   If the proposed healthcare intervention is going to supplant the current intervention(s), what approach should be taken for withdrawing the current one?
   c. How does this interact with the implementation of the proposed healthcare intervention, for instance, in terms of service delivery or timelines?

### Implementation - Evaluation considerations

1. What type of monitoring and/or evaluation is needed with implementation of the proposed healthcare intervention (e.g., ongoing performance measurement system or process evaluation of implementation strategy)?

2. What measurement indicators are appropriate for monitoring the impacts of the proposed healthcare intervention?
   a. What is the minimum dataset needed to calculate these indicators?
   b. When and how often should data be collected?

3. How long will it take before meaningful data can be obtained? How should relevant health/performance data be collected and registered (i.e., new or existing monitoring system)?

4. Where needed, how should benchmarks/goals be determined?
   a. Where existing data is not available, how should a proxy be determined in the interim?

5. To whom should this information be reported to?

6. What actions should be taken if monitoring reveals significant unintended consequences of the proposed healthcare intervention, including failure to meet stated objectives?
   a. Is there a feedback mechanism that will then monitor these actions?

### Economic considerations

1. What financial resources are available in total?
   a. How are resources currently distributed amongst programs surrounding the healthcare issue?
   b. Is the healthcare intervention affordable given available resources?
   c. Are there areas of care surrounding the healthcare issue that could be
The intention is for the proposed aid to be generalizable in its application to the plethora of health-related decision contexts encompassed by 'complex population-based health policy', including funding decisions for drugs or health programs, health human resources allocation decisions, health services provision and eligibility decisions, and many others. It should be noted that the purpose of the proposed aid is not to prescribe a solution for a policy problem but simply to provide a systematic and methodical way of navigating through all the considerations underlying a policy decision. Further, use of the proposed aid should instill confidence that a comprehensive approach to arriving at a decision has been taken, as not to neglect considerations that may lead to unintended and undesirable consequences.

Consisting of a comprehensive series of prompts, the proposed aid helps to identify the broad array of evidence and information that is pertinent to a health policy decision. It was designed to ensure that having considered and incorporated the contents of the proposed aid throughout the policymaking
process, where appropriate, a well-informed and well-rounded piece of work has been done to get to the point of policy. Further, while acknowledging that the current policymaking process prohibits full disclosure of the entire policymaking process to the public, the proposed aid aims to facilitate increased transparency in health policymaking. A degree of transparency – not only to the public but to those directly involved in the policymaking process – can be achieved through use of the proposed aid by way of heightened attention and structure to the full range of considerations relevant to a health policy decision. It also provides insight into or a frame of reference of the thought process for identifying the numerous and multi-faceted considerations leading up to a policy decision.

Although the ideal would be for the proposed aid to be used as a whole in its entirety, though not necessarily by a single individual, its use may manifest differently to match with each policy issue in question. Depending on the complexity of the health policy issue, stage or level of policymaking, and/or the needs and constraints of individual users, some, most, or all of the aid can be used as needed. For instance, generating evidence for each of the proposed aid's decision domains and elements may be assigned to various individuals based on their expertise and responsibilities in relation to the policy issue, a single decision domain may be used by an individual or entity to review or communicate what is known, or the contents of the entire decision aid may be used by an individual or entity to assist with compiling a policy report (or brief) regarding the policy issue. Taking into account the many different roles involved in policymaking, the non-linear nature of the policymaking process, and the unique characteristics of individual decision contexts, adaptability and flexibility are important features of the proposed aid.

4.4 – Study Implications

Implications of the proposed aid relate to the provision of support for individuals involved with health policymaking and for evidence-informed policy. Based on initial feedback from this study's key informant interviews, the proposed aid should have value for a range of individuals involved in the health policymaking process, for example, branches of government responsible for developing and implementing health policies. Though study participants reflected that the proposed aid should be useful for people with different levels of experience with health policymaking, some individuals noted its particular effectiveness for those with less experience. Secondary stakeholders might include people with an interest in attaining a greater understanding of the types of consideration that should go into a health policy decision. For example, a journalist reviewing or critiquing a policy issue might use the proposed aid as a checklist for navigating through all the various considerations influencing a health policy decision.
As a beta version, the proposed aid might be used as a guide for the creation of other health policy decision aids. Over the course of the study, there was some discussion about whether the focus of the deliverable should be generalizable across decision types or decision-specific. While the more generalizable approach was taken within the proposed aid for application towards a wide range of health policy decisions, it may be used as a basic framework that can be adapted for the creation of decision-specific tools.

In terms of evidence-informed policy, the proposed aid contributes to the mitigation of unintended negative consequences resulting from overlooked decision elements in the health policymaking process, through the comprehensive nature of the tool. It also contributes towards greater transparency of health policymaking. Use of the proposed aid in itself will not achieve transparency of a policy decision or the decision-making process leading up to it. This is to be expected, given that it is not a model for the health policymaking process itself, but a tool that assists with a component within that process (i.e., informational needs). However, the proposed aid was designed in a way that it may contribute to overall improved transparency. A degree of transparency may be achieved among those involved in the policymaking process should a policymaking body adopt a collaborative approach for using the proposed aid. As previously stated, the proposed aid can be used to produce a centralized record of policy-relevant decision considerations, which can facilitate a shared understanding between peers of this policymaking body. This understanding can also lead to an assurance that at the very least, the decision elements in the proposed aid have been considered at some point during the policymaking process.

One might argue that the proposed aid is not very effective in terms of improving transparency since it accepts that some aspects of policymaking, as yet, remain undisclosed to the public and even to others involved in the policymaking process. However, this limitation may not be so different from other (health) policymaking models that prescribe changes to the process to enforce full disclosure (of decision rationales). Both approaches are subject to the will of users/policymakers. Though there are exceptions, it is ultimately up to those directly involved in the policymaking process to determine what, how much, and to whom that process is disclosed. Having said that, the present study does not refute the desirability and optimality of more transparent health policymaking processes.
4.5 – Study Limitations

4.5.1 – Meta-Narrative Review

The meta-narrative review method has been modified for this study to fit within the scope of a master's thesis project. Typically, this method is carried out by a team of individuals, whom collectively share the expertise needed to carry out the review and synthesis of literature in research traditions related to the issue of interest. The meta-narrative review within this study was conducted by a single graduate student. In order to ensure that sufficient expertise was employed in the search and review process of each research tradition, the thesis supervisory committee and an advisory group were consulted on a regular basis throughout the review. An advisory group consisting of field experts in related research traditions was set up to contribute their knowledge and expertise in searching and developing the meta-narrative for each research tradition identified, respectively. The thesis supervisory committee assisted in the initial generation of potential research traditions and associated field experts (candidates for the advisory group). They further provided support as a sounding board for overall synthesis across the research traditions as the meta-narratives developed.

A further limitation within this study was the inclusion of evidence-informed health policy decision aids that did not fall within the original method's definition for a research tradition. While a meta-narrative could not be provided for these tools, they were included in the synthesis of data due to their direct relationship with the study subject. The major disadvantage to the inclusion of these tools was that unlike findings from other research traditions, they did not have an underlying meta-narrative to explain any incongruence with other findings. This did not pose a major issue, particularly since these tools align well with the present study context and aims. Nevertheless, the thesis supervisory committee was consulted about possible causes for divergence stemming from these tools, given their wealth of knowledge about health policy. The focus group's role in contextualizing the meta-narrative review recommendations also acted as a safeguard against a misguided interpretation of the findings for the intended context. Furthermore, the benefits of their inclusion outweighed the lack of theoretical cause for divergence in the findings. To deny the tools' significance to evidence-informed health policymaking and contributions to the development of the proposed aid would have been remiss.

4.5.2 – Focus group

Commonly cited limitations of focus group methodology that potentially impacted this study include moderator bias and limited generalizability of findings (Gibbs, 1997; Smithson, 2000; Stewart & Shamdasani, 2014). Moderator bias may have been introduced with the presentation of the meta-narrative review findings. On one hand, the focus group was intended to help contextualize the meta-narrative
review findings; on the other hand, its alternative purpose was to generate original discussion for what participants thought the purpose and conceptualization and construction of the proposed aid should be. To minimize this potential bias, participants were always asked to first discuss what their thoughts on the subject were before presenting them with the review findings. Analysis of the discussion also heeded changes in perspectives through the progression of discussion before and after introduction of the review findings.

The relatively small number of participants and their recruitment from a single organization (i.e., NCCSN) may inhibit the generalizability of findings to the larger population. This is of particular concern for this study given that the context is one that involves a multitude of individuals with different roles and responsibilities. Furthermore, the national perspective is also a challenge given that there are jurisdictional differences in the way the health policymaking process works; individuals with the same roles and responsibilities might have very different perspectives depending on how the policymaking process might deviate across jurisdictions. Though the participant group was small, an effort was made to select individuals across Canada, spanning 5 provinces. Another limitation related to the sample consisting mainly of those with more senior-level positions within organizations related to CRC screening policy. Their association with CRC screening may reflect some distinct characteristics that may or may not be present in other areas of health policy. However, the creation of the initial working draft for the proposed aid did not rely solely on the focus group findings but was also informed by the meta-narrative review, which drew from a range of research traditions, including some outside of healthcare. Further, the focus group method was followed up with key informant interviews, adding to the diversity among study participants.

4.5.3 – Key Informant Interviews

Two potential limitations associated with the conduction of interviews may have been present in this study: the interviewer's limited practical experience with health policy (including screening policy) decision-making and the limited generalizability of findings. Advanced preparations were made to mitigate the negative impact of these limitations. The interview script was created with guidance from the thesis supervisory committee (that has extensive experience in both qualitative research and health policy research) and was piloted with several peers with knowledge of both the health policymaking process and qualitative research methods. Piloting provided an opportunity for practice and feedback for both the interview script and the interviewer. The final script was reviewed once more and approved by the thesis supervisory committee before the formal conduction of key informant interviews. The thesis supervisory committee's guidance was also present for the analysis. Despite such preparations, the wide breadth of
knowledge required for understanding health policy and CRC screening policy may have limited the interviewer in exploring all areas of discussion thoroughly.

The key informant interviews allowed for greater depth of data from each participant, beyond the scope of the focus group, however, this method is still vulnerable to limited generalizability of findings. Again, this is especially the case for the health policymaking context; the number of participants in phase three of this study is relatively small compared to the number of people involved in the health policymaking process. To account for the wide range of perspectives within the present context, key informant interview participants spanned across 5 Canadian provinces, various stages of the health policymaking process (i.e., deputy health minister and program/policy analyst) and fields of expertise relating to the decision domains included in the proposed aid. Based on the scope of the present study, the sample of study participants was able to sufficiently inform the development of a beta version of the proposed aid that as intended, can be further tested, adapted, and/or refined in future efforts. However, next steps will require involvement of more individuals from the full spectrum of the health policymaking process.

4.6 – Future Research

The next step for this beta version of the proposed aid includes an examination of the optimal method(s) for dissemination, both academically and towards real-world application, in order to maximize the impact of the proposed aid. It may be piloted, adapted, and/or developed through further investigations. Some potential areas of investigation are elaborated below, including: piloting under various decision contexts, addition of a valuation component, and optimal operationalization and implementation.

Although a preliminary evaluation of the proposed aid has been completed through the final phase of the present study, comprising key informant interviews, further evaluation is needed to ascertain a deeper understanding of the proposed aid's validity and utility. As noted in the findings of the final phase of this study, while the decision domains and elements made sense to informants on the level of reading and reflecting, it often takes piloting of a tool under a real-life setting to truly grasp whether or not everything is where and as it should be.

More formal evaluation of the decision for the proposed aid to approach decision support in a generalizable manner is needed. Given that the proposed aid is meant for generalized application within the plethora of decision contexts encompassed by 'health policy' (e.g., pharmaceutical funding, population-based programming), it is important that the tool is piloted and evaluated under these different
contexts. This is necessary to determine whether or not the proposed aid is sufficient and appropriate across different decision contexts. It will also help to pinpoint specific needs and importantly, the range of perspectives that need to be accounted for within the tool.

Future findings may spur the creation or adaptation of different versions of the proposed aid for use within different decision contexts, minimizing the users' determination of which pieces are needed for that given context. One direction for development of the proposed aid might be its adaptation to create a family of decision aids for specific decision contexts. Another approach might be to develop more specific guidance for users on how to use the proposed aid in general, as well as for specific decision contexts. This could take on the form of sample cases to demonstrate how the aid can be adapted for different information needs of various decision-making scenarios. Future evaluation of the proposed aid's use in a practical setting and by a range of individuals involved in health policy decision-making may help to inform these sample cases.

Another facet of piloting the proposed aid is the examination of the concepts of better decisions and decision preparedness. While the underlying goal of any decision support tool is arguably to assist in making better decisions, it is difficult to determine and assess what a better decision actually is. However, the participants in this study have alluded to the concept of decision preparedness – confidence that a decision has been thoroughly thought through and having minimized any risks of overlooking critical issues – at least in part, is what contributes to a better decision. Thus, further investigation into whether use of the proposed aid does in fact impart greater confidence in the decision made and whether that confidence can be justified (i.e., using the proposed aid does in fact minimize the risk of unintended, negative consequences of a policy decision), would be valuable. A further avenue of research might be the addition of a valuation component as seen in some of the tools identified in the meta-narrative review. There were mixed views from key informants on whether and to what extent a valuation component should influence the health policymaking process. More research is needed to determine whether a valuation component is a valuable addition to the tool and if so, a great deal more research is needed towards its design.

Future research should also look further into the optimal operationalization of the proposed aid. The present study has only described organizational fit in terms of content relevance and adaptability as a key consideration in the operationalization of the tool. The structure and comprehensive nature of the proposed aid lends itself to the facilitation of communication by serving as a primary point of reference for all decision domains and elements under consideration with regard to a health policy decision. It has the potential for becoming a centralized tool for assisting with the identification of necessary and
appropriate linkages between assumptions made, data gathered, and those responsible for data retrieval and synthesis. Early identification of potential linkages through the proposed aid and the opening of communication channels between involved parties can save the trouble of having completed an assessment only to realize that it needs to be redone to recalibrate for assumption "X" from two domains that were in conflict. More importantly, it assists in ensuring that missing linkages that may lead to incompatibilities in decision elements informing a health policy decision and subsequently, negative unintended consequences of the decision are avoided.

The aim of further development and evaluation in this area will be to provide a common platform or resource on which policymakers can deliberate and arrive at a decision, with confidence in the uniformity and cohesiveness of the information used to represent the healthcare issue at hand. Further evaluation would be required to understand whether communication between involved parties at various stages and levels of health policymaking, through use of the proposed aid within a real-life setting, is feasible and to what extent. For example, a centralized computer-based program/server that would organize and hold all of the retrieved decision elements might be effective, however, this might also raise other feasibility issues (e.g., costs and data security) that would need to be evaluated.

4.7 – Concluding Comments

In answering the research questions set out at the beginning of this study, the aim was to create a health policy decision aid designed to assist policymakers and those supporting them, in systematically thinking through the decision elements of a public health policy decision. In particular, the aim was to enable the structured and systematic incorporation of research- and non-research-based evidence and considerations into the policymaking process. A mixed methods approach was taken towards the development of the proposed aid, using meta-narrative review, focus group, and key informant interviews. An initial working draft (alpha version) of the proposed aid was created, comprising a comprehensive set of decision elements that ought to be considered through the policy decision-making process. Preliminary feedback has provided the opportunity for some initial refinements, resulting in a beta version that is ready for piloting and further study. Research to test its usability and validity in a real-world setting and towards further refinements is warranted.
References


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abstract


Dear <<Insert Name>>,

You are invited to participate as an expert advisor to guide research towards development of a decision aid supporting evidence-informed, public sector health policy decisions made on behalf of populations. Participation in this study will involve two separate interviews (at the outset and completion of the review – about one hour each) over the span of several months. The purpose of this interview is to inform the meta-narrative review process regarding approaches to searching and mapping the literature specific to <<insert field of expertise>>.

**Background:** The paucity of structured processes for identifying, interpreting, and applying various scientific and non-scientific evidentiary sources across different decision-making contexts is an obstacle to transparent, evidence-informed policy. This is an increasingly important issue as new health discoveries are made within the context of increasing demand for transparency and accountability in healthcare decision-making. Its aim is to develop a transparent and systematic decision aid that will guide high-level, public sector decisions in healthcare made on behalf of populations. A meta-narrative review will be conducted to survey the vast array of knowledge about decision aids existing in various literatures. Findings from the meta-narrative review will then be presented to a focus group in order to contextualize and adapt said findings for the health policy context, ultimately contributing to the development of the decision aid. Key informant interviews will then be conducted to further refine the decision aid.

Participant Criteria: You have been sent this invitation based on your expertise in the specified research traditions, which we have identified as highly relevant to the development of a health policy decision aid. Your participation will greatly assist us in meeting our research objectives but participation remains voluntary.

Minimal risks are associated with this study. Published material may list your participation as one of the expert advisors guiding the meta-narrative review search; however, you will not be associated with specific comments.

If you are interested in participating or have any questions or concerns regarding this study, please contact Peggy Tso – lead investigator, MSc candidate at the University of Toronto – or Dr. Mark Dobrow – supervisor – by telephone or email as listed below. Thank you for your consideration.

Sincerely,

Peggy Tso, MSc Candidate
Research Associate, Cancer Services and Policy Research Unit, Cancer Care Ontario
Phone: 416-971-9800 x3372   Email: peggy.tso@utoronto.ca

Mark Dobrow, PhD
Scientist, Cancer Services and Policy Research Unit, Cancer Care Ontario
Assistant Professor, Health Policy, Management and Evaluation, University of Toronto
Phone: 416-217-1380   Email: mark.dobrow@utoronto.ca
CIHR Team in Population-Based Colorectal Cancer Screening – AIM 3, Phase 2

Dear <<Insert Name>>,

You are invited to participate in focus group research towards development of a decision aid supporting evidence-informed health policy decision-making in the context of colorectal cancer screening. We hope to draw on your expertise and experience with population-based screening policy decisions for defining relevant decision factors to include in the decision aid and to position it appropriately in the current policy context. Participation in this study will involve a web conference meeting (approximately 1 hour – in January/February), using Microsoft LiveMeeting. The focus group will be conducted by Peggy Tso and will be recorded. Your participation is completely voluntary and anonymity and confidentiality will be ensured to all participants.

Please note that an overview of this study was presented at the National Colorectal Cancer Screening Network’s (NCCSN) spring 2010 meeting and is one of 4 key projects supported by a Canadian Institutes of Health Research Team in Population-Based Colorectal Cancer Screening, led by Dr. Linda Rabeneck.

Background: Decision aids have been developed in a number of health disciplines to support evidence-informed decision-making, including patient decision aids and clinical practice guidelines. However, policy contexts differ from clinical contexts and require different approaches for identifying, interpreting, and applying various types of evidence to support decisions. With few studies in the literature offering decision guidance specifically to health policymakers, the present study aims to facilitate the structured and systematic incorporation of research evidence, and importantly, values and other non-research-based evidence into the policymaking process. The intent is not to develop a decision aid that will yield uniform recommendations across jurisdictions, but rather for the decision aid to facilitate more transparent policy decisions that incorporate broader and more appropriate types of evidence.

A meta-narrative review has been conducted to survey the array of knowledge about decision aids existing in various literatures, contributing to the initial development of the decision aid. Focus groups will then be conducted to elicit more depth from the perspective of policymakers and those contributing to the policy decision, on key decision factors and ensuring that the resulting aid is both useable and useful for decision-makers, such as yourself. Finally, key informant interviews will be conducted to further inform and refine the decision aid with a larger audience of potential end-users.

Participant Criteria: You have been sent this invitation based on your role as a member of the Canadian Partnership Against Cancer’s NCCSN, with experience contributing to population-based screening policy decisions. Your participation is voluntary, but will greatly assist us in meeting our study objectives which will ultimately create a working decision aid to support population-based decision-making.

Please indicate if you are willing to participate in the focus groups by completing the enclosed informed consent form and returning it within two weeks of receipt of this email. Please also visit the following link to indicate your availability for the first focus group: <<insert URL>>. If you have any questions or concerns regarding this study, please do not hesitate to contact Peggy Tso – lead investigator, MSc candidate – or Dr. Mark Dobrow – supervisor – as listed below. Thank you for your consideration.
Appendix 2: Study Invitation Letter – Focus Group (Page 2 of 2)

Sincerely,

Peggy Tso, MSc Candidate
Phone: 416-971-9800 x3372  Email: peggy.tso@utoronto.ca

Mark Dobrow, PhD
Scientist, Cancer Services and Policy Research Unit, Cancer Care Ontario
Assistant Professor, Health Policy, Management and Evaluation, University of Toronto
Phone: 416-217-1380  Email: mark.dobrow@utoronto.ca
INFORMED CONSENT FORM

CIHR Team in Population-Based Colorectal Cancer Screening – Development of a Decision Aid to Guide Public Sector Health Policy Decisions

Investigators: Peggy Tso, Linda Rabeneck MD, Mark Dobrow PhD
Nancy Baxter, MD, PhD, Melissa Brouwers, PhD, Ann L. Casebeer, PhD, Tony Culyer PhD, Robert Hilsden MD, Elizabeth McGregor PhD, Larry Paszat MD, Paul Ritvo, PhD

You have been invited to participate in this study based on your contributions and experience with population-based screening policy decisions. If you agree to participate, your participation will involve one focus group, lasting approximately one hour.

Only the study researchers will have access to the focus group data, which will be kept completely confidential and stored securely. No information will be released that would disclose your personal identity within any presentations or publications resulting from this research project without your express consent, and the focus group data will not be used for any purposes outside of this project.

You can obtain additional information on any part of the project from the lead researcher, Peggy Tso, 416-971-9800 extension 3372 or peggy.tso@utoronto.ca.

If you have any questions or concerns about your rights as a research participant, please contact Daniel Gyewu, Research Ethics Manager, Health Sciences Research Ethics Board d.gyewu@utoronto.ca or 416-946-5763.

I have been informed of the purpose and methodology for the study on the use of different types of evidence in the development of a population-based colorectal cancer screening program. I understand that by signing my name below I am agreeing to participate in this study and informed consent is considered to have been given.

I understand that I have the right to withdraw my participation at any time, in which case any data collected from me would be destroyed. As an focus group participant I have the right to refuse to answer any questions and to withdraw from the focus group at any time.

Signature: ______________________________ Date: __________________________

Name: __________________________________

Preferred Contact Information:

Address: __________________________________________
Appendix 3: Study Consent Form – Focus Group (Page 2 of 2)

Telephone: ____________________________ Email: _____________________________

Please note that we will also be sending you pre-focus group information 2-3 days before your scheduled focus group. It would help us greatly if you could identify the best way to contact you.

Please check one of the following and provide relevant contact details:
☐ I prefer to receive the pre-focus group information sheet by email at:
______________________________

☐ I prefer to receive the pre-focus group information sheet by fax at:
______________________________

Please return this form by fax to the attention of:
Peggy Tso, Fax #: 416-971-6888
If there are any problems, please contact Peggy Tso at 416-971-9800 ex 3372
Appendix 4: Focus Group Slideshow Presentation (Page 1 of 3)

Focus Group I, January 14, 2011.

Mediator: Peggy Tso

Agenda

- Study background
- Today’s objectives:
  - Position decision aid within current policy context
  - Topics for focus group input:
    1) Purpose of decision aid
    2) Conceptualization: Decision factors
    3) Implementation issues

Background

- Governments and health organizations are increasingly relying on evidence-informed approaches to justify practices and policies
- Decision aids have been developed to assist in the evidence-informed decision-making process in many contexts and health disciplines (e.g., patient decision aids, clinical practice guidelines, etc.)
- BUT, policy contexts differ from clinical contexts and few studies have directed decision guidance specifically to health policymakers

Study Aims

- Develop a decision aid for policymakers to guide evidence-informed, public sector health policy decisions (e.g., population-based screening decision)
- Facilitate more transparent policy decisions, incorporating broader and more appropriate types of evidence (research-based, values, and other non-research-based)

Modified meta-narrative review findings (1)

- Key dimensions analyzed:
  - Purpose
  - Design considerations
  - Decision principles (content)
  - Implementation issues

Modified meta-narrative review findings (2)

- Included research streams on decision aids:
  - Clinical Decision Aids
    - Clinical practice guidelines
    - Patient decision aids
  - Health Technology Assessments
  - Multi-Criteria Decision Analysis (MCDA)
  - Program Budgeting and Marginal analysis (PBMA)
  - Principles of Screening
  - Policy Analysis
    - Ideas, Interests, and Institutions
    - Policy Cycle
Appendix 4: Focus Group Slideshow Presentation (Page 2 of 3)

Developing a decision aid - Purpose

Focus group input, question #1:

What should be the purpose of a decision aid for population-based health policy decisions?

Purpose (2)

Examples from other disciplines:

- To provide information; overview of alternative options
- Facilitate patient involvement in decisions
- To achieve patients’ goals, goals of risk communication, improvements in knowledge, risk perception, and behavioural outcomes
- To maximize population benefits for a given set of resources
- To evaluate and choose among alternatives based on multiple criteria using systematic analysis

Developing a decision aid - Conceptualization

Focus group input, question #2:

How should decision aids for population-based health policy decisions be conceptualized and constructed?

- What decision factors should be included?

Conceptualization (2)

- Concise (i.e., 1-page summary) vs. Comprehensive (i.e., Lavis et al.’s 18 SUPPORT tools)
  - Expert opinion vs. public opinion
  - Science vs. values
  - Inform decision vs. Prescribe solution

Conceptualization (3)

- Common decision factors identified by the modified meta-narrative review:
  - Problem definition/context:
    - Sociopolitical
    - Stakeholders, ‘players’ & interests
    - Economics
  - Alternative options:
    - Expected outcomes (social, ethical, political, environmental)
      - Risks
      - Benefits
      - Uncertainty
      - Value clarification
      - Scientific evidence

Developing a decision aid - Implementation

Focus group input, question #3:

How should decision aids for population-based health policy decisions be operationalized and implemented?
Implementation (2)

- What does it mean for a decision aid to have ‘organizational fit’ within the health policy environment?

- What else is important for making a decision aid to guide population-based health policy useful and appropriate for the current policy context?

Thank you!

- Additional thoughts or comments?

- To contact the mediator of today’s focus group for any further details, you can reach Peggy Tso at:
  - Peggy.tso@utoronto.ca
  - 416-971-9800 Ext. 3372
Appendix 5: Study Invitation Letter – Key Informant Interview (Page 1 of 1)

CIHR Team Grant in Population-Based Colorectal Cancer Screening, AIM 3, Phase 2

Dear <<Insert Name>>,

We are conducting a study that aims to develop a decision guide for evidence-based public sector health policy decisions. This study is funded by the Canadian Institutes of Health Research Team Grant in Population-Based Colorectal Cancer Screening and involves investigators from a number of research institutions in Ontario and Alberta including the University of Toronto, University of Calgary, Cancer Care Ontario and the Alberta Cancer Board. The purpose of the study is to develop a transparent and systematic decision guide that will assist decision-makers in thinking through different elements of complex health policy decisions. The guide provides a comprehensive series of prompts that ensure the consideration of appropriate types of evidence pertinent to the policy decision.

The first phase of the study involved a literature review, examining decision aids across multiple research disciplines to identify relevant factors of decision-making. A focus group was then conducted to reflect on the review findings and provide guidance on how to transform those into a functional decision guide for health policymakers. Based on those results, an initial draft of the decision guide was developed. Given your experience and role in health policy decision-making, we would like to invite you to participate in an interview so that we can gain your insights on how to improve the decision guide. The interview will involve the navigation through various components of the web-based guide and questions regarding the validity of its contents.

Interviews will be conducted via telephone by Peggy Tso and will be recorded, at a time that is convenient for you and will take approximately one hour of your time. Your participation is completely voluntary and anonymity and confidentiality will be ensured to all participants.

If you are willing to participate in the interview, please reply to this email with the telephone number you wish to be reached at; the times at which you are available between the dates of Wednesday July 27th, 2011 and Friday August 19th, 2011; and return a completed informed consent form (attached). We will contact you by telephone and/or e-mail to confirm your participation and schedule the interview.

Your perceptions and insights will be invaluable to meeting the study’s objectives. If you have any questions or concerns regarding participation in the interview, please don’t hesitate to contact Peggy Tso, as listed below.

Yours sincerely,

Peggy Tso, MSc Candidate
Phone: 416-971-9800 x3372 Email: peggy.tso@utoronto.ca

Mark Dobrow, PhD
Scientist, Cancer Services and Policy Research Unit, Cancer Care Ontario
Assistant Professor, Health Policy, Management and Evaluation, University of Toronto
Phone: 416-217-1380 Email: mark.dobrow@utoronto.ca
INFORMED CONSENT FORM

CIHR Team in Population-Based Colorectal Cancer Screening – Development of a Decision Aid to Guide Public Sector Health Policy Decisions

Investigators: Peggy Tso, Linda Rabeneck MD, Mark Dobrow PhD, Nancy Baxter, MD, PhD, Melissa Brouwers, PhD, Ann L. Casebeer, PhD, Tony Culyer PhD, Robert Hilsden MD, Elizabeth McGregor PhD, Larry Paszat MD, Paul Ritvo, PhD

You have been invited to participate in this study based on your contributions and experience with population-based screening policy decisions. If you agree to participate, your participation will involve one key informant interview, lasting approximately one hour.

Only the study researchers will have access to the key informant interview data, which will be kept completely confidential and stored securely. No information will be released that would disclose your personal identity within any presentations or publications resulting from this research project without your express consent, and the interview data will not be used for any purposes outside of this project.

You can obtain additional information on any part of the project from the lead researcher, Peggy Tso, 416-971-9800 extension 3372 or peggy.tso@utoronto.ca.

If you have any questions or concerns about your rights as a research participant, please contact Daniel Gyewu, Research Ethics Manager, Health Sciences Research Ethics Board d.gyewu@utoronto.ca or 416-946-5763.

I have been informed of the purpose and methodology for the study on the use of different types of evidence in the development of a population-based colorectal cancer screening program. I understand that by signing my name below I am agreeing to participate in this study and informed consent is considered to have been given.

I understand that I have the right to withdraw my participation at any time, in which case any data collected from me would be destroyed. As key informant interview participant I have the right to refuse to answer any questions and to withdraw from the interview at any time.

Signature: ____________________________ Date: ____________________________

Name: __________________________________

Preferred Contact Information:

Address: _________________________________________________________________

Telephone: ____________________________ Email: _____________________________

Please return this form by fax to the attention of:

Peggy Tso, Fax #: 416-971-6888

If there are any problems, please contact Peggy Tso at 416-971-9800 ex 3372
Hello [Informant's name],

Thank you again for accepting this invitation for an interview. Your experience and the insights you share with us today will help us to refine the initial working draft of the tool we have developed. The aim of this present study is to develop a decision aid for evidence-informed public sector health policy decisions. Using the decision of whether or not to implement a population-based CRC screening program as a base case, where we can retrospectively look at what was considered, and maybe what should have been considered, we turned to the literature and to a panel of experts to identify what types of decision factors needed to be considered in making such a decision. We then generalized the aid to help individuals think about health policy decisions more broadly.

Over the past week, I’ve been interviewing a range of individuals involved in the policy making process, including those who contribute to policy planning, to higher level decision-makers. What I’m hoping for today, is to navigate through the online tool with you together, by first introducing some background about the tool and then looking at the overview of the tool’s contents more broadly, and then honing in on a few of the decision domains more specifically for your feedback. Finally, in the last ten minutes or so, we can wrap up by trying to address any questions or take any overall comments you might have. Before we start, I would like to note that everything that is discussed today will remain entirely anonymous.

Perhaps I could ask you to pull up the website in front of you, if you haven’t already done so. Please let me know, throughout the interview, if you have any trouble accessing any of the links or webpages, as the site is still under construction. Let’s begin by looking at the introductory page. Just to note, the links to the different webpages can all be accessed from the navigation bar on the far left hand side of the screen. So on the introductory page, we give some background about the tool, its objectives, who it’s meant to be used by, what it does, and finally take a look at what evidence constitutes in this context.

There are 3 main objectives of this decision aid.

1) Help individuals **think about and clarify all potentially relevant factors** of complex health policy decisions.
2) Facilitate **more transparent policy decisions** that **incorporate broader and more appropriate types of evidence**.
3) **Support the interdependent efforts and communication** between policymakers, stakeholders and expert groups (e.g., between epidemiologists and economists) throughout the policy-making process. As we do understand that this process is not linear and requires the interdependent efforts of individuals with a range of expertise.

The decision aid is not meant to prescribe a policy solution or to yield uniform recommendations across jurisdictions. We recognize that its use in different contexts and by different groups of individuals will result in different decisions.
Who is this aid for?

The proposed decision aid is for those involved in developing policy decisions, whether it’s the high-level decision-makers whom decide on whether a policy should pass or the individuals and groups who help with the planning of a policy.

We don’t expect that the aid will be used by any single individual but by a range of individuals who collaborate in the policy planning and decision-making process.

What does the decision aid do?

The decision aid provides a comprehensive series of prompts that help identify the appropriate types of evidence relevant to the policy decision.

- What we noted in a previous focus group that we conducted is the need for a tool that helps to minimize the risk of overlooking evidence related to significant consequences, which is what we hope to do by having this comprehensive and systematic series of prompts.

- Though we tried to be very comprehensive about this, we recognize that not all prompts will be relevant to all specific decisional contexts.

Lastly, before we move on to looking at the tool itself, we specify our inclusion of evidence, as many people have different conceptions of this. For the purposes of this aid, please consider evidence as both scientific (e.g., randomized controlled trials and observational studies) and colloquial (e.g., administrative databases, values, habits and traditions).

The evidence-informed part of this is one of our major goals, however, it’s been a bit tricky determining how best to incorporate this into the aid. Your insights regarding this would be appreciated as we go through the tool.

If I could ask you to click on the ‘overview of the instrument’ link on the menu bar on the left hand side of the page, this is basically the overall structure of our decision aid. We have looked at three general activities inherent to really any decision-making process – that is, problem definition, mapping of the current environment and definition and assessment of the policy option(s) – and have presented corresponding decision domains that capture unique dimensions of the health policy decision, as identified through a literature review that we have conducted. Each domain highlights a set of decision elements that ought to be considered during the decision-making process. There are 11 listed here.

1) Do you think that these domains make sense? Are there any major areas that are missing?
2) What do you think of the structure of the decision aid that we have here? That is, having the domains grouped under these decision-making activities.
3) Do you think there might be another way to organize these that might bring certain emphasis to some things more than others?
4) Does it make sense in an intuitive way when you’re looking at it?
As we go through the different domains more thoroughly, I would like you to reflect on the content and whether you think that it’s comprehensive enough. For example, is anything missing that might be important for consideration; are the prompts clear and easy to understand; are the prompts intuitive enough, or perhaps they need to be framed differently; are examples needed anywhere to better illustrate the point; etc.

[Visit links for each of the decision domains as follows and review decision elements therein with informant for feedback. Provide clarification if necessary.]

Characteristics of the healthcare issue
Contextual considerations
Stakeholder considerations
Ideological considerations
Characteristics of the proposed healthcare intervention
Clinical/health considerations
Health system and population impact considerations
Implementation planning considerations
Implementation-evaluation considerations
Economic considerations
Evidentiary considerations

5) One of the challenges we ran into was trying to figure out which prompts fell under which domain. Have we gotten it more or less right? Do the prompts fit in their current domains?

6) One of our concerns, especially, comes from our understanding that the policymaking process is not necessarily linear and is a collaborative effort between a number of individuals with different backgrounds and expertise. So, some prerequisite knowledge for answering the prompts in one domain may be covered in another domain. For example, a lot of the information needed in order to answer the implementation planning and evaluation prompts are related to the contextual considerations and economic considerations. In that sense, there is a concern that by having these rather distinct decision domains might impede the analysis.

However, the intent of this decision aid is for it to be used by a group of individuals with different expertise that can answer the range of prompts in the domains that are applicable and will require interaction and communication between individuals addressing the prompts from different domains.
Appendix 7: Key Informant Interview Script (Page 4 of 4)

Having gone through the aid briefly, do you think that it’s structured in a way that is compatible with how we hope for the aid to work? And if not, how would you modify it?

7) Do you see this tool being used and if so, by whom?

8) Is the presently proposed decision aid different from other decision-making frameworks that you might have used in the past? And if so, how is it different?

   Does this aid add anything novel or unique to the decision-making frameworks that you know of that are already out there?

9) Some decision aids that we reviewed from the literature enabled decision-makers to explicitly assign a value to the various pieces of evidence under consideration. These values represented evidentiary quality and/or the weight of the piece of evidence with respect to its significance in decision-making. In the proposed decision aid, we have attempted to incorporate both scientific and colloquial types of evidence into the policymaking process, which may pose a challenge towards the former representation of evidentiary value. Do you see this valuation component (either form) as a helpful addition to the tool? If so, what challenges, if any, do you foresee with its incorporation? Any suggestions for how to overcome these issues?

10) Additional comments or questions about the proposed decision aid?

Thank you again for your interest and participation in this study. Your feedback has been very informative and will help with refinement of the proposed decision aid. If you would like to receive updates on the tool, please let me know. This website will also be updated as different iterations of the proposed decision aid become available. Please feel free to visit this website for access to the tool. If you have any additional thoughts or questions about the tool or this study, you can contact me at peggy.tso@utoronto.ca.
Introduction to the Decision Checklist

What are the objectives of this checklist?
- To help individuals think about and clarify all potentially relevant factors of complex health policy decisions without preconceived notions of what is correct.
- To facilitate more transparent policy decisions that incorporate broader and more appropriate types of evidence.
- To support the interdependent efforts and communication between policymakers, stakeholders and expert groups (e.g., between epidemiologists and economists) throughout the policy-making process.

The decision checklist is not meant to prescribe a policy solution or to yield uniform recommendations across jurisdictions.
- Use of the decision checklist by different policymaking groups engaged in different policymaking processes will likely result in different decisions in different contexts according to the available evidence and factors specific to each decision-making context.

Who is this checklist for?
The decision checklist is designed to assist policymakers and those supporting them:
- Individuals and groups who can make or influence policy decisions (e.g., cabinet members)
- Individuals and groups who facilitate by informing decision-making processes (e.g., advisory groups and civil servants).

Use of the decision checklist, as a whole, is not intended for any single individual.
- While an authority responsible for the policy decision may initiate use of the decision checklist, the task of contributing and assessing the relevant evidence as highlighted by the checklist’s prompts of the decision domains will be delegated to a mix of individuals and groups with different skills and expertise.

What does this checklist do?
- The decision checklist provides a comprehensive series of prompts that help identify the appropriate types of evidence relevant to each policy decision.
  - By systematically using the provided prompts, the risks of overlooking evidence related to significant consequences can be minimized.
  - However, all prompts may not be relevant to all specific decisional contexts.
  - Furthermore, the prompts may not identify the same types or levels of evidence nor employ the same processes for obtaining evidence in different contexts.
Appendix 8: Initial Working Draft (Alpha Version) of the Proposed Decision Aid for Evidence-Informed Public Health Policy (Page 2 of 9)

Acknowledgement

Funded by: Canadian Institutes of Health Research Team in Population-Based CRC Screening

Principal Investigator: Dr. Linda Rabeneck

Overview: Structure and Content of the Decision Checklist

The decision checklist addresses three activities inherent to decision-making – 1) problem definition, 2) mapping of the current environment and 3) definition of the policy option(s). It presents the corresponding domains that capture unique dimensions of the health policy decision. Each domain highlights a set of decision elements that ought to be considered during the decision-making process.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Decision Domain</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Definition</td>
<td>a) Characteristics of the healthcare issue</td>
<td>A concise description of the healthcare issue of interest.</td>
</tr>
<tr>
<td>Environment Mapping</td>
<td>b) Contextual considerations</td>
<td>Description of contextual factors (local/provincial/national/international) that condition the limits of policy change through the formation of opportunities and constraints.</td>
</tr>
<tr>
<td></td>
<td>c) Stakeholder considerations</td>
<td>Identification of relevant stakeholders and their relationships to the policy-making process and to the healthcare issue in question.</td>
</tr>
<tr>
<td></td>
<td>d) Ideational considerations</td>
<td>Identification of prominent ideas surrounding/impacting the healthcare issue in question.</td>
</tr>
<tr>
<td>Policy Options</td>
<td>e) Characteristics of the proposed healthcare intervention</td>
<td>A concise description of the proposed healthcare intervention.</td>
</tr>
<tr>
<td></td>
<td>f) Clinical/health considerations</td>
<td>Identification of health-related impacts at patient- and population-levels.</td>
</tr>
<tr>
<td></td>
<td>g) Health system and population impact considerations</td>
<td>Identification of non-health-related impacts that may affect the feasibility and acceptability of the healthcare intervention at the system- and population-level.</td>
</tr>
<tr>
<td></td>
<td>h) Implementation - planning considerations</td>
<td>Details surrounding the structure and organization of the proposed healthcare intervention and its functional impact on the health system.</td>
</tr>
<tr>
<td></td>
<td>i) Implementation - Evaluation considerations</td>
<td>Description of surveillance needs surrounding the proposed healthcare intervention.</td>
</tr>
<tr>
<td></td>
<td>j) Economic considerations</td>
<td>Description of the proposed healthcare intervention’s impact on resource use/allocation and value for money.</td>
</tr>
<tr>
<td></td>
<td>k) Evidentiary considerations</td>
<td>Factors relating to the quality of evidence used to form the basis for developing the policy options, discussion and the final decision.</td>
</tr>
</tbody>
</table>
### Problem Definition

<table>
<thead>
<tr>
<th>Activity</th>
<th>Decision Domains</th>
<th>Decision Prompts</th>
</tr>
</thead>
</table>
   a. Does the policy problem address an important and/or significant healthcare issue?  
      i. What is the magnitude (e.g., disease severity) of the healthcare issue within the local context?  
   b. Is the issue well understood?  
   c. What is the (likely) cause(s) of the issue?  
   d. Who is impacted by the issue?  
   e. What specific aspects of the issue require action?  
   f. How did the problem come to attention and has that influenced the prospect of it being addressed? |

### Environment Mapping

|          | b) Contextual considerations | 1. What is the current political environment (local/regional/provincial/federal) surrounding the healthcare issue in question?  
2. Are there any current or upcoming political events that might influence the policy decision?  
3. What is the level of priority assigned to this healthcare issue by different stakeholder groups?  
4. What is known about the current activity for this healthcare issue?  
   a. What services are offered?  
   b. What are the objectives of services offered?  
   c. How are services administered and by whom?  
   d. Who has authority over these services (at the policy, organizational, commercial and professional levels)?  
   e. What is known about the effectiveness of these services?  
5. What formal institutional arrangements are relevant to the healthcare issue?  
   a. E.g., administrative hierarchies, legislative and decision-making procedures, budget mechanisms and bureau types; legal systems, etc.  
6. What formal rules at organizational- and societal-levels are relevant to the healthcare issue?  
   a. E.g., legislation, contractual agreements, standard operating procedures, ethical standards,  
7. What informal rules at organizational- and societal-levels are relevant to the healthcare issue?  
   a. E.g., soft-laws, norms, cultures, routines, duties, traditions, etc.  
8. What values does the healthcare system hold toward the healthcare issue? |
<table>
<thead>
<tr>
<th>Environment Mapping (cont'd)</th>
<th>b) Contextual considerations (cont'd)</th>
<th>a. E.g., Health gain, access, innovation, sustainability, client-focus, community engagement, equity, efficiency, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>9. What values do the society at large (e.g., public opinion or public mood) hold toward the healthcare issue?</td>
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<tr>
<td></td>
<td></td>
<td>10. How is the healthcare issue portrayed in the media?</td>
</tr>
<tr>
<td></td>
<td>c) Stakeholder considerations</td>
<td>1. Who are the primary/critical and peripheral stakeholders involved in the policy (e.g., political bodies, economic bodies, social bodies, educational bodies, professional/regulatory bodies, etc.)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. What is known about the interests held by stakeholders regarding the policy problem?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a. What is the relative importance of their interest(s)?</td>
</tr>
<tr>
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<td></td>
<td>3. What are their positions on the policy (ranging from high support to high opposition)?</td>
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<tr>
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<td></td>
<td>4. What level of power and influence do they have (low to high)?</td>
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<tr>
<td></td>
<td></td>
<td>a. What is their potential impact on policy development?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. What other attributes might affect the influence that various stakeholders have on the policy decision (e.g., level of policymaking, such as national or regional; sector, such as political, commercial, media, governmental; what type of organization)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Does a consensus or conflict of interests exist between stakeholders?</td>
</tr>
<tr>
<td></td>
<td>d) Ideational considerations</td>
<td>1. What overarching public policy ideas/ideologies relate to this healthcare issue?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. How do the policy ideas influence policy options?</td>
</tr>
<tr>
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<td></td>
<td>3. What international trends are relevant to the policy decision?</td>
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<td>4. How is the policy problem being framed by different stakeholders?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a. How do these different frames impact the policy decision?</td>
</tr>
<tr>
<td>Policy Options</td>
<td>e) Characteristics of the proposed healthcare intervention</td>
<td>1. Clear description of proposed healthcare intervention(s).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a. What are the objectives of the intervention?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i. Through which mechanisms of the intervention are these objectives achieved?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. What are the different elements (e.g., technical characteristics) involved with implementing the intervention?</td>
</tr>
</tbody>
</table>
|                             |                                      | i. Which elements of the intervention are critically important (and hence need to be retained), and which could be excluded or
### Appendix 8: Initial Working Draft (Alpha Version) of the Proposed Decision Aid for Evidence-Informed Public Health Policy (Page 5 of 9)

<table>
<thead>
<tr>
<th>Policy Options (cont’d)</th>
<th>e) Characteristics of the proposed healthcare intervention (cont’d)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>modified?</td>
</tr>
<tr>
<td></td>
<td>c. In which way(s) is the intervention new compared to the status quo?</td>
</tr>
<tr>
<td></td>
<td>d. What is the anticipated duration or lifespan of the proposed healthcare intervention?</td>
</tr>
<tr>
<td></td>
<td>e. What are the likely impacts on the proposed intervention’s feasibility?</td>
</tr>
<tr>
<td></td>
<td>f. What are its indications for use?</td>
</tr>
<tr>
<td></td>
<td>g. What is its level of distribution/diffusion in other jurisdictions?</td>
</tr>
<tr>
<td></td>
<td>i. Is there any local data on its use?</td>
</tr>
<tr>
<td></td>
<td>ii. Are there patterns of its use?</td>
</tr>
<tr>
<td></td>
<td>h. What assumptions is the proposed healthcare intervention based on?</td>
</tr>
<tr>
<td></td>
<td>i. What are their potential impacts?</td>
</tr>
<tr>
<td></td>
<td>ii. Is it possible to be confident about a decision despite a lack of evidence?</td>
</tr>
<tr>
<td></td>
<td>i. What is the target population of the proposed healthcare intervention?</td>
</tr>
<tr>
<td></td>
<td>j. Is this population clearly identifiable and accessible?</td>
</tr>
</tbody>
</table>

|                         | 2. What is the size of the population? |

<table>
<thead>
<tr>
<th>f) Clinical/health considerations</th>
<th>1. Safety: Are there any associated risks or adverse effects/events associated with the healthcare intervention for individuals/organizations/private sectors/etc.?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. Frequency and severity?</td>
</tr>
<tr>
<td></td>
<td>b. How do these compare to the risks or adverse effects/events associated with alternative options?</td>
</tr>
<tr>
<td></td>
<td>c. Are these more or less acceptable/tolerable compared to the alternative options?</td>
</tr>
</tbody>
</table>

|                                   | 2. Efficacy/effectiveness:                                                                                                         |
|                                   | a. What are the anticipated health-related and satisfaction-related benefits at the patient-level? (e.g., diagnostic, prevention, treatment, rehabilitation, symptom relief, survival, quality of life, convenience, etc.) |
|                                   | i. What is known about the value of these benefits for those affected by the healthcare issue/intervention?                        |
|                                   | ii. How do these compare to the benefits associated with alternative options?                                                     |
|                                   | b. How will the proposed healthcare intervention impact population health, in terms of:                                            |
|                                   | i. Burden of illness: incidence, prevalence, other measurements of impact on an illness                                             |
| Policy Options (cont'd) | f) Clinical/health considerations (cont'd) | on population health?  
|------------------------|------------------------------------------|----------------------
|                        |                                          | ii. Health promotion and disease prevention?  
|                        |                                          | c. How do the benefits associated with the intervention compare with those of alternative options?  
|                        |                                          | 3. What assumptions are embedded into the evidence on safety and efficacy?  
|                        |                                          | a. What are their potential impacts?  
|                        |                                          | b. Is it possible to be confident about a decision despite a lack of evidence?  
|                        |                                          | 4. What uncertainties exist surrounding the proposed healthcare intervention?  
|                        |                                          | a. What are their potential impacts?  
|                        |                                          | b. Is it possible to be confident about a decision despite a lack of evidence?  
|                        |                                          | 5. Are there any ongoing studies or new important studies with results expected shortly that should be considered or could impact decision-making?  
|                        |                                          | 6. Are there substantial differences between study contexts and the local context (e.g., differences in health system arrangements or baseline conditions) that might affect its generalizability for the current application?  
|                        |                                          | a. Can the evidence be adapted to fit the local context?  
|                        |                                          | 7. Does the overall benefit of the healthcare intervention outweigh the potential physical and psychological harms of its application?  
|                        | g) Health system and population impact considerations-  
|                        | 1. What is known about the proposed healthcare intervention’s impact on the health system’s performance (e.g., access, quality, sustainability, integration, etc.)?  
|                        | 2. How would the proposed healthcare intervention contribute to professional development, education, training and/or research? How important would those contributions be?  
|                        | 3. Does the proposed healthcare intervention align with or impede other healthcare interventions (existing and projected) and/or depend on the completion of other healthcare interventions?  
|                        | 4. Does the proposed healthcare intervention align with strategic objectives for addressing the healthcare issue? Healthcare system objectives?  
|                        | a. If not, are there acceptable countermeasures to resolve the conflict?  
|                        | 5. Is the level and nature of risk(s) associated with the healthcare intervention acceptable?  
|                        | a. Have any feasible mitigation strategies been
### g) Health system and population impact considerations (cont'd)

<table>
<thead>
<tr>
<th>Policy Options (cont'd)</th>
<th>identified?</th>
</tr>
</thead>
<tbody>
<tr>
<td>g) Health system and population impact considerations (cont'd)</td>
<td>b. Does the risk(s) of the proposed healthcare intervention outweigh the risk(s) of continuing with the status quo?</td>
</tr>
<tr>
<td></td>
<td>6. Is the healthcare intervention clinically, socially, and ethically acceptable to relevant stakeholders and the society at large?</td>
</tr>
<tr>
<td></td>
<td>7. Does the proposed healthcare intervention fit and comply with applicable rules and institutions (e.g., contractual agreements, medical guidelines, organizational cultures and routines, etc.)?</td>
</tr>
<tr>
<td></td>
<td>8. Does the current healthcare system have the necessary resources – human resources, technical capacity, infrastructure, and equipment (financial resources addressed in a separate domain – to support the healthcare intervention now (or in the future)?</td>
</tr>
<tr>
<td></td>
<td>9. How will the proposed intervention affect other healthcare services, hospitals, regions, sectors, etc.?</td>
</tr>
<tr>
<td></td>
<td>a. Is there an opportunity for the healthcare intervention to be of benefit by multiple groups?</td>
</tr>
<tr>
<td></td>
<td>b. Is it synergistic with existing technologies/programs/services?</td>
</tr>
<tr>
<td></td>
<td>c. Will it duplicate a service that already exists?</td>
</tr>
<tr>
<td></td>
<td>10. Based on what is known about the stakeholders, can anything be done to engage, at the very least, the support of primary/critical stakeholders?</td>
</tr>
</tbody>
</table>

### h) Implementation planning considerations

<table>
<thead>
<tr>
<th>h) Implementation planning considerations</th>
<th>1. What service delivery and governance structures are needed to implement the healthcare intervention?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. E.g., which incentive structures (carrier-wise, work process-wise, treatment-wise, etc.) will be established with the healthcare intervention for staff, patients, and others?</td>
</tr>
<tr>
<td></td>
<td>2. What is the timeline for implementation?</td>
</tr>
<tr>
<td></td>
<td>a. Does the intervention require a transient period to reach steady state? Is it acceptable?</td>
</tr>
<tr>
<td></td>
<td>3. Can barriers or bottlenecks for implementation and strategies for resolving them be identified?</td>
</tr>
<tr>
<td></td>
<td>4. In what ways will the proposed healthcare intervention affect those involved in implementation with respect to information, training, work environment? (E.g., Roles and competencies, employee satisfaction, etc.)?</td>
</tr>
<tr>
<td></td>
<td>5. How should cooperative efforts between administration levels, across units and different sectors be coordinated?</td>
</tr>
<tr>
<td></td>
<td>6. What opportunities/obstacles exist within the organization(s) responsible for implementing the policy, the general organizational environment, and the broader</td>
</tr>
<tr>
<td>Policy Options (cont'd)</td>
<td>h) Implementation - planning considerations (cont'd)</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>political environment that might affect the feasibility of the policy option?</td>
</tr>
<tr>
<td></td>
<td>7. What strategies should be considered in order to facilitate the necessary behavioural changes among healthcare recipients and the public, healthcare professionals, and within organizations and the healthcare system?</td>
</tr>
<tr>
<td></td>
<td>8. Are there any elements of the healthcare intervention that can be modified or excluded to improve its acceptability and feasibility?</td>
</tr>
<tr>
<td></td>
<td>9. How should information regarding implementation be communicated in order to engage stakeholders?</td>
</tr>
<tr>
<td></td>
<td>10. How should enquiries regarding the healthcare intervention be handled? Who will be responsible?</td>
</tr>
<tr>
<td>i) Implementation - evaluation considerations</td>
<td>1. Does the healthcare intervention require regular monitoring (e.g., performance measurement system)?</td>
</tr>
<tr>
<td></td>
<td>2. How should relevant health/performance data be collected and registered (i.e., new or existing monitoring system)?</td>
</tr>
<tr>
<td></td>
<td>3. What measurement indicators are appropriate for monitoring the impacts of the healthcare intervention?</td>
</tr>
<tr>
<td></td>
<td>4. To whom should this information be reported to?</td>
</tr>
<tr>
<td></td>
<td>5. What actions should be taken if monitoring reveals significant unintended consequences of the healthcare intervention, including failure to meet stated objectives?</td>
</tr>
<tr>
<td>j) Economic considerations</td>
<td>1. What financial resources are available in total?</td>
</tr>
<tr>
<td></td>
<td>a. How are resources currently distributed amongst programs surrounding the healthcare issue?</td>
</tr>
<tr>
<td></td>
<td>b. Is the healthcare intervention affordable given available resources?</td>
</tr>
<tr>
<td></td>
<td>c. Are there areas of care surrounding the healthcare issue that could be provided to the same level of effectiveness with the proposed healthcare intervention but with fewer resources?</td>
</tr>
<tr>
<td></td>
<td>d. Are there areas of care surrounding the healthcare issue that despite being effective, should receive fewer resources because the proposed healthcare intervention is more effective?</td>
</tr>
<tr>
<td></td>
<td>2. What financial arrangements (e.g., how the intervention is financed and by whom, how health professionals are remunerated, etc.) are most suitable for supporting the proposed intervention?</td>
</tr>
<tr>
<td></td>
<td>3. Value for money (e.g., Cost-effectiveness or cost-benefit evaluations):</td>
</tr>
<tr>
<td></td>
<td>a. Have current cost-effective health policy options been implemented as far as practicable?</td>
</tr>
</tbody>
</table>
|                        | b. Is the healthcare intervention cost-effective in
### Appendix 8: Initial Working Draft (Alpha Version) of the Proposed Decision Aid for Evidence-Informed Public Health Policy (Page 9 of 9)

<table>
<thead>
<tr>
<th>Policy Options (cont'd)</th>
<th>j) Economic considerations (cont'd)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>comparison to other options for managing the healthcare issue, and in relation to other healthcare priorities?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Is the total financial cost of the healthcare intervention economically balanced in relation to other healthcare priorities?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Have these evaluations been considered from all relevant stakeholder perspectives (e.g., patients or health system)?</td>
<td></td>
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<tr>
<td></td>
<td>4. In what ways, if at all, would adoption of the healthcare intervention impact the ability to adopt future activities over the next couple of years?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. What assumptions or uncertainties surrounding these evaluations have been made?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. What are their potential impacts?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Is it possible to be confident about a decision despite a lack of evidence?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Does adoption of the healthcare intervention accrue additional/saved costs for hospital, other hospitals, other sectors, etc?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Which stakeholders are most economically impacted by implementation of the intervention?</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>k) Evidentiary considerations*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. How relevant is this evidence to understanding the health policy decision at hand?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. How representative is this of the population that concerns us?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Is it generalizable or can it be adapted to fit the local context?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Does the evidence represent particular biases?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. How reliable or well-founded is the evidence?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Are there any major/critical gaps in evidence?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. What is the best way to address these gaps?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. What should be done where there is poor, unreliable or no data?</td>
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</tbody>
</table>

*This section highlights considerations applicable to several domains. Evidence refers to both scientific (e.g., randomized controlled trials) and colloquial (e.g., administrative databases, values, etc.) form.
Introduction to the Decision Aid

What are the objectives of this aid?

- To help individuals think about and clarify all potentially relevant factors of complex health policy decisions without preconceived notions of what is correct.
- To facilitate more transparent policy decisions that incorporate broader and more appropriate types of evidence.
- To support the interdependent efforts and communication between policymakers, stakeholders and expert groups (e.g., between epidemiologists and economists) throughout the policy-making process.

The decision aid is not meant to prescribe a policy solution or to yield uniform recommendations across jurisdictions.

- Use of the decision aid by different policymaking groups engaged in different policymaking processes will likely result in different decisions in different contexts according to the available evidence and factors specific to each decision-making context.

Who is this aid for?

The decision aid is designed to assist policymakers and those supporting them:

- Individuals and groups who can make or influence policy decisions (e.g., cabinet members)
- Individuals and groups who facilitate by informing decision-making processes (e.g., advisory groups and civil servants).

Use of the decision aid, as a whole, is not intended for any single individual.

- While an authority responsible for the policy decision may initiate use of the decision aid, the task of contributing and assessing the relevant evidence as highlighted by the aid’s prompts of the decision domains will be delegated to a mix of individuals and groups with different skills and expertise.

What does this aid do?

The decision aid provides a comprehensive series of prompts that help identify the appropriate types of evidence relevant to each policy decision.

- By systematically using the provided prompts, the risks of overlooking evidence related to significant consequences can be minimized.
- However, all prompts may not be relevant to all specific decisional contexts.
- Furthermore, the prompts may not identify the same types or levels of evidence nor employ the same processes for obtaining evidence in different contexts.
What does the term ‘evidence’ include?

Evidence refers to both scientific (on effectiveness or context) and colloquial types. Colloquial evidence pertains to the views, expertise, and realities of stakeholders – values (e.g., political judgment), practical operational considerations (e.g., resources, habits/traditions), and interests (e.g., pragmatics/contingencies) – not obtained through rigorous scientific methods.

Acknowledgement

Funded by: Canadian Institutes of Health Research Team in Population-Based CRC Screening

Principle Investigator: Dr. Linda Rabeneck

Overview: Structure and Content of the Decision Aid

The decision aid addresses three activities inherent to decision-making – 1) problem definition, 2) mapping of the current environment and 3) definition of the policy option(s). It presents the corresponding domains that capture unique dimensions of the health policy decision. Each domain highlights a set of decision elements that ought to be considered during the decision-making process.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Decision Domain</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Definition</td>
<td>a) Characteristics of the healthcare issue</td>
<td>A concise description of the healthcare issue of interest.</td>
</tr>
<tr>
<td>Environment Mapping</td>
<td>b) Contextual considerations</td>
<td>Description of contextual factors (local/provincial/national/international) that condition the limits of policy change through the formation of opportunities and constraints.</td>
</tr>
<tr>
<td></td>
<td>c) Stakeholder considerations</td>
<td>Identification of relevant stakeholders and their relationships to the policy-making process and to the healthcare issue in question.</td>
</tr>
<tr>
<td>Policy Options</td>
<td>d) Characteristics of the proposed healthcare intervention</td>
<td>A concise description of the proposed healthcare intervention.</td>
</tr>
<tr>
<td></td>
<td>e) Clinical/health considerations</td>
<td>Identification of health-related impacts at patient- and population-levels.</td>
</tr>
<tr>
<td></td>
<td>f) Health system and population impact considerations</td>
<td>Identification of non-health-related impacts that may affect the feasibility and acceptability of the healthcare intervention at the system- and population-level.</td>
</tr>
<tr>
<td></td>
<td>g) Implementation - planning considerations</td>
<td>Details surrounding the structure and organization of the proposed healthcare intervention and its functional impact on the health system.</td>
</tr>
<tr>
<td></td>
<td>h) Implementation - Evaluation considerations</td>
<td>Description of surveillance needs surrounding the proposed healthcare intervention.</td>
</tr>
<tr>
<td></td>
<td>i) Economic considerations</td>
<td>Description of the proposed healthcare intervention’s impact on resource use/allocation and value for money.</td>
</tr>
</tbody>
</table>
The following is a list of questions that should be considered during the decision-making process (to ensure that important consequences are not overlooked):

<table>
<thead>
<tr>
<th>Activity</th>
<th>Decision Domains</th>
<th>Decision Prompts</th>
</tr>
</thead>
</table>
| Problem Definition  | a) Characteristics of the healthcare issue | 2. State a clear description of the healthcare issue.  
   a. Does the policy problem address an important and/or significant healthcare issue?  
   i. What is the magnitude (e.g., disease severity) of the healthcare issue within the local context?  
   b. Is the issue well understood?  
   c. What is the (likely) cause(s) of the issue?  
   d. Who is impacted by the issue?  
   e. What specific aspects of the issue require action?  
   f. How did the problem come to attention and has that influenced the prospect of it being addressed? |
| Environment Mapping | b) Contextual considerations            | 12. What is the current political environment (local/regional/provincial/federal) surrounding the healthcare issue in question?  
   13. Are there any current or upcoming political events that might influence the policy decision?  
   14. What relevant international trends are related to the healthcare issue?  
   15. What overarching public policy ideas/ideologies relate to this healthcare issue?  
   a. How do these influence potential policy options for addressing the healthcare issue?  
   16. What is known about the current strategy/activity for addressing this healthcare issue?  
   a. What services are offered?  
   b. What are the objectives of services offered?  
   c. How are services administered and by whom?  
   d. Who has authority over these services (at the policy, organizational, commercial and professional levels)?  
   e. What is known about the effectiveness of these services?  
   i. In which areas or in what ways do current outcomes warrant additional attention to the healthcare issue?  
   f. Are there any major/critical gaps in evidence?  
   i. What is the best way to address these gaps?  
   g. What should be done where there is poor, unreliable or no data?  
   17. What formal institutional arrangements at the level of government are relevant to the healthcare issue? (E.g., administrative hierarchies, legislative and decision-making procedures, budget mechanisms and legal systems.) |
### Environment Mapping (cont'd) b) Contextual considerations (cont'd)

18. What formal institutions, or rules, at organizational- and healthcare system-levels are relevant to the healthcare issue (e.g., legislation, contractual agreements, standard operating procedures and ethical standards)?
19. What informal institutions, or rules, at organizational- and healthcare system-levels are relevant to the healthcare issue (e.g., soft-laws, norms, cultures, routines, duties and traditions)?
20. What values do the society at large (e.g., public opinion or public mood) hold toward the healthcare issue?
21. What objectives of the healthcare system are related to the healthcare issue (e.g., Health gain, access, innovation, sustainability, client-focus, community engagement, equity and efficiency)?
   - b. How is the healthcare issue portrayed in the media?
   - c. Does the identified perspectives represent particular biases?

### c) Stakeholder considerations

9. Who are the primary/critical and peripheral stakeholders involved in the policy (e.g., political bodies, economic bodies, social bodies, educational bodies and professional/regulatory bodies)?
10. How is the healthcare issue framed from different stakeholders’ perspectives?
    - a. Are all relevant stakeholder perspectives accounted for?
11. What level of priority is assigned to the healthcare issue by different stakeholder groups?
12. What are stakeholders’ positions on the policy (ranging from high support to high opposition)?
13. What is known about the interests held by stakeholders regarding the healthcare issue?
    - a. What is the relative importance of their interest(s)?
14. What level of power and influence do they have (low to high)?
    - a. What is their potential impact on policy development?
15. What other attributes might affect the influence that various stakeholders have on the policy decision (e.g., level of policymaking, such as national or regional; sector, such as political, commercial, media, governmental; what type of organization)?
16. Does a consensus or conflict of interests exist between stakeholders?

### Policy Options d) Characteristics of the proposed healthcare intervention

3. Clear description of proposed healthcare intervention(s).
   - a. What are the objectives of the intervention?
     - i. Through which mechanisms of the intervention are these objectives achieved?
   - b. What is the target population of the proposed healthcare intervention?
   - c. Is this population clearly identifiable and accessible?
<table>
<thead>
<tr>
<th>Policy Options (cont’d)</th>
<th>d) Characteristics of the proposed healthcare intervention (cont’d)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>ii. What is the size of the population?</td>
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<td></td>
<td>d. What are the different elements (e.g., technical characteristics) involved with implementing the intervention?</td>
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<tr>
<td></td>
<td>i. Which elements of the intervention are critically important (and hence need to be retained), and which could be excluded or modified?</td>
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<td>e. In which way(s) is the intervention new compared to the status quo?</td>
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<td>f. What is the anticipated duration or lifespan of the proposed healthcare intervention?</td>
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<td></td>
<td>g. What are its indications for use?</td>
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<td></td>
<td>h. What is its level of distribution/diffusion in other jurisdictions?</td>
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</tr>
<tr>
<td></td>
<td>i. Is there any local data on its use?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. Are there patterns of its use?</td>
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<td></td>
<td>iii. Is it possible to be confident about a decision despite a lack of evidence?</td>
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<tr>
<td></td>
<td>i. What other jurisdictions have implemented the proposed healthcare intervention?</td>
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<tr>
<td></td>
<td>i. What implementation strategies for the proposed healthcare intervention have been used in these jurisdictions?</td>
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<td></td>
<td>ii. How do these jurisdictions compare to the local environment? For example, in terms of governance structures or population demographics?</td>
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<td></td>
<td>iii. What is known about the impact of the proposed healthcare intervention implemented in these jurisdictions (e.g., patient outcomes, public acceptance or health system efficiency)?</td>
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<tr>
<td></td>
<td>iv. What is the source for this evidence?</td>
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<td></td>
<td>v. What assumptions were made in assessing the impact of the proposed healthcare intervention in these jurisdictions?</td>
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<tr>
<td></td>
<td>vi. How do these factors impact the adaptation of the proposed healthcare intervention for the local environment?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e) Clinical/health considerations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Safety: Are there any associated risks or adverse effects/events associated with the proposed healthcare intervention for individuals/organizations/private sectors/etc.?</td>
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<tr>
<td></td>
<td>a. Frequency and severity?</td>
<td></td>
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<td></td>
<td>b. How do these compare to the risks or adverse effects/events associated with alternative options (including the status quo)?</td>
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<td></td>
<td>c. Are these more or less acceptable/tolerable compared to the alternative options (including the status quo)?</td>
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</table>
### Policy Options (cont’d)

| e) Clinical/health considerations (cont’d) | 10. Efficacy/effectiveness:  
j. What are the anticipated health-related and satisfaction-related benefits at the patient-level (for instance, in terms of prevention, rehabilitation, symptom relief, survival, quality of life and convenience)?  
  What is known about the value of these benefits for those affected by the proposed healthcare issue/intervention?  
i. How do these compare to the benefits associated with alternative options (including the status quo)?  
k. How will the proposed healthcare intervention impact population health, in terms of:  
  i. Burden of illness: incidence, prevalence, other measurements of impact on an illness on population health?  
  ii. Health promotion and disease prevention?  
l. How do the benefits associated with the intervention compare with those of alternative options (including the status quo)?  
11. Are there substantial differences between study contexts and the local context (e.g., differences in health system arrangements or baseline conditions) that might affect its generalizability for local application?  
m. Can the evidence be adapted to fit the local context?  
12. Does the evidence represent particular biases?  
13. What or who are the sources of the evidence?  
14. What assumptions is the evidence on safety and efficacy based upon?  
  n. What are their potential impacts?  
  o. Is it possible to be confident about a decision despite a lack of evidence?  
15. What uncertainties or critical gaps in evidence exist surrounding the proposed healthcare intervention?  
p. What are their potential impacts?  
q. What is the best way to address these uncertainties/gaps?  
r. Is it possible to be confident about a decision despite a lack of evidence?  
16. Are there any ongoing studies or new important studies with results expected shortly that should be considered or could impact decision-making?  
17. Does the overall benefit of the healthcare intervention outweigh the potential physical and psychological harms of its application? |
### Policy Options (cont'd)

<table>
<thead>
<tr>
<th>Policy Options (cont'd)</th>
<th>2. What is known about the proposed healthcare intervention’s impact on the health system’s performance (e.g., access, quality, sustainability and integration)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>d. How would the proposed healthcare intervention contribute to professional development, education, training and/or research? How important would those contributions be?</td>
</tr>
<tr>
<td></td>
<td>8. Does the proposed healthcare intervention align with or impede other healthcare interventions (existing and projected) and/or depend on the completion of other healthcare interventions?</td>
</tr>
<tr>
<td></td>
<td>9. Does the proposed healthcare intervention align with short- and long-term objectives for addressing the healthcare issue? Healthcare system objectives?</td>
</tr>
<tr>
<td></td>
<td>b. If not, are there acceptable countermeasures to resolve the conflict?</td>
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<tr>
<td></td>
<td>c. What should be done if short- and/or long-term objectives have not yet been set?</td>
</tr>
<tr>
<td></td>
<td>10. Is the level and nature of risk(s) associated with the healthcare intervention acceptable?</td>
</tr>
<tr>
<td></td>
<td>a. Have any feasible mitigation strategies been identified?</td>
</tr>
<tr>
<td></td>
<td>b. Does the risk(s) of the proposed healthcare intervention outweigh the risk(s) of continuing with the status quo?</td>
</tr>
<tr>
<td></td>
<td>11. Is the healthcare intervention clinically, socially and ethically acceptable to relevant stakeholders and the society at large?</td>
</tr>
<tr>
<td></td>
<td>12. Does the current healthcare system have the necessary resources – human resources, technical capacity, infrastructure, and equipment (financial resources addressed in a separate domain) to support the healthcare intervention now (or in the future)?</td>
</tr>
<tr>
<td></td>
<td>13. How will the proposed intervention affect other healthcare services, hospitals, regions, sectors, etc.?</td>
</tr>
<tr>
<td></td>
<td>a. Is there an opportunity for the proposed healthcare intervention to be of benefit to multiple groups?</td>
</tr>
<tr>
<td></td>
<td>b. Is it synergistic with existing technologies/programs/services?</td>
</tr>
<tr>
<td></td>
<td>c. Will it duplicate a service that already exists?</td>
</tr>
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<td></td>
<td>14. What is the timeline for implementation?</td>
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<tr>
<td></td>
<td>d. Does the intervention require a transient period to reach steady state? Is it acceptable?</td>
</tr>
<tr>
<td></td>
<td>15. What service delivery and governance structures are needed to implement the proposed healthcare intervention?</td>
</tr>
<tr>
<td></td>
<td>16. What are the various areas and/or levels of accountability related to implementing the proposed healthcare intervention?</td>
</tr>
<tr>
<td></td>
<td>a. How are these organized into a hierarchy or chain of accountability?</td>
</tr>
<tr>
<td></td>
<td>e. Who is accountable for each of these, respectively?</td>
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</table>

### Implementation - planning considerations
<table>
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<tr>
<th>Policy Options (cont'd)</th>
<th>g) Implementation - planning considerations (cont'd)</th>
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<tbody>
<tr>
<td></td>
<td>17. Can barriers or bottlenecks for implementation and strategies for resolving them be identified?</td>
</tr>
<tr>
<td></td>
<td>18. In what ways will the proposed healthcare intervention affect those involved in implementation with respect to information, training, work environment (e.g., Roles and competencies and employee satisfaction)?</td>
</tr>
<tr>
<td></td>
<td>19. How should cooperative efforts between administration levels, across units and different sectors be coordinated?</td>
</tr>
<tr>
<td></td>
<td>20. Does the proposed healthcare intervention comply with applicable rules and institutions (e.g., contractual agreements, medical guidelines, privacy laws, organizational cultures and routines)? (Responses from the ‘Contextual Considerations’ domain may be a helpful reference for informing this.)</td>
</tr>
<tr>
<td></td>
<td>b. If not, what can be done to resolve issues of non-compliance?</td>
</tr>
<tr>
<td></td>
<td>21. What opportunities/obstacles exist within the organization(s) responsible for implementing the proposed healthcare intervention, the general organizational environment, and the broader socio-political environment that might affect its feasibility? (Responses from the ‘Contextual Considerations’ domain may be a helpful reference for informing this.)</td>
</tr>
<tr>
<td></td>
<td>22. What strategies should be considered in order to facilitate the necessary behavioural changes among healthcare recipients, the public, healthcare professionals, healthcare organizations and the healthcare system (e.g., incentive structures)?</td>
</tr>
<tr>
<td></td>
<td>23. Are there any elements of the healthcare intervention that can be modified or excluded to improve its acceptability and feasibility?</td>
</tr>
<tr>
<td></td>
<td>24. Which primary/critical stakeholders’ involvement is crucial for full penetration of the target population and successful implementation of the proposed healthcare intervention?</td>
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<tr>
<td></td>
<td>a. Based on what is known about these stakeholders (see Stakeholder Considerations domain), what engagement strategies can be used to gain their support?</td>
</tr>
<tr>
<td></td>
<td>b. Are any of these stakeholders suitable and/or willing to champion the proposed healthcare intervention, particularly where the desired behavioural change will be voluntary?</td>
</tr>
<tr>
<td></td>
<td>25. How should information regarding implementation be communicated in order to engage stakeholders?</td>
</tr>
<tr>
<td></td>
<td>a. How should enquiries regarding the healthcare intervention be handled? Who will be responsible?</td>
</tr>
<tr>
<td></td>
<td>26. What should be done with the current intervention(s) related to the healthcare issue in order to accommodate the proposed healthcare intervention?</td>
</tr>
</tbody>
</table>
|                        | a. If the proposed healthcare intervention is going to supplant the current intervention(s), what approach
### Policy Options (cont'd)

#### g) Implementation - planning considerations (cont'd)

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<table>
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<td>should be taken for withdrawing the current one?</td>
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<td>b. How does this interact with the implementation of the proposed healthcare intervention, for instance, in terms of service delivery or timelines?</td>
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#### h) Implementation - Evaluation considerations

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<table>
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<td></td>
<td>7. What type of monitoring and/or evaluation is needed with implementation of the proposed healthcare intervention (e.g., ongoing performance measurement system or process evaluation of implementation strategy)?</td>
</tr>
<tr>
<td></td>
<td>8. What measurement indicators are appropriate for monitoring the impacts of the proposed healthcare intervention?</td>
</tr>
<tr>
<td></td>
<td>a. What is the minimum dataset needed to calculate these indicators?</td>
</tr>
<tr>
<td></td>
<td>b. When and how often should data be collected?</td>
</tr>
<tr>
<td></td>
<td>9. How long will it take before meaningful data can be obtained? How should relevant health/performance data be collected and registered (i.e., new or existing monitoring system)?</td>
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<tr>
<td></td>
<td>10. Where needed, how should benchmarks/goals be determined?</td>
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<tr>
<td></td>
<td>b. Where existing data is not available, how should a proxy be determined in the interim?</td>
</tr>
<tr>
<td></td>
<td>11. To whom should this information be reported to?</td>
</tr>
<tr>
<td></td>
<td>12. What actions should be taken if monitoring reveals significant unintended consequences of the proposed healthcare intervention, including failure to meet stated objectives?</td>
</tr>
<tr>
<td></td>
<td>b. Is there a feedback mechanism that will then monitor these actions?</td>
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#### i) Economic considerations

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<tr>
<td></td>
<td>c. Are there areas of care surrounding the healthcare issue that could be provided to the same level of effectiveness with the proposed healthcare intervention but with fewer resources?</td>
</tr>
<tr>
<td></td>
<td>d. Are there areas of care surrounding the healthcare issue that despite being effective, should receive fewer resources because the proposed healthcare intervention is more effective?</td>
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<td></td>
<td>10. What financial arrangements (e.g., how the intervention is financed and by whom, how health professionals are remunerated, etc.) are most suitable for supporting the proposed intervention?</td>
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<td></td>
<td>11. Value for money (e.g., Cost-effectiveness or cost-benefit evaluations):</td>
</tr>
<tr>
<td>Policy Options (cont’d)</td>
<td>i) Economic considerations (cont’d)</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------------</td>
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<tr>
<td></td>
<td>f. Have current cost-effective health policy options been implemented as far as practicable?</td>
</tr>
<tr>
<td></td>
<td>g. Is the healthcare intervention cost-effective in comparison to other options for managing the healthcare issue, and in relation to other healthcare priorities?</td>
</tr>
<tr>
<td></td>
<td>h. Is the total financial cost of the healthcare intervention economically balanced in relation to other healthcare priorities?</td>
</tr>
<tr>
<td></td>
<td>i. Have these evaluations been considered from all relevant stakeholder perspectives (e.g., patients or health system)?</td>
</tr>
<tr>
<td></td>
<td>j. Is the evidence generalizable or adaptable for the local context?</td>
</tr>
<tr>
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<td>12. Does the evidence on financial resources and value for money represent particular biases?</td>
</tr>
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<td></td>
<td>13. In what ways, if at all, would adoption of the healthcare intervention impact the ability to adopt future activities over the next couple of years?</td>
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<tr>
<td></td>
<td>14. What assumptions or uncertainties surrounding these evaluations have been made?</td>
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<tr>
<td></td>
<td>c. What are their potential impacts?</td>
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<tr>
<td></td>
<td>d. Is it possible to be confident about a decision despite a lack of evidence?</td>
</tr>
<tr>
<td></td>
<td>15. Does adoption of the healthcare intervention accrue additional/saved costs for hospital, other hospitals, other sectors, etc?</td>
</tr>
<tr>
<td></td>
<td>16. Which stakeholders are most economically impacted by implementation of the intervention?</td>
</tr>
</tbody>
</table>
As discussed in Section 4.2, the following is a list of resources for guiding users in data/evidence retrieval and appraisal [adapted from Goetghebeur et al. (2008)]. The list is not exhaustive but may be used as a starting point from which to broaden or complement one's data search and review process.

- **Academy of Managed Care Pharmacy**: The AMCP format for formulary submissions. **Version 4.0.** [http://www.amcp.org/practice-resources/amcp-format-formulary-submissions/].


- **Canadian Coordinating Office for Health Technology Assessment**: A guidance document for the costing of healthcare resources in the Canadian setting: Second edition. [https://www.cadth.ca/guidance-document-costing-process-2e].


- **Canadian Agency for Drugs and Technologies in Health**: Guidelines for the economic evaluation of health technologies: Canada. 2006 [https://www.cadth.ca/sites/default/files/pdf/186_EconomicGuidelines_e.pdf].


- **EQUATOR Network**: Toolkits [http://www.equator-network.org/]


