



ENGAGING HEALTH SYSTEM DECISION-
MAKERS IN SUPPORTING
COMPREHENSIVE CHRONIC PAIN
MANAGEMENT IN PROVINCIAL AND
TERRITORIAL HEALTHCARE SYSTEMS IN
CANADA



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Issue Brief:
**Engaging Health System Decision-makers in Supporting
Comprehensive Chronic Pain Management in
Provincial and Territorial Healthcare Systems in Canada**

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McMaster Health Forum

For concerned citizens and influential thinkers and doers, the McMaster Health Forum strives to be a leading hub for improving health outcomes through collective problem solving. Operating at the regional/provincial level and at national levels, the Forum harnesses information, convenes stakeholders, and prepares action-oriented leaders to meet pressing health issues creatively. The Forum acts as an agent of change by empowering stakeholders to set agendas, take well-considered actions, and communicate the rationale for actions effectively.

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KEY MESSAGES

What's the problem?

- The overarching problem is that there is lack of health system decision-maker engagement in supporting comprehensive chronic pain management in provincial and territorial healthcare systems in Canada.
 - Chronic pain may not garner sufficient attention because it is often associated with or the result of one or more physical or psychological co-morbidities and, as a result, it is often seen as a symptom rather than a disease or condition in its own right. Moreover, there is a general lack of awareness of the high prevalence of chronic pain, and of co-morbidities among chronic pain sufferers in Canada.
 - A lack of awareness of limitations in existing programs and services for chronic pain, at the level of both primary healthcare and specialized programs and services, may also contribute to the problem.
 - Additional contributors to the problem include a variety of gaps in existing delivery arrangements (e.g., lack of well established packages of care/guidelines for the management of chronic pain, lack of a comprehensive continuum of care, and lack of integration with other models of proactive and coordinated care for chronic conditions), financial arrangements (e.g., lack of visibility of the public and private costs of chronic pain management and lack of financial incentives for effective chronic pain management at the primary healthcare level), and governance arrangements (e.g., lack of clear policy authority and lack of training and accreditation for healthcare providers and clinics to deliver care to patients with chronic pain).

What do we know (from systematic reviews) about three viable options to address the problem?

- Option 1 – Launch an advocacy campaign
 - Traditional media can positively influence individual health-related behaviours, however, no systematic reviews have addressed whether and how traditional media, new media or directly engaging government officials increase the attention paid to an issue by health system decision-makers.
- Option 2 – Create a multi-stakeholder provincial or national working group for chronic pain
 - While there was a lack of evidence about the effects of multi-stakeholder networks (specifically public health partnerships) on health outcomes, qualitative studies suggested that some partnerships increased the profile of health inequalities on local policy agendas.
 - Opinion leaders may be effective for improving appropriate care, however, no reviews have addressed their use to increase the attention paid to an issue by health system decision-makers.
- Option 3 –Develop chronic pain policy portfolios in provincial and territorial ministries of health and strategic foci in regional health authorities
 - No systematic reviews have addressed this option.

What implementation considerations need to be kept in mind?

Potential barriers to implementing these options include:

- wide array of advocacy campaigns for many different diseases with each competing for the attention of health system decision-makers;
- difficulty in engaging relevant stakeholders in either an advocacy campaign or a working group;
- skepticism or unwillingness of providers to implement the recommendations from a working group;
- limited resources to support the activities of a working group;
- increasing focus of regional health authorities and ministries of health on broad issue domains rather than on specific diseases.

However, these and other potential barriers (and strategies to address them) warrant further study in their own right.

REPORT

Chronic pain is a serious health problem given its prevalence, associated disability, impact on quality of life, and the costs associated with the extensive use of healthcare services by people living with chronic pain.(1-3) In Canada, some investments have been made to strengthen chronic pain management.(4-6) Despite these and other investments, the management of chronic pain remains a serious healthcare system challenge.

In December 2009, the McMaster Health Forum convened a stakeholder dialogue on the subject of supporting chronic pain management across provincial and territorial healthcare systems in Canada. Several dialogue participants voiced strong support for one or more of the three options outlined in the evidence brief, which included:

1. create a model patient registry/treatment-monitoring system in a single jurisdiction;
2. create a national network of centres with a co-ordinating “hub” to provide chronic pain-related decision support; and
3. broker and support the implementation of a cross-payer, cross-discipline model of patient-centred primary healthcare-based chronic pain management.

Despite support for these options, many dialogue participants noted that long-term sustainable action (i.e., moving beyond short-term demonstration projects) is constrained due to the lack of attention paid to chronic pain by health system decision-makers.

The purpose of this issue brief is to build on the previous dialogue by reviewing the research evidence about: 1) features of the problem of a lack of health system decision-maker engagement in supporting comprehensive chronic pain management in provincial and territorial healthcare systems; 2) three options for addressing the problem, and hence contributing to the more systematic engagement of health system decision-makers; and 3) key implementation considerations for moving any of the options forward.

In this issue brief, engaging health system decision-makers refers to increasing the consistency with which decision-makers are included, and actively participating, in debate and program/policy development related to supporting chronic pain management. Health system decision-makers include two groups:

Box 1: Background to the issue brief

This issue brief mobilizes both global and local research evidence about a problem, three options for addressing the problem, and key implementation considerations. Whenever possible, the issue brief summarizes research evidence drawn from systematic reviews of the research literature and occasionally from single research studies. A systematic review is a summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select and appraise research studies and to synthesize data from the included studies. The issue brief does not contain recommendations.

The preparation of the issue brief involved five steps:

- 1) convening a Steering Committee comprised of representatives from key stakeholder groups and the McMaster Health Forum;
- 2) developing and refining the terms of reference for an issue brief, particularly the framing of the problem and three viable options for addressing it, in consultation with the Steering Committee and a number of key informants, and with the aid of several conceptual frameworks that organize thinking about ways to approach the issue;
- 3) identifying, selecting, appraising and synthesizing relevant research evidence about the problem, options and implementation considerations;
- 4) drafting the issue brief in such a way as to present concisely and in accessible language the global and local research evidence; and
- 5) finalizing the issue brief based on the input of several merit reviewers.

The three options for addressing the problem were not designed to be mutually exclusive. They could be pursued simultaneously or elements could be drawn from each option to create a new (fourth) option.

The issue brief was prepared to inform a stakeholder dialogue at which research evidence is one of many considerations. Participants’ views and experiences and the tacit knowledge they bring to the issues at hand are also important inputs to the dialogue. One goal of the stakeholder dialogue is to spark insights – insights that can only come about when all of those who will be involved in or affected by future decisions about the issue can work through it together. A second goal of the stakeholder dialogue is to generate action by those who participate in the dialogue, and by those who review the dialogue summary and the video interviews with dialogue participants.

1. policymakers – either the elected officials or the civil servants involved in the development and/or implementation of policy (e.g., politicians, political staff, assistant deputy ministers, senior policy advisors, and policy analysts); and
2. regional health authority staff – includes the executives or management of regional health authorities (or equivalent) involved in decision-making about policy, programs or services in their regions.

Also, it is important to note that health professional associations (e.g., the Canadian Medical Association) and regulatory bodies (e.g., College of Physicians and Surgeons of Ontario) play key roles in shaping policy in healthcare systems even if they are not health system decision-makers per se. As well, academic institutions (e.g., universities with health science faculties) prepare future clinician and research leaders to support health system decision-makers.

The preparation of this issue brief was informed by (but not limited to) two definitions of pain. First, the International Association for the Study of Pain defines pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage”.⁽⁷⁾

Second, the Canadian Pain Coalition states that:

“Chronic pain is pain that persists over three months, beyond when an injury should have healed. Chronic pain can be intermittent (occurs in a pattern) or persistent (lasting more than 12 hours daily) and can be considered a disease itself. Usually the pain results from a known cause, such as surgery, or inflammation from arthritis. Sometimes the cause of this pain is abnormal processing of pain by the nervous system as in the case of fibromyalgia.”⁽⁸⁾

Many chronic pain conditions have been characterized and fit the above definitions, including painful neuropathies, pelvic and abdominal pain, headaches, and back, neck and joint pain.

The scope of this issue brief does not include details about effective chronic pain management or optimal supports to effective chronic pain management. A previously prepared evidence brief focused on optimal supports to effective chronic pain management.⁽⁹⁾ The scope of this brief is also primarily limited to chronic non-cancer pain. Although poorly controlled peri-operative pain may create conditions in which chronic non-cancer pain can develop, peri-operative pain is typically “self-limiting.” Also, cancer pain tends to be given significant attention in cancer care and palliative

Box 2: Equity considerations

A problem may disproportionately affect some groups in society. The benefits, harms and costs of options to address the problem may vary across groups. Implementation considerations may also vary across groups.

One way to identify groups warranting particular attention is to use “PROGRESS,” which is an acronym formed by the first letters of the following eight ways that can be used to describe groups[†]:

- place of residence (e.g., rural and remote populations);
- race/ethnicity/culture (e.g., First Nations and Inuit populations, immigrant populations, and linguistic minority populations);
- occupation or labour-market experiences more generally (e.g., those in “precarious work” arrangements);
- gender;
- religion;
- educational level (e.g., health literacy);
- socio-economic status (e.g., economically disadvantaged populations); and
- social capital/social exclusion.

The issue brief strives to address all citizens, but (where possible) it also examines whether and how existing data and research evidence give particular attention to individuals/patients in ‘small’ provinces and territories (with ‘small’ meaning provinces with small numbers of policymakers, providers and/or patients). Many other groups warrant serious consideration as well (e.g., older patients or patients with particular co-morbidities), and a similar approach could be adopted for any of them.

[†] The PROGRESS framework was developed by Tim Evans and Hilary Brown (Evans T, Brown H. Road traffic crashes: operationalizing equity in the context of health sector reform. *Injury Control and Safety Promotion* 2003;10(1-2): 11–12). It is being tested by the Cochrane Collaboration Health Equity Field as a means of evaluating the impact of interventions on health equity.

care systems and is also typically “self limiting.” That said, all types of pain are typically under-treated, many of the options to address this problem could apply equally well to all types of pain, and the implementation of these options might be facilitated by having a consistent approach across all types of pain.

The original evidence brief outlined several key features of the health policy and system context in Canada. Features of specific interest for this issue brief include the following key features:

- the Canadian healthcare system is comprised of 13 publicly financed healthcare systems (10 provincial and 3 territorial) that are each distinguished by a long-standing private (not-for-profit) delivery/public payment agreement between government on the one hand, and physicians and hospitals on the other (with the latter groups often wary of potential infringements on their professional and commercial autonomy);
- many forms of care that are delivered by providers other than physicians and in settings other than hospitals are not addressed by agreements similar to the ones that govern physician-provided and hospital-based care, and hence these alternate forms of care are more likely to be provided by for-profit providers (e.g., many rehabilitation clinics) and financed by a mix of public and private payment (with private payment including both private insurance coverage and out-of-pocket payments by patients);
- the Canadian federal government only has a role to play in decisions that affect the private (not-for-profit) delivery/public payment agreement, and in health services delivery focused on First Nations and Inuit populations, many of whom also obtain care through provincial and territorial systems;(10) and
- each province has devolved decisions relating to the planning, funding and integration of healthcare to regional health authorities, and the number of regional health authorities and the types of decisions that each are allowed to make vary by province.

THE PROBLEM

The lack of health system decision-maker engagement in supporting comprehensive chronic pain management in provincial and territorial healthcare systems in Canada can be understood by considering four sets of interrelated issues: 1) lack of awareness of chronic pain; 2) lack of awareness of limitations in existing programs and services; 3) gaps in healthcare system arrangements that limit the attention given to chronic pain; and 4) limited reach of existing efforts to engage health system decision-makers in supporting chronic pain.

Lack of awareness of chronic pain

Many participants in the first stakeholder dialogue argued that having “no recognition of chronic pain as a disease” was a significant contributor to the lack of health system decision-maker engagement.⁽¹¹⁾ Chronic pain is often associated with or the result of one or more physical co-morbidities (e.g., arthritis, diabetes, injury and fibromyalgia) or psychological co-morbidities (e.g., anxiety and depression).⁽¹⁾ For instance, Choinière et al. found that, as compared to the Canadian general population, patients with chronic pain reported significantly lower scores in all physical and mental domains of a multi-dimensional health survey (the SF-36v2).⁽¹⁾ Due to the association of chronic pain with such a wide spectrum of co-morbidities it may be more often seen as a symptom rather than a disease or condition in its own right (and hence warranting attention).

Another contributor to the lack of health system decision-maker engagement may be a lack of awareness of the high prevalence of chronic pain. Estimates of its prevalence range from 15%⁽¹²⁾ to 29%⁽³⁾ of the adult population. As was reported in the evidence brief about supporting chronic pain management⁽⁹⁾, the most recent population-based prevalence data are from a telephone survey conducted in 2007/08 among a random sample of Canadian adults (18 and older), which found the prevalence of chronic pain in Canada as a whole to be approximately 18%, and the prevalence by province ranging from 15.5% in Quebec to 23% in the Atlantic provinces.⁽¹³⁾ Additional data collected in 2008 by Statistics Canada as part of the Canadian Community Health Survey found that 9.7% of Canadians aged 35 to 44 reported that they usually have pain or discomfort that is moderate or severe, which was higher than the 8.6% reported in the previous survey conducted in 2003.⁽¹⁴⁾ The survey also found that prevalence increases with age, with 24% of Canadians between 65 and 74 years of age and 30% of Canadians aged 75 to 84 years of age living with chronic pain.⁽¹⁴⁾ As well, health professionals receive minimal education about the prevalence (and management) of pain, including pain that is a persistent ongoing problem.⁽¹⁵⁾

There may also be a lack of awareness of the prevalence of co-morbidities, such as depression, among chronic pain sufferers in Canada, as well as the impact of these co-morbidities on chronic pain sufferers’ ability to sustain employment. A recent cross-sectional study of 728 patients on wait lists for multidisciplinary pain treatment facilities in seven Canadian provinces found that 50% of the sample had severe or extremely severe levels of depression, and 34.6% had passive or active suicidal ideation.⁽¹⁾ The same study also found

Box 3: Mobilizing research evidence about the problem

The available research evidence about the problem was sought from a range of published and “grey” research literature sources. Published literature that provided a comparative dimension to an understanding of the problem was sought using three health services research “hedges” in MedLine, namely those for appropriateness, processes and outcomes of care (which increase the chances of identifying administrative database studies and community surveys). Published literature that provided insights into alternative ways of framing the problem was sought using a fourth hedge in MedLine, namely the one for qualitative research. Grey literature was sought by reviewing a number of Canadian and international organizations, such as Action Ontario, the Canadian Pain Society and the European Observatory on Health Systems and Policies. Priority was given to research evidence that was published more recently, that was locally applicable (in the sense of having been conducted in Canada), and that took equity considerations into account.

that for more than half of the sample, chronic pain interfered with different facets of activities of daily living, including normal work activities.(1)

Further complicating matters, there is a lack of clear guidance on how to identify/diagnose chronic pain. With many definitions of chronic pain, each emphasizing different characteristics and duration of symptoms,(16) identifying and diagnosing chronic pain can be difficult (especially for those who do not routinely provide chronic pain care), which may contribute to it being viewed exclusively as the result of other diseases and conditions (and not as a condition that may exist in the absence of other diseases and conditions). In addition, there may be an element of stigma related to seeking care and to the diagnostic uncertainty associated with chronic pain.(17;18) This stigma may then be translated into a lack of legitimacy of the need for care, which in turn adds to the burden of chronic pain and to its lack of visibility.(11)

Lack of awareness of limitations in existing programs and services for chronic pain

A lack of health system decision-maker engagement in supporting chronic pain management may also reflect a lack of awareness of limitations in existing programs and services for chronic pain. General limitations in the availability of and access to primary healthcare services (e.g., roughly 14% of Canadians report having no regular primary healthcare provider(19)) are likely felt particularly intensely by those living with chronic pain, given they may be seen as more complex patients (and hence be less likely to be taken on as patients), they may have greater needs for care (and hence be more likely to suffer the consequences of a lack of care), and they may be more likely to seek out care in suboptimal settings such as emergency rooms (and hence be more likely to suffer the consequences of inappropriate care).

There may also be a lack of awareness of specific limitations in the availability of and access to specialized programs and services for chronic pain. For example, based on survey data from 2005-2006, there were only 102 multidisciplinary pain clinics in Canada, which translates into one clinic for every 258,000 Canadians.(20) Moreover, the majority (80%) of these clinics are located in urban centres,(20) these clinics typically have long wait lists,(1) and the median cost per patient per month for patients on these wait lists was recently found to be \$1,462, of which 95% was privately financed (i.e., either out-of-pocket or through private insurance).(2) Those living in underserved areas, such as rural or remote regions of the country, may face particular challenges in accessing specialized programs and services.

However, many of these assessments of limitations in existing programs and services for chronic pain remain speculative, given the significant gaps in our knowledge about the nature and extent of the under-utilization of cost-effective programs and services, and the over-utilization of ineffective or harmful programs and services, which may also contribute to a lack of health system decision-maker engagement.

Gaps in healthcare system arrangements that limit the attention given to chronic pain

There are also a number of gaps in healthcare system arrangements that likely limit the attention given to chronic pain by health system decision-makers. Existing healthcare delivery arrangements contribute to the problem in a number of ways. First, there is a lack of well-established packages of care and guidelines for the management of chronic pain at the primary healthcare level, as well as a lack of strategies for supporting their implementation. One potential example of an indicator of the lack of implementation of guidelines is the recent finding that approximately one in three patients with a prescription for long-acting oxycodone through Ontario's public drug plan (which is targeted at those over 65 years of age, with disabilities or eligible for social assistance) received doses classified as high (201-400 mg/day of oral morphine or equivalent) or very high (>400 mg/day of oral morphine or equivalent).(21) However, data about individual patient circumstances that might justify higher doses would make this a more compelling indicator. Second, there is a lack of a comprehensive continuum of care available to patients living with chronic pain. This continuum might ideally include: 1) primary healthcare that offers routine management for chronic pain; 2) support structures that provide ongoing mentoring, continuing education and advice to primary healthcare providers

engaged in chronic pain management; and 3) tertiary care for patients requiring more complex care. Limitations in, or a lack of coordination across this continuum can result in patients seeking care in emergency rooms and in other sub-optimal settings, however, such system-level ‘side-effects’ may not be measurable given that chronic pain is typically not recorded as a distinct condition. Lastly, there is a lack of integration of chronic pain management within the Chronic Care model or within other prevailing models of proactive and coordinated care,(21-23) which can mean that chronic pain management can easily become isolated from routine care, and that common issues across chronic conditions can fail to be identified (e.g., a lack of information coordination among patients, providers and payers).

Financial arrangements may also limit the attention paid to supporting chronic pain management. First, there is a lack of visibility of the public costs associated with chronic pain management because chronic pain is not a widely recognized diagnosis, chronic pain specialists are not a formally recognized specialty, and chronic pain clinics are not a formally recognized type of healthcare facility. As a result, decision-makers may not be aware of the significant public resources already being spent on chronic pain management (and which could be re-directed to appropriate forms of care). Second, there is a lack of visibility of the private costs associated with chronic pain management. The lack of coverage for the mix of programs that could be delivered by primary healthcare providers (e.g., no fee code for a defined package of care for those with chronic pain), other primary healthcare providers (e.g., limited public coverage of physiotherapy services), and specialty providers can place a significant financial burden on patients, which is often not visible to others. For instance, a recently conducted survey of chronic pain patients on wait lists for multidisciplinary pain clinics (which was also discussed previously in this issue brief) found that, from the onset of pain, patients reported having consulted an average of 7.4 different types of healthcare professionals, including those in medicine (family physicians and a broad range of specialists), physical therapy (e.g. physiotherapists), counselling (e.g., psychologists), and alternative care (e.g., acupuncturists).(1) Third, there is also a lack of financial incentives for effective chronic pain management at the primary healthcare level (e.g., chronic pain management is not the target of existing chronic care management incentives), which means that poor performance in chronic pain management is not being measured and good performance is not being rewarded.

Governance arrangements can contribute in two ways to a lack of health system decision-maker engagement in supporting comprehensive chronic pain management. First, there is a lack of clear policy authority for supporting optimal chronic pain management. As outlined earlier, chronic pain is often seen as a symptom or the result of other physical or psychological co-morbidities and, as a result, it is relevant to many different policy portfolios (e.g., for different levels and types of care and for different diseases) in provincial and territorial healthcare systems, and to many different strategic areas of focus in regional health authorities. Unlike for diseases such as heart disease or conditions like pregnancy, there is typically no individual in government or a regional health authority who is accountable for the healthcare being provided to chronic pain sufferers. Second, there is a lack of training and accreditation for healthcare providers and clinics to deliver care for people with chronic pain in Canada, resulting in a remarkable mix in approaches that cannot be clearly justified on the basis of existing research evidence.

Limited reach of existing efforts to engage health system decision-makers

There have been several recent examples of efforts to engage health system decision-makers and bring increased attention to the issue of chronic pain. One example of how health system decision-makers in Ontario are being engaged is through the creation and activities of a task force involving representatives from the Ontario Medical Association and the Ministry of Health Long-Term Care. The task force is developing recommendations about the management of chronic pain, as well as discussing how to approach revisions to payment schedules in Ontario in order to better support the management of chronic pain. In addition, Action Ontario is advocating for the development of a chronic pain strategy and hosted a symposium with patients, physicians and researchers entitled *Patient Input for System Change* in November 2010 to begin working towards the development of such a strategy.(24)

An example of how health system decision-makers are being engaged at the national level is the Canadian Pain Coalition's and the Canadian Pain Society's submission of briefs to the Parliamentary Committee on Palliative and Compassionate Care in October 2010.(25) The Canadian Pain Coalition's brief called for "[a] National Pain Strategy for Canada that recognizes pain as a chronic disease, promotes improved access to services for people with pain, and addresses the awareness, educational, clinical and research needs to support effective pain management...."(25). The brief also outlined six recommendations to government: 1) give official recognition to chronic pain as a chronic disease in Canada; 2) create and implement a Canadian pain strategy; 3) ensure that Canada's healthcare system becomes more supportive of pain care; 4) support education for the general public and healthcare professionals about pain and pain management; 5) fund research on underlying causes of chronic pain and on delivery systems for pain management; and 6) engage people with pain as an integral part of the solution. Similarly, the brief from the Canadian Pain Society emphasized the need for a national pain strategy and outlined five recommendations: 1) improve education about pain assessment and management; 2) improve access to appropriate care for pain; 3) provide a continuum of stepped care that ensures the right level of care to the right person in the right place along with efficient use of resources; 4) develop initiatives to assure appropriate support for research about causes and new approaches to management of pain; 5) ensure that any investment can be measured against expected outcomes to ensure accountability and sustainability. To our knowledge, the briefs from the Canadian Pain Coalition and the Canadian Pain Society have not yet elicited a response.

There have been several recent examples of promising provincial-level initiatives to support chronic pain management. For instance, the province of Quebec has supported the development of four expert centres based within universities (Laval, McGill, Montreal and Sherbrooke) and anchored within the Réseaux Universitaires Intégrés de Santé (RUIS – Integrated University Health Network).(11) Each centre has a specific mandate in terms of tertiary-level clinical services, training, research and support for a defined region of the province. Also, as noted by a participant in the first stakeholder dialogue, Quebec is well on its way to developing a patient registry/treatment-monitoring system within the context of a Fonds de la Recherche en Santé du Québec (FRSQ)-funded research project.(11) Similarly, one of the primary healthcare networks in Calgary (26) delivers primary healthcare-based chronic pain management for patients with mild to moderate complexity.(11) The network also provides physicians with mentoring from secondary- and tertiary-level specialists (e.g., rounds, tools and telephone consultations), and pays for a variety of non-physician primary healthcare providers (e.g., nurse coordinator, physiotherapist, mental health worker and pharmacist).(11) In Nova Scotia the Provincial Department of Health has also made investments in chronic pain through a dedicated annual budget of \$1 million since 2007, to enhance secondary and tertiary care pain services and to develop additional primary care service and self management supports.(27) This initiative has also provided partnership support for the Nova Scotia Chronic Pain Collaborative Care Network.(27)

Equity-related observations about the problem

In considering the problem, the differing contexts of provinces and of regions within provinces should be considered. For instance, the context of 'small' provinces and territories, meaning provinces with small numbers of policymakers, providers and/or patients, is often very different from 'larger' provinces. Similarly, the context of the often large rural and remote health regions with dispersed populations may differ in important ways from the often geographically small urban regions that are home to high population densities. However, we found no data or research evidence that helped to identify whether particular features of the problem were more or less significant in these different contexts.

THREE OPTIONS FOR ADDRESSING THE PROBLEM

Many options could be selected as a starting point for deliberations designed to inform future initiatives for engaging health system decision-makers in supporting comprehensive chronic pain management in provincial and territorial healthcare systems in Canada. To promote discussion about the pros and cons of potentially viable options, three have been selected as exemplars for more in-depth review. They include: 1) launching an advocacy campaign; 2) creating a multi-stakeholder provincial or national working group; and 3) developing chronic pain policy portfolios in government and strategic foci within regional health authorities.

The focus in this section is on what is known about these options. In the next section the focus turns to the barriers to adopting and implementing these options and to possible implementation strategies to address the barriers.

Option 1 – Launch an advocacy campaign

This option involves using a variety of advocacy approaches to bring increased attention to the issue in general and to elevate its visibility on provincial and territorial governments' agendas in particular (with the latter ideally positioned within a more general effort to encourage better informed health system decision-making).

To further understand this option, it is useful to consider it according to different approaches to advocacy that could each provide unique ways of bringing increased attention to the issue. Specifically, the elements of this option might include:

- traditional media for public engagement, such as print, radio and television;
- 'new media' for public engagement, such as mass-short-messages (MSMs) and other mobile phone-based strategies, as well as online petitions and other internet-based approaches; and
- efforts to directly engage government officials.

We did not identify any systematic reviews assessing whether and how traditional media increase the attention paid to an issue by health system decision-makers. However, we did find systematic reviews about the effects of traditional media on individual health-related behaviours. One high-quality but old review found that mass media campaigns and unplanned mass media

Box 4: Mobilizing research evidence about options for addressing the problem

The available research evidence about options for addressing the problem was sought primarily from a continuously updated database containing more than 1,200 systematic reviews of delivery, financial and governance arrangements within health systems: Health Systems Evidence (www.healthsystemsevidence.org). The reviews were identified by searching the database for reviews addressing features of the options (first with pain as a keyword to identify any 'near perfect' matches). In order to identify evidence about costs and/or cost-effectiveness, the NHS Economic Evaluation Database (available through the Cochrane Library) was also searched using a similar approach.

The authors' conclusions were extracted from the reviews whenever possible. Some reviews contained no studies despite an exhaustive search (i.e., they were "empty" reviews), while others concluded that there was substantial uncertainty about the option based on the identified studies. Where relevant, caveats were introduced about these authors' conclusions based on assessments of the reviews' quality, the local applicability of the reviews' findings, equity considerations, and relevancy to the issue. (See Appendices for a complete description of these assessments.)

Being aware of what is not known can be as important as being aware of what is known. When faced with an empty review, substantial uncertainty, or concerns about quality and local applicability or lack of attention to equity considerations, primary research could be commissioned, or an option could be pursued, and a monitoring and evaluation plan designed as part of its implementation. When faced with a review that was published many years ago, an updating of the review could be commissioned if time allows.

No additional research evidence was sought beyond what was included in the systematic review. Those interested in pursuing a particular option may want to search for a more detailed description of the option or for additional research evidence about the option.

coverage can have a positive influence on the utilization of health services.(28) In another high-quality but more recent review, all of the 35 included studies concluded that mass media interventions were effective in the promotion of voluntary counselling and testing for HIV.(29) The results of this review were primarily based on multiple media interventions for the general public, with only one study providing an evaluation of televised interventions.(29)

We also did not identify any reviews evaluating whether and how new media or efforts to directly engage government officials increase the attention paid to an issue by health system decision-makers. However, a previous issue brief prepared by the McMaster Health Forum about engaging civil society in supporting research use in healthcare systems, outlines how new media offers the potential to actively influence healthcare system policymaking (and not just inform it).(30) More specifically, the issue brief describes how new media can hold policymakers accountable for poorly informed healthcare system policymaking and encourage better informed healthcare system policymaking. Successful examples include mass-short-message campaigns that have mobilized citizens to protest (e.g., the World Trade Organization meeting in Seattle in 1999 and the “Orange revolution” in the Ukraine in 2004 and 2005) and to go to the polls to oust presidents in the Philippines in 2001 and in South Korea in 2004.(31) Mass-short-message campaigns have been cited anecdotally as key factors influencing election turn-out and voting (e.g., in the Calgary municipal election in 2010).(32) Other successful examples of how new media can help increase the attention paid to a specific issue include online petitions and other internet-based strategies that have been used by organizations like Avaaz.org to articulate for policymakers and others widespread public concerns over the environment and many other global issues.

A summary of the key findings from the synthesized research evidence is provided in Table 1. For those who want to know more about the systematic reviews contained in Table 1 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 1.

Table 1: Summary of key findings from systematic reviews relevant to Option 1 – Launch an advocacy campaign

Category of finding	Summary of key findings
Benefits	<ul style="list-style-type: none"> • Traditional media <ul style="list-style-type: none"> ○ A high-quality but old review found that all of the studies (which were of variable quality) apart from one concluded that planned mass media campaigns and unplanned mass media coverage can have a positive influence on the utilization of health services. ○ A high-quality review found that all of the studies concluded that mass media interventions were effective in the promotion of voluntary counselling and testing for HIV.
Potential harms	<ul style="list-style-type: none"> • Not addressed by any identified systematic reviews
Costs and/or cost-effectiveness in relation to the status quo	<ul style="list-style-type: none"> • Not addressed by any identified systematic reviews
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)	<ul style="list-style-type: none"> • Uncertainty because no systematic reviews were identified <ul style="list-style-type: none"> ○ New media <ul style="list-style-type: none"> ▪ No reviews were identified that addressed this element of the option ○ Directly engaging government officials <ul style="list-style-type: none"> ▪ No reviews were identified that addressed this element of the option • Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review <ul style="list-style-type: none"> ○ Not applicable (i.e., no empty reviews were identified) • No clear message from studies included in a systematic review <ul style="list-style-type: none"> ○ Not applicable (i.e., no reviews were identified that identified a lack of clear message)
Key elements of the policy option if it was tried elsewhere	<ul style="list-style-type: none"> • Not addressed by any identified systematic reviews
Stakeholders’ views and experience	<ul style="list-style-type: none"> • Not addressed by any identified systematic reviews

Option 2 – Create a multi-stakeholder provincial or national working group

This option involves raising awareness and support among policymakers who could or should be paying attention to chronic pain, ideally in the context of a broader effort to engage all relevant stakeholders in supporting improvements to chronic pain management (with the stakeholders including the full range of health system decision-makers, healthcare providers, researchers and provincial/national coalitions or NGOs). The development of a working group would also ideally draw on lessons learned from national commissions/coalitions for specific diseases that have been previously organized (e.g., Mental Health Commission of Canada and Canadian Strategy for Cancer Control/Canadian Partnership Against Cancer), which in the case of cancer, emerged from a similar working group model.(33)

Elements of a multi-stakeholder provincial or national working group could include:

- establishing a national network of stakeholder groups with a coordinating “hub”;
- engaging key opinion leaders who can take action, both those leading the push for strengthened chronic pain management and those in primary healthcare practices, regional health authorities and government;
- equipping these key opinion leaders (and the stakeholder groups from which they’re drawn) with the necessary tools to take action, which could in turn include:
 - compelling data and stories about the current burden of chronic pain and the implications (e.g., costs) of not addressing it;
 - regularly updated, evidence-based packages of care/guidelines for the management of chronic pain at the primary healthcare level and in related fields of practice;
 - mechanisms to coordinate across fields of practice and across relevant disease groups that are often linked to chronic pain; and
 - periodically identified priorities for new primary and secondary research and the communication of these priorities to relevant funders.

For this option, we found one medium-quality systematic review addressing the element related to establishing a multi-stakeholder network.(34) The review assessed the impact of organizational partnerships to improve public health outcomes in England between 1997 and 2008, and found a lack of evidence of the effects of public health partnerships on health outcomes. However, the qualitative studies included in the review suggested that some partnerships increased the profile of health inequalities on local policy agendas.(34)

We also found three high-quality systematic reviews, of which two were recent,(35;36) and one was older,(37) as well as one low-quality systematic review,(38) addressing the element of engaging key opinion leaders. All of the reviews were focused on supporting clinical practice and the implementation of clinical guidelines. While these reviews do not directly address the option element under consideration, they still offer helpful insights about the potential effects of using local opinion leaders who can lead the push for engaging health system decision-makers in strengthening chronic pain management. Both of the high quality and recent reviews found minimal evidence about local opinion leaders, but one concluded that opinion leaders with or without another intervention were generally effective for improving appropriate care,(35) and the other concluded that there was insufficient evidence to determine the effectiveness of local opinion leaders in the field of physiotherapy.(36) The remaining two reviews similarly concluded that there is insufficient evidence to determine whether local opinion leaders are effective for supporting clinical practice.(37;38)

A summary of the key findings from the synthesized research evidence is provided in Table 2. For those who want to know more about the systematic reviews contained in Table 2 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 2.

Table 2: Summary of key findings from systematic reviews relevant to Option 2 – Create a multi-stakeholder provincial or national working group

Category of finding	Summary of key findings
Benefits	<ul style="list-style-type: none"> • Local opinion leader: <ul style="list-style-type: none"> ○ One high quality and recent systematic review found that local opinion leaders were generally effective for improving appropriate care
Potential harms	<ul style="list-style-type: none"> • Not addressed by any identified systematic reviews
Costs and/or cost-effectiveness in relation to the status quo	<ul style="list-style-type: none"> • Not addressed by any identified systematic reviews
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)	<ul style="list-style-type: none"> • Uncertainty because no systematic reviews were identified <ul style="list-style-type: none"> ○ Tools for opinion leaders • Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review <ul style="list-style-type: none"> ○ Not applicable (i.e., no empty reviews were identified) • No clear message from studies included in a systematic review <ul style="list-style-type: none"> ○ Multi-stakeholder network with a coordinating ‘hub’ <ul style="list-style-type: none"> ▪ One systematic review found insufficient evidence that organizational partnerships improved public health outcomes in England from 1997-2008 ○ Local opinion leaders <ul style="list-style-type: none"> ▪ Three systematic reviews (two high-quality and one low-quality) concluded there was insufficient evidence to determine whether local opinion leaders are effective at supporting clinical practice and the implementation of clinical guidelines
Key elements of the policy option if it was tried elsewhere	<ul style="list-style-type: none"> • Not addressed by any identified systematic reviews
Stakeholders’ views and experience	<ul style="list-style-type: none"> • Not addressed by any identified systematic reviews

Option 3 – Develop chronic pain policy portfolios and strategic foci

This option involves developing policy portfolios in provincial and territorial ministries of health and strategic foci in regional health authorities. These portfolios or strategic foci would provide the opportunity to coordinate responses to chronic pain within and across governments, regional health authorities, and the stakeholder community. This could include engaging and liaising with other relevant policy areas within the government and regional health authorities to coordinate the development and implementation of relevant policies and programs, as well as engaging and liaising with relevant stakeholders to inform the development and implementation of programs and services in the community

Elements of this option might include:

- mapping what existing policy portfolios are relevant to supporting chronic pain management, particularly at the primary healthcare level; and
- establishing an integrated portfolio to support chronic pain management or a coordinating role that would work across other relevant portfolios and departments.

The latter could be focused on chronic pain exclusively or be embedded within a broader chronic disease approach (as one of several prioritized chronic conditions).

We did not find any systematic reviews addressing any of the elements of this option.

However, we can highlight the key messages that emerged from previous efforts in Canada to reallocate resources and decision-making to support a shift in perspective. In the early 1990s, the province of Prince Edward Island (P.E.I.) initiated a process of health reform that shifted resources to support factors (other than healthcare) that contribute to people's health.(39-44) This 'cross-sectoral reallocation' emphasized "broad determinants of health, client focus in service delivery, pooling of human services, integration and coordination of services, and the establishment of regional governance."(44) An analysis of instruments put in place to facilitate the shift towards the broad determinants of health revealed that regional governance can help ensure integration and coordination within regions. However, the analysis also found that it made the funding and operationalization of programs across regions difficult, which highlighted the need for a central authority to ensure equity of provision between regions.(44) Additional elements cited as important facilitators of the process include: 1) fostering an organizational culture that is supportive of change; and 2) starting with low-profile changes that can demonstrate how it can work.(44) While the changes in P.E.I. were much broader and involved more complex structural changes, the process provides helpful lessons learned for ministries of health or regional health authorities that may want to undergo a process of increasing the coordination across policy portfolios, and/or establishing an integrated portfolio to support chronic pain.

A summary of the domains where no systematic reviews were found is provided in Table 3.

Table 3: Summary of key findings from systematic reviews relevant to Option 3 – Develop policy portfolios and strategic foci

Category of finding	Summary of key findings
Benefits	<ul style="list-style-type: none"> • Not applicable (i.e., no relevant reviews were identified)
Potential harms	<ul style="list-style-type: none"> • Not applicable (i.e., no relevant reviews were identified)
Costs and/or cost-effectiveness in relation to the status quo	<ul style="list-style-type: none"> • Not applicable (i.e., no relevant reviews were identified)
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)	<ul style="list-style-type: none"> • Uncertainty because no systematic reviews were identified <ul style="list-style-type: none"> ○ Mapping existing policy portfolios that are relevant for supporting chronic pain ○ Establishing an integrated portfolio or coordinating role across relevant departments • Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review <ul style="list-style-type: none"> ○ Not applicable (i.e., no empty reviews were identified) • No clear message from studies included in a systematic review <ul style="list-style-type: none"> ○ Not applicable (i.e., no relevant reviews were identified)
Key elements of the policy option if it was tried elsewhere	<ul style="list-style-type: none"> • Not applicable (i.e., no relevant reviews were identified)
Stakeholders' views and experience	<ul style="list-style-type: none"> • Not applicable (i.e., no relevant reviews were identified)

Additional equity-related observations about the three options

None of the identified systematic reviews identified insights specific to ‘small’ provinces and regions. However, the key messages that emerged from experimenting with integrated policy portfolios were drawn from a very small province and not a large one.

IMPLEMENTATION CONSIDERATIONS

A summary of the potential barriers to implementing the options, organized by level within healthcare systems, is provided in Table 4.

Table 4: Potential barriers to implementing the options

Levels	Option 1 – Launch an advocacy campaign	Option 2 – Create a multi-stakeholder provincial or national working group	Option 3 – Develop policy portfolios in ministries and strategic foci in regional health authorities
Patient/individual	Chronic pain patients may be unwilling (e.g., due to the stigma associated with chronic pain) or unable (e.g., due to the limitations related to having chronic pain) to be meaningfully engaged in advocacy campaigns There is a wide array of advocacy campaigns for many different diseases with each competing for the attention of the broader public	Chronic pain patients may be unwilling (e.g., due to the stigma associated with chronic pain) or unable (e.g., due to the limitations related to having chronic pain) to be meaningfully engaged in the activities of a working group	Not applicable – such a change would likely not be visible to patients/individuals
Care provider	Providers or associations of providers attempting to directly engage health system decision-makers may not have the time or skills required to make the case for better supporting chronic pain management	Providers may be skeptical about or unwilling to implement the recommendations from a working group	Not applicable – such a change would likely not be visible to care providers
Organization	Organizations attempting to directly engage health system decision-makers may not have the time or skills required to make the case for better supporting chronic pain management Key healthcare system advocacy organizations (e.g., medical associations) may not be willing to devote resources to advocacy for chronic pain compared to other conditions that have bigger impacts on their members' interests	Healthcare delivery organizations may not be willing to participate in a working group for chronic pain compared to other conditions that have bigger impacts on their organization Organizations with existing chronic pain strategies may not be willing to participate in a working group that is covering ground that they have already covered	Regional health authorities are increasingly focused on broad issue domains (e.g., chronic disease) that encompass many different diseases rather than on specific diseases
System	There is a wide array of advocacy campaigns for many different diseases with each competing for the attention of health system decision-makers	There are limited resources available to support the development and ongoing activities of a working group	Ministries of health, and those seeking to influence them, are increasingly focused on broad issue domains (e.g., chronic disease) that encompass many different diseases rather than on specific diseases

Many implementation strategies could be considered for any given option. However, given that several options could be pursued simultaneously and that option elements could be combined in different and creative ways, identifying 'cross-cutting' implementation strategies could be an important first step. One possible cross-cutting implementation strategy could be the development, pilot testing and iterative re-development of a package of communication materials that highlight the ways in which chronic pain affects

people's lives, the costs associated with the status quo, and success stories (and how their cost-effectiveness compares to the status quo). Ideally the development of these materials would be overseen by a group of champions for implementation (clinicians, leaders in teaching institutions, and patients), who would then also be well placed to ensure that the materials are used in persuasive ways regardless of the options or option elements that are chosen.

REFERENCES

- (1) Choiniere M, Dion D, Peng P, Banner R, Barton PM, Boulanger A et al. The Canadian STOP-PAIN project - Part 1: Who are the patients on the waitlists of multidisciplinary pain treatment facilities? *Canadian Journal of Anaesthesia* 2010;57(6):539-48.
- (2) Guerriere DN, Choiniere M, Dion D, Peng P, Stafford-Coyte E, Zagorski B et al. The Canadian STOP-PAIN project - Part 2: What is the cost of pain for patients on waitlists of multidisciplinary pain treatment facilities? *Canadian Journal of Anaesthesia* 2010;57(6):549-58.
- (3) Moulin DE, Clark AJ, Speechley M, Morley-Forster PK. Chronic pain in Canada: Prevalence, treatment, impact and the role of opioid analgesia. *Pain Research and Management* 2009;7(4):179-84.
- (4) Dobkin, P. L. and Boothroyd, L. J. *Management of Chronic (Non-Cancer) Pain* Organization of Health Services. Montreal, QC: Agence d'Evaluation des Technologies et des Modes d'Intervention en Sante (AETMIS); 2006.
- (5) Lynch ME, O'Sullivan R. How to improve access to services using a collaborative model in the development of Nova Scotia Pain Services. *Pain Research and Management* 2009;14:133.
- (6) Alberta Heritage Foundation for Medical Research. AHFMR Research News - The Heart of the Matter. 18-19. 2002.
- (7) IASP Task Force on Taxonomy. Pain Terms, A Current List with Definitions and Notes on Usage. In: Merskey H, Bogduk N, editors. *Classification of Chronic Pain*. 1994. p. 209-14.
- (8) Canadian Pain Society. Canadian Pain Society. www.canadianpainsociety.ca/en/index.html 2011 February 16;
- (9) Lavis JN, Boyko J. *Supporting chronic pain management in provincial and territorial health systems in Canada*. Hamilton, Canada: McMaster Health Forum; 2009.
- (10) Lavis JN. *Political Elites and their Influence on Health-Care Reform in Canada*. Discussion Paper No. 26 ed. Saskatchewan: Commission on the Future of Health Care in Canada; 2002.
- (11) Lavis JN. *Dialogue Summary: Supporting Chronic Pain Management Across Provincial and Territorial Health Systems in Canada*. Hamilton, Canada: McMaster Health Forum; 2009.
- (12) Van Den Kerkhof EG, Hopman WM, Towheed TE, Anastassiades TP, Goldstein DH, Canadian Multicentre Osteoporosis Study Research Group. The impact of sampling and measurement on the prevalence of self-reported pain in Canada. *Pain Research & Management* 2003;8(3):157-63.
- (13) Taenzer P. *Chronic Non-Cancer Pain in Canada: A Public Health Perspective*. 2008.
- (14) Statistics Canada. CANSIM Table 105-0501: Health indicator profile, annual estimates, by age group and sex, Canada, provinces, territories, health regions (2007 boundaries) and peer groups, occasional. *Canadian Community Health Survey* 2009;
- (15) Watt-Watson J, McGillion M, Hunter J, Choiniere M, Clark AJ, Dewar A et al. A survey of prelicensure pain curricula in health science faculties in Canadian universities. *Pain Research & Management* 2009;14(6):439-44.

- (16) Boulanger A, Clark AJ, Squire P, Cui E, Horbay GLA. **Chronic pain in Canada: Have we improved our management of chronic noncancer pain?** Pain Research & Management 2009;12(1):39-47.
- (17) Slade SC, Molloy E, Keating JL. Stigma experienced by people with nonspecific chronic low back pain: a qualitative study. Pain Medicine 2009;10(1):143-54.
- (18) Holloway I, Sofaer-Bennett B, Walker J. The stigmatisation of people with chronic back pain. Disability and Rehabilitation 2007;29(18):1456-64.
- (19) Health Council of Canada. Fixing the Foundation: An Update on Primary Health Care and Home Care Renewal in Canada. Toronto, Canada: Health Council of Canada; 2008.
- (20) Peng P, Choiniere M, Dominique D, Intrater H, leFort S, Lynch M et al. **Challenges in accessing multidisciplinary pain treatment facilities in Canada.** Canadian Journal of Anaesthesia 2007;54(12):977-84.
- (21) Singh D. How can chronic disease management programmes operate across care settings and providers? World Health Organization; 2008.
- (22) The Robert Wood Johnson Foundation. The Chronic Care Model. Princeton, USA: Improving Chronic Illness Care; 2009.
- (23) Wagner EH, Austin BT, Von Korff M. Organizing care for patients with chronic illness. The Milbank Quarterly 1996;74(4):511-44.
- (24) ACTION Ontario. Rallying together to ease the pain: ACTION Ontario brings together patients and experts to discuss the needs of Ontarians with chronic pain. CNW Group 2010 November 9; Available from: URL: <http://www.newswire.ca/en/releases/archive/November2010/09/c2419.html>
- (25) Canadian Pain Coalition. The Status of Pain in Canada - Moving toward a Canadian Pain Strategy: Brief for the Parliamentary Committee on Palliative and Compassionate Care. 19-10-2010.
- (26) Alberta Health Services: Calgary and Area. Primary Care Networks. Alberta Health Services 2011 March 6; Available from: URL: http://www.calgaryhealthregion.ca/pcp/100_primarycarenetworks.htm
- (27) Bayers C. Funding boost for Nova Scotia Chronic Pain Collaborative Care Network. Dalhousie University 2011 February 23; Available from: URL: <http://news.medicine.dal.ca/chronicpainnetwork.htm>
- (28) Grilli R, Ramsay C, Minozzi S. Mass media interventions: Effects on health service utilisation. Cochrane Database Syst Rev 2002;(1):Art. No.: CD000389. DOI: 10.1002/14651858.CD000389.
- (29) Vidanapathirana J, Abramson MJ, Forbes A, Fairley C. Mass media interventions for promoting HIV testing. Cochrane Database Syst Rev 2003;(3):Art. No.: CD004775. DOI: 10.1002/14651858.CD004775.pub2.
- (30) Lavis JN, McCutchen B, Bopardikar A. Engaging civil society in supporting research use in health systems. Hamilton, Canada: McMaster Health Forum; 2009.
- (31) Ramey C. Mobile Phones in Mass Organizing: A Mobile Activity White Paper. Verclas K, editor. 2009. 11-11-2009.

- (32) CTV.ca News Staff. Calgary's mayor-elect basks in surprise win. CTV News 2010 October 19; Available from: URL: <http://www.ctv.ca/CTVNews/Politics/20101019/new-calgary-mayor-101019/>
- (33) Canadian Strategy for Cancer Control Governing Council. **The Canadian Strategy for Cancer Control: A cancer plan for Canada**. Ottawa, Canada: Canadian Strategy for Cancer Control; 2006.
- (34) Smith KE, Bamba C, Joyce KE, Perkins N, Hunter DJ, Blenkinsopp EA. Partners in health? A systematic review of the impact of organizational partnerships on public health outcomes in England between 1997 and 2008. *Journal of Public Health* 2009;31(2):210-21.
- (35) Doumit G, Gattelari M, Grimshaw J, O'Brien MA. Local opinion leaders: Effects on professional practice and health care outcomes. *Cochrane Database Syst Rev* 2007;(1):Art. No.: CD000125. DOI: 10.1002/14651858.CD000125.pub3.
- (36) van der Wees PJ, Jamtvedt G, Rebbek T, de Bie RA, Dekker J, Hendriks EJ. Multifaceted strategies may increase implementation of physiotherapy clinical guidelines: A systematic review. *Australian Journal of Physiotherapy* 2008;54(4):233-41.
- (37) Thomas LH, Cullum N, McColl E, Rousseau N, Soutter J, Steen N. Guidelines in professions allied to medicine. *Cochrane Database Syst Rev* 2000;(2):Art. No.: CD000349. DOI: 10.1002/14651858.CD000349.
- (38) Chaillet N, Dubé E, Dugas M, Audibert F, Tourigny C, Fraser WD et al. Evidence-based strategies for implementing guidelines in obstetrics: a systematic review. *Obstetrics and Gynecology* 2006;108(5):1234-45.
- (39) Stoddart GL, Chaulk P, Eyles J, Gallant D, Lomas J, MacDonald J et al. PEI System Evaluation Project: Decision Support Tool 1. A Conceptual Framework for Cross-sectoral Reallocation of Resources for Health. Charlottetown (PEI): PEI Department of Health and Social Services; 1998.
- (40) Eyles J, Chaulk P, Gallant D, Lomas J, MacDonald J, Moase O et al. PEI System Evaluation Project: Decision Support Tool 2. Scan and Plan: Meeting and Managing Potential Challenges to Cross-sectoral Reallocation. Charlottetown (PEI): PEI Department of Health and Social Services; 1998.
- (41) Pranger T, MacDonald J, Chaulk P, Eyles J, Gallant D, Lomas J et al. PEI System Evaluation Project: Decision Support Tool 3. Facilitating Staff Involvement in the Shift to Cross-sectoral Reallocation. Charlottetown (PEI): PEI Department of Health and Social Services; 1998.
- (42) Rachlis MM, Chaulk P, Eyles J, Gallant D, Lomas J, MacDonald J et al. PEI System Evaluation Project: Decision Support Tool 4. Preparing for Media Communications about Cross-sectoral Reallocation. Charlottetown (PEI): PEI Department of Health and Social Services; 1998.
- (43) Stoddart GL, Chaulk P, Eyles J, Gallant D, Lomas J, MacDonald J et al. PEI System Evaluation Project: Decision Support Tools for Cross-sectoral Investments in Population Health in the Context of Health System Change. Charlottetown (PEI): PEI Department of Health and Social Services; 1998.
- (44) Eyles J, Stoddart GL, Lavis JN, Pranger T, Molyneaux-Smith L, McMullan C. Making Resource Shifts Supportive of the Broad Determinants of Health: The PEI Experience. Ottawa, Canada: Canadian Health Services Research Foundation; 2001.

APPENDICES

The following tables provide detailed information about the systematic reviews identified for each option. Each row in a table corresponds to a particular systematic review and the reviews are organized by option element (first column). The focus of the review is described in the second column. Key findings from the review that relate to the option are listed in the third column, while the fourth column records the last year the literature was searched as part of the review.

The fifth column presents a rating of the overall quality of the review. The quality of each review has been assessed using AMSTAR (A Measurement Tool to Assess Reviews), which rates overall quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to delivery, financial or governance arrangements within healthcare systems. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, a review that scores 8/8 is generally of comparable quality to a review scoring 11/11; both ratings are considered “high scores.” A high score signals that readers of the review can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the review should be discarded, merely that less confidence can be placed in its findings and that the review needs to be examined closely to identify its limitations. (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1):S8.

The last three columns convey information about the utility of the review in terms of local applicability, applicability concerning prioritized groups, and issue applicability. The third-from-last column notes the proportion of studies that were conducted in Canada, while the second-from-last column comments on the proportion of studies included in the review that deal explicitly with the prioritized groups. The last column indicates the review’s issue applicability in terms of the proportion of studies focused on chronic pain.

All of the information provided in the appendix tables was taken into account by the issue brief’s authors in compiling Tables 1-3 in the main text of the brief.

Appendix 1: Systematic reviews relevant to Option 1 – Launch an advocacy campaign

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with the prioritized group	Proportion of studies that focused on chronic pain
Traditional media campaign	Effects of mass media on the utilization of health services(28)	<ul style="list-style-type: none"> All of the studies (which were of variable quality) apart from one concluded that planned mass media campaigns and unplanned mass media coverage can have a positive influence on the utilization of health services. 	1999	8/11 (AMSTAR rating from www.rxforchange.ca)	0/20	0/20	0/20
	Effect of mass media interventions and the most effective form of mass media intervention at a general population level or in specific target populations, in relation to changes in HIV testing (29)	<ul style="list-style-type: none"> Mass media campaigns designed to raise awareness of HIV/AIDS have shown immediate and significant effects in the promotion of voluntary counselling and testing for HIV. No long-term effects were seen on mass media interventions for promotion of HIV testing. There was no significant impact of detecting seropositive status after mass media intervention for promoting HIV testing. These results were mainly based on multiple media interventions for the general public. Only one study was based on televised interventions and one study targeted blood transfusion recipients. The review was unable to compare the type of mass media interventions, characteristics of messages, or to assess cost effectiveness due to a lack of relevant studies. 	2004	11/11 (AMSTAR rating from the Ontario HIV Treatment Network)	1/35	0/35	0/35

Appendix 2: Systematic reviews relevant to Option 2 – Create a multi-stakeholder provincial or national working group

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with the prioritized group	Proportion of studies that focused on chronic pain
Multi-stakeholder network	Impact of organizational partnerships on public health outcomes (health improvement and/or a reduction in health inequalities) in England between 1997 and 2008 (34)	<ul style="list-style-type: none"> Findings suggest that there is not yet any clear evidence of the effects of public health partnerships on health outcomes. However, qualitative studies suggested that some partnerships increased the profile of health inequalities on local policy agendas. Both the design of partnership interventions and of the studies evaluating them meant it was difficult to assess the extent to which identifiable successes and failures were attributable to partnership working. 	2008	7/10 (AMSTAR rating from the McMaster Health Forum)	0/15	0/15	0/15
Local opinion leader	Effectiveness of the use of local opinion leaders in improving professional practice and patient outcomes (35)	<ul style="list-style-type: none"> Relatively few studies have assessed the effects of opinion leaders on professional behaviour and patient outcomes. Opinion leaders with or without another intervention were generally effective for improving appropriate care with medium effect sizes. 	2005	7/11 (AMSTAR rating from www.rxforschange.ca)	2/12	0/12	0/12 (although one was focused on cancer pain)
	Effectiveness of strategies to increase the implementation of physiotherapy clinical guidelines (36)	<ul style="list-style-type: none"> There was insufficient evidence to determine the effectiveness of multifaceted interventions, educational meetings, or use of local opinion leaders, on appropriate care outcomes. 	2007	7/11 (AMSTAR rating from www.rxforschange.ca)	0/3	0/3	0/3 (although three were focused on low-back pain)
	Effective strategies for implementing clinical practice guidelines in obstetric care and specific barriers to behaviour change and facilitators in obstetrics (38)	<ul style="list-style-type: none"> Audit and feedback and multifaceted interventions were generally effective for improving appropriate care, as compared with no intervention. Educational meetings (n=2) yielded generally ineffective results for appropriate care. There was insufficient evidence to determine results of reminders (n=1), local 	2005	4/11 (AMSTAR rating from www.rxforschange.ca)	Not reported	0/33	0/33

Engaging Health System Decision-makers in Supporting Chronic Pain Management

Option element	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with the prioritized group	Proportion of studies that focused on chronic pain
	<p>opinion leaders (n=1), and educational outreach visits (n=1) on appropriate care.</p> <p>Effects of studies of the introduction of clinical practice guidelines in nursing (including health visiting), midwifery and other professions allied to medicine (37)</p>	<p>opinion leaders (n=1), and educational outreach visits (n=1) on appropriate care.</p> <ul style="list-style-type: none"> • There are different methods of guideline dissemination, and the included studies were analyzed depending on the method of implementation. Mixed effects were observed for educational meetings (n=6) for appropriate care. There was insufficient evidence for multifaceted interventions alone or in combination with other interventions compared to another intervention. Insufficient evidence exists for local opinion leaders compared to educational meetings for appropriate care. Insufficient evidence exists for educational outreach visits, distribution of educational materials, patient-mediated interventions and reminders for appropriate care. 	1996	8/11 (AMSTAR rating from www.rxfchange.ca)	1/18	0/18	0/18