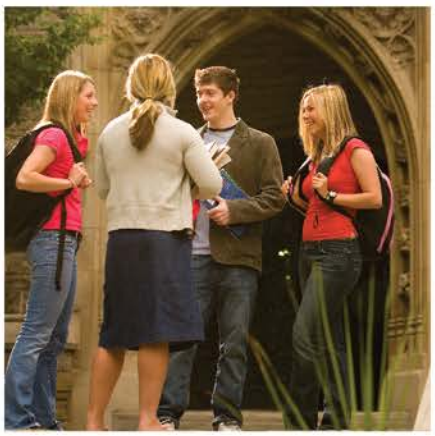
McMaster University

McMaster HEALTH FORUM

ISSUE BRIEF

FOSTERING LEADERSHIP FOR HEALTH-SYSTEM REDESIGN IN CANADA



4 MARCH 2014

EVIDENCE >> INSIGHT >> ACTION

Issue Brief:
Fostering Leadership for Health-System Redesign in Canada

4 March 2014

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.

Authors

John N. Lavis, MD PhD, Director, McMaster Health Forum, and Professor, McMaster University

Kaelan A. Moat, PhD, Lead, Health Systems Evidence and Learning, McMaster Health Forum

Zain Rizvi, Fellow, McMaster Health Forum, and Final-Year B.H.Sc. Student, McMaster University

Funding

The issue brief, and the stakeholder dialogue it was prepared to inform, were both funded by the Canadian Institutes for Health Research and the Michael Smith Foundation for Health Research through a Partnerships for Health System Improvement (PHSI) award entitled "Leadership and Health-System Redesign." The McMaster Health Forum receives both financial and in-kind support from McMaster University. The views expressed in the issue brief are the views of the authors and should not be taken to represent the views of the funders.

Conflict of interest

The authors declare that they have no professional or commercial interests relevant to the issue brief. The funders played no role in the identification, selection, assessment, synthesis, or presentation of the research evidence profiled in the issue brief.

Merit review

The issue brief was reviewed by a small number of policymakers, stakeholders and researchers in order to ensure its system relevance and scientific rigour.

Acknowledgements

The authors wish to thank Amanda Chen, Aunima Bhuiya, Julian Daza Vargas, Peter DeMaio and Camilla Tapp for their assistance in preparing the issue brief. We are grateful to Steering Committee members and merit reviewers for providing feedback on previous drafts of the brief. We are especially grateful to Graham Dickson, Bill Tholl, Ron Lindstrom and Don Philippon from the PHSI project leadership team for their many contributions to the issue brief, and to Jean-Louis Denis and Maura Davies for their feedback and suggestions. The views expressed in the issue brief should not be taken to represent the views of these individuals.

Citation

Lavis JN, Moat KA, Rizvi Z. Issue Brief: Fostering Leadership for Health-System Redesign in Canada. Hamilton, Canada: McMaster Health Forum, 4 March 2014.

Product registration numbers

ISSN 1925-2269 (print)
ISSN 1925-2277 (online)

Table of Contents

KEY MESSAGES

What's the problem?

- Redesigning health systems has been a significant focus for some time.
- Many factors can affect whether and with what success health-system redesign is undertaken, but leadership has garnered increasing attention in recent years as one potentially critical factor.
- A cross-national study has identified that leadership capacity in Canada is insufficient to support large-scale health-system redesign, which is a problem that can be understood in relation to four contributors to the problem:
  - links between leadership, its antecedents (i.e., the factors associated with successful leadership) and its consequences (i.e., the impact of leadership on achieving aims and objectives) have not been well established;
  - leadership programs and initiatives aren't getting us where we need to be;
  - existing health system arrangements complicate the situation significantly; and
  - progress is being made, but slowly.

What do we know (from systematic reviews) about three elements of a potential approach to address the problem?

- None of the elements has been the principal focus of a systematic review of the research literature, and those systematic reviews that relate in some way to each element are often of indirect interest and of low or medium quality. That said, decisions can and often need to be made without supportive research evidence, and in this case these decisions can be informed by the tacit knowledge, views and experiences of dialogue participants.
- Element 1 – Create and implement a pan-Canadian initiative that will support a dramatic enrichment of leadership capacity
  - One medium-quality systematic review was identified on the topic of undertaking a consultative process, and it identified some potential benefits as well as the factors that need to be considered to build successful collaboration (however, this review was not focused specifically on leadership). One low-quality review identified a number of important components of succession planning, which is one potential focus for a national dialogue. No systematic reviews were identified about other potential areas of focus for a national dialogue to inform a leadership initiative.
- Element 2 – Create and implement a pan-Canadian succession-planning project
  - Systematic reviews were identified for four of these sub-elements, however, the links to leadership were often tenuous and seven of eight were of low or medium quality.
- Element 3 – Coordinate research and knowledge-mobilization efforts about health leadership in Canada
  - Three medium-quality reviews and one low-quality review addressed the critical success factors for clinical leadership that could be incorporated into any guidance that is produced about such factors. No systematic reviews were identified about other potential components of a coordinated effort.

What implementation considerations need to be kept in mind?

- While potential barriers exist at the levels of providers, organizations and systems (if not patients/ citizens, who are unlikely to be aware of or particularly interested in these approach elements), perhaps the biggest barrier lies in making the case for a 'burning platform,' given how challenging it is to confirm (or refute) the assertion that investing in leadership will support health-system redesign and ultimately have an impact on the 'Triple Aim' dimensions.
- Potential windows of opportunity include forums where next steps have been or can be advocated for, and other windows that can be created through the momentum already established by the Canadian Health Leadership Network, the Partnerships for Health System Improvement project of which this evidence brief is an output, and related initiatives.

REPORT

Redesigning health systems has been a significant focus for those working in the health field for some time.(1) What health-system redesign means can vary dramatically by an individual's or group's interest or context. At one end of a spectrum, we can consider health-system redesign to be the implementation of innovations or evidence-based approaches within an otherwise largely stable organization or system. At the other end of the spectrum, we can consider redesign to include more fundamental reform or transformation of organizations and systems. Perhaps somewhere in between we encounter the language of management (of quality and safety or of change more generally) and improvement (again, of quality and safety or of performance more generally), both of which suggest some shift in an organization or system, but perhaps not as significant as the words redesign and transformation suggest.

Many factors can affect whether and with what success health-system redesign is undertaken, but leadership has garnered increasing attention in recent years as one potentially critical factor.(1;2) Leadership can come from many types of individuals in the system: the front-line nurse manager and the patient advocate working with staff and peers from other parts of the hospital and in the community to improve the patient experience for individuals who are heavy users of the health system, the executive building consensus among clinical leaders and the senior management team about how to keep per capita costs manageable in his region, and the senior civil servant driving an effort to institutionalize reforms that have the long-run potential to improve the health of her province's population. As well, and as these examples suggest, leadership can express itself at the organizational, regional and provincial levels (as well as at the national level) and at the interface between these levels.

In 2010 a team of Canadian researchers and decision-makers was awarded a Partnerships for Health System Improvement (PHSI) grant by the Canadian Institutes of Health Research and the Michael Smith Foundation for Health Research to undertake a cross-national study of the role of leadership in health-system redesign. The team's goal was to identify ways to foster leadership for health-system redesign in Canada and, using a participatory-action research approach, to explore the dynamics of leadership in the particular health-system redesign effort each sub-team was studying. This issue brief draws on the outputs

Box 1: Background to the issue brief

This issue brief mobilizes both global and local research evidence about a problem, three elements of a potential approach to address 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, which would have required the authors of the brief to make judgments based on their personal values and preferences, and which could pre-empt important deliberations about whose values and preferences matter in making such judgments.

The preparation of the issue brief involved five steps:

1) convening a Steering Committee comprised of representatives from the partner organization 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 elements of an approach to address 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, elements of an approach to address the problem, 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 approach elements could be pursued singly, simultaneously with equal or different emphasis, or in a sequenced way.

Unlike a Forum evidence brief, a Forum issue brief does not involve as comprehensive an evidence review by Forum staff.

The issue brief was prepared to inform a stakeholder dialogue for 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.

of the first three phases of this study while also constituting (along with the stakeholder dialogue that it was prepared to inform) the fourth and final phase of the study.

The team used a definition of leadership that had first been employed in the original application for a PHSI grant,(3) and over the life of the cross-national study it identified particular conceptualizations of leadership that arise when considering the role of leadership in health-system redesign (Table 1). We employ the same definitions in this issue brief.

Table 1: Key conceptualizations of leadership used in the cross-national study

Term	Definition
Leadership	"Capacity for self and others to work together to achieve a constructive purpose."(3)
Authentic leadership	"Process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviours on the part of leaders and associates, fostering positive self-development."(4)
Adaptive leadership	"The practice of mobilizing people to tackle tough challenges and thrive."(5)
Complexity leadership	"Sees the environment or context for action as a complex, turbulent entity that is very unpredictable, self-organizing in many instances, and rife with unanticipated consequences of action"(6), citing the following: (7;8)
Contingency leadership	"Postulates an interaction between the leader's style of leadership (task-oriented versus relationship-oriented) and the favourableness of the situation for the leader (relations between leader and members, amount of power in the leader's role, and amount of task structure)."(9)
Distributed leadership (in contrast to designated leadership)	"Attends to change visioning and implementation as a collective enterprise, involving a variety of actors (individuals and/or groups) sharing in change agency roles."(10)
Servant leadership	Servant leaders are "people whose role and responsibility is to represent the needs of others and act on their behalf... [they] make a commitment to sacrifice for the common good as the essence of leadership."(6) citing the following: (11)
Situational leadership	Posits that there is "no one best way to influence people". Situational leadership "is based on the amount of direction (task behavior) and the amount of socioemotional support (relationship behavior) a leader must provide given the situation and the level of "readiness" of the follower or group."(12)
Substitutes for leadership	Highlights "…a variety of situational variables that can substitute for, neutralize, or enhance the effects of a leader's behaviour."(6) citing the following: (13)

The cross-national study involved six cases of attempted health system redesign, many of which were at the 'transformation' end of the previously described spectrum. Two examples are consolidating supply management and business functions through a central provincial office in Saskatchewan, and introducing a new model of primary care in each of Ontario and Quebec (Table 2). The data-collection approaches always included interviews and sometimes included focus groups, a survey, documentary analysis and/or observations of meetings as well. The primary outputs relied on in this issue brief include the final report from each of the six sub-teams (one for each of five regions in Canada and another for the national level) and a cross-case analysis prepared by the team leaders.

Table 2: Focus, data-collection methods and investigators of the cross-national study

Node	Focus	Data-collection methods	Investigators
National	Redesign of the health system in Canada to achieve access, quality and appropriateness(14)	Interviews or focus groups with (when possible) the same 12 individuals over three cycles at 6-8 month intervals	Graham Dickson Bill Tholl Maura MacPhee
British Columbia (B.C.)	Implementation of the integrated primary and community care initiative in the Chilliwack area of B.C.(15)	Interviews with 16 unique individuals (seven once, five twice and four three times for a total of 29 interviews), one focus group, and observation of 19 meetings over three cycles	Charlotte Gorley Ron Lindstrom Charlyn Black et al.
Prairie	Implementation of shared services in Saskatchewan by consolidating supply management and business functions through a central office(16)	Interviews with 39 individuals and a Delphi survey of 32 of these individuals (cycle 1), interviews with 16 individuals (of whom three were new to this cycle) and two focus groups (cycle 2), and interviews with seven individuals and one focus group (cycle 3)	Greg Marchildon Donald Philippon Amber Fletcher
Ontario	Development and implementation of Family Health Teams and Nurse Practitioner-Led Clinics in Ontario(17)	Interviews with 16 individuals involved in creating the policy and influencing the environment where the organizations emerged (cycle 1), interviews with 44 individuals in four high-performing organizations (cycle 1), and interviews with eight individuals – the administrative and clinical leaders in each of the four organizations – of the original 44 (cycle 2)	G. Ross Baker Monica Aggarwal Jan Barnsley
Quebec	Development and implementation of Family Medicine Groups in Quebec(18)	Interviews with 13 individuals from three high-performing organizations (cycle 1), interviews with six individuals from the same three organizations (cycle 2), and a focus group with three individuals from two of the three organizations (cycle 3)	Régis Blais Jean-Louis Denis Nathalie Clavel Julie Lajeunesse Françoise Chagnon
Atlantic Canada	Implementation of a leadership framework in Eastern Health (Newfoundland) with a particular focus on management and employee engagement(19)	Interviews with three individuals and one focus group with five individuals (cycle 1) and four focus groups with 38 individuals (cycle 2)	Shirley Solberg
	Engaging physicians in Capital Health and the IWK Health Centre (Nova Scotia) in health-system redesign(20)	Interviews with nine individuals (cycle 1), interviews with eight individuals (cycle 2), and a focus group with six individuals (cycle 3), all of whom had participated in one or both interviews	Kate Calnan Stephanie Gilbert Diane LeBlanc David Persaud

The key conclusions from the study can be described in relation to its three study questions (Table 3). In general terms, the messages were that: 1) leadership capacity in Canada is insufficient; 2) the 'LEADS in a Caring Environment Capabilities Framework' (which is described in Table 4, later in this issue brief) is generally well accepted as a guide to understanding and defining health leadership, but certain capabilities (e.g., 'Lead self,' 'Develop coalitions,' and 'System transformation') are underdeveloped in Canada; and 3) leadership for health-system redesign can be fostered through a common approach across Canada (including a common language about leadership and a broad-based effort to engage clinical, managerial and policy leaders), greater attention to succession planning, and more focused efforts to learn across provinces and from other countries (such as Australia and the United Kingdom). For the most part, the conclusions from the cross-case analysis reflected the conclusions from the specific cases, however, there were instances where there appeared to be context- and/or issue-specific findings (e.g., in the use of distributed leadership in Quebec and in the expression of certain leadership capabilities in B.C., Ontario and Quebec).

Table 3: Key conclusions from the cross-national study, by study question

#	Detailed question	Findings from the cross-case analysis(6)	Divergent findings from specific cases*
1	What is the current state of health leadership capacity in Canada?	• ". . .Canada does not have the leadership capacity required to lead significant health reform." • "There was also a growing awareness of the need to address the 'convener role' issues as they look for ways to work in concert. Yet there was little clarity on who might convene such an initiative."	• "There were some interviewees who flagged the need to work at the regional level to initiate change (e.g. western leadership conference) because of the onerous nature of working nationally." [National](14) • "No one talked about national involvement…." [Nova Scotia] (20)
	What is working, or not working, in terms of stimulating and supporting health system transformation?	• "Canada lacks a long term and shared vision around health [reform and] leadership." • ". . . Canada is not realizing its potential because we have not embraced distributed or shared leadership models." • "Change fatigue is growing among senior leaders." • ". . . ambiguity [exists] around the alignment of authorities and accountabilities in the system, with ministerial accountability and responsibility waxing and waning depending on the political environment." • ". . . vision and engagement does not always permeate to leaders at the front line . . ." • "Canada needs to invest in a national strategy for leadership development, mentorship and succession planning, and physician/cross discipline leadership."	• "We observe a more distributed leadership (across all members of Family Medicine Groups [FMGs]) during the development of FMGs, although physician leaders remain the main coordinators of FMG development by supervising the overall management of their FMG." [Quebec](18)
	What contextual factors influence effective leadership action?	• "…Canada is not realizing potential due to the many contravening structural, cultural and political factors at play." • ". . . there is a rising concern about the sustainability of even current leadership capacity due to increased churn at the senior policy level and its subservience to politicization forces." • "A rebalancing of efforts between our collective ability to work together and the	• When there's an alignment of policy, vision, resource allocation, and local initiatives exists – from public service to front-line – effective change can happen. [Ontario] (17)

		forces of fragmentation is desired. Currently the "tug" forces outweigh the "hug" ones. The importance of policy context is significant to better understanding the forces of fragmentation." • "Some informants believe there that there is individual capacity inherent in the system, but that it is sprinkled sparsely throughout, and held back from realizing its promise because of many intervening structural, cultural, and political factors that delimit the ability of leaders to be effective."	
2	Where are the gaps between current practices, the evidential base in the literature, and the expectations for leadership outlined in the emerging health leadership capability/competency frameworks (e.g., LEADS capabilities framework)?	• "The LEADS in a Caring Environment leadership capabilities framework is being seen as a unifying force…. Four out of the six case studies (with the exception of Quebec and B.C.) showed LEADS being increasingly accepted as the leadership framework." • "Some leadership capabilities were found to be less strong across the nodes, especially 'Systems transformation'." • "The capabilities of 'Lead self' and 'Develop coalitions' seem to be underweighted . . .."	• " . . . 'Systems transformation' was evident in the ability of study participants to practice systems and critical thinking, encourage innovation, orient themselves to the future, and champion change." [B.C.](15) • ". . . local leaders focused on system transformations … developed coalitions and le[a]d self." [Ontario](21) • "Many practices of leadership observed … are consistent with the LEADS framework, especially around the components 'Engage others', 'Achieve results,' 'Develop coalitions' and 'Systems transformation'." [Quebec](18)
	How might a set of national standards for leadership be structured?	• "Some consensus around common leadership capabilities needed for reform [was] identified," including: o emotional intelligence; o enlightened self-interest; o commitment; o character; o vision; o resilience; o champion for change; o complexity theory and systems thinking; o role model and mentor; o team-building/teamwork; and o effective two-way communication. • LEADS is "generally supported", "four out of the six case studies … showed LEADS being increasingly accepted as the leadership framework," and "there is also optimism about prospects for a more distributive approach to leadership and growing adoption of a common [vision] for health, by health leadership platform across the country (i.e. LEADS)."	Not applicable
3	How can knowledge of effective leadership be translated and mobilized by the	• Canada should learn from system-wide efforts to improve leadership in Australia and the United Kingdom. • Adopting a national set of standards – as done by Australia and the United Kingdom –	• "Over the duration of the study there was also a growing awareness of the need to address the "convener role" issues as they look for ways to work in concert. Yet there was little clarity on

	network into approaches, programs, tools and techniques to develop a culture of effective leadership in Canada, and enhance the development of quality health leaders?	would provide a common language, facilitating leadership practice and development. • "It is hard to envisage a true distributed leadership system without a common language around leadership." • "Canada should be more strategic at a systems level especially at the interprovincial level with leadership development linked to tackling current problems." • "A renewed focus on clinical leadership and to redouble mentoring/coaching efforts in support of the next generation of health leaders is required . . .." • "There should be focus on succession planning and leadership development."	who might convene such an initiative." [National] (14)

*Note that the Ontario and Quebec cases were focused on the retrospective analysis of 'successful' health-system redesign, and hence were better able to identify the positive correlates of such redesign (and not gaps, etc.)

As a complement to the key conclusions from the study, preliminary results from a nation-wide health leadership benchmarking study include:

- a response rate of 58% (65/113) across the two sample frames (members of the Association of Canadian Academic Healthcare Organizations and members of the Canadian Health Leadership Network/Health Action Lobby);
- only one-third (32%) of respondents indicated that their organization has the leadership capacity to respond to future challenges and reforms;
- just over half (54%) rated the leadership gap to be small-to-medium in size and see it more as a skills gap than a supply/demand gap;
- almost two-thirds (65%) rated the skills gap as important or very important;
- about two-fifths (38%) indicated that they protect time for leadership development;
- less than one-third (29%) rated their satisfaction with their organization's leadership development programs as satisfied or very satisfied;
- the same fraction (30%) rated their satisfaction with their organization's leadership-development budgets as satisfied or very satisfied;
- just less than half (47%) reported having adopted LEADS or another leadership-development framework;
- about two-fifths (39%) reported having a formal approach to succession planning; and
- about two-fifths (38%) reported having a formal process to identify emerging leaders. (22)

The final results of the benchmarking study will be available from the Canadian Health Leadership Network shortly after the stakeholder dialogue.

Additional conclusions from the study pertain to sub-capabilities in the 'LEADS in a Caring Environment Capabilities Framework' (Table 4), which were generally confirmed (or unaddressed) by the study.

Table 4: Aspects of the 'LEADS in a Caring Environment Capabilities Framework'* that were confirmed, unaddressed or refuted by the cross-national study

Capability	Sub-capability	Detail about sub-capability	Confirmed, unaddressed or refuted by the cross-case analysis	Confirmed, unaddressed or refuted by the specific cases
Lead self	Self-motivated leaders			
	• Are self aware	They are aware of their own assumptions, values, principles, strengths and limitations	Confirmed	Confirmed (B.C., Ontario, Atlantic)
	• Manage themselves	They take responsibility for their own performance and health	Unaddressed	Confirmed (B.C., Prairie, Atlantic)
	• Develop themselves	They actively seek opportunities and challenges for personal learning, character building and growth	Unaddressed	Confirmed (B.C., Atlantic)
	• Demonstrate character	They model qualities such as honesty, integrity, resilience and confidence	Confirmed	Confirmed (National, B.C., Prairie, Ontario, Atlantic)
Engage others	Engaging leaders			
	• Foster development of others	They support and challenge others to achieve professional and personal goals	Confirmed	Confirmed (Ontario, Quebec, Atlantic)
	• Contribute to the creation of healthy organizations	They create engaging environments where others have meaningful opportunities to contribute and ensure that resources are available to fulfil their expected responsibilities	Unaddressed	Confirmed (National, Ontario, Quebec, Atlantic)
	• Communicate effectively	They listen well and encourage open exchange of information and ideas using appropriate communication media	Confirmed	Confirmed (National, B.C., Quebec, Atlantic)
	• Build teams	They facilitate environments of collaboration and cooperation to achieve results	Confirmed	Confirmed (National, Prairie, Ontario, Quebec, Atlantic)
Achieve results	Goal-oriented leaders			
	• Set direction	They inspire vision by identifying, establishing and communicating clear and meaningful expectations and outcomes	Confirmed	Confirmed (B.C., Ontario, Quebec, Atlantic)
	• Strategically align decisions with vision values and evidence	They integrate organizational missions and values with reliable, valid evidence to make decisions	Unaddressed	Confirmed (B.C., Prairie, Atlantic)
	• Take action to implement decisions	They act in a manner consistent with the organizational values to yield effective, efficient public-centred service	Confirmed	Confirmed (National, Prairies, Quebec, Atlantic)

	• Assess and evaluate	They measure and evaluate outcomes, compare the results against established benchmarks, and correct the course as appropriate	Unaddressed	Confirmed (National)
Develop coalitions	Collaborative leaders			
	• Purposefully build partnerships and networks to create results	They create connections, trust and shared meaning with individuals and groups	Unaddressed	Confirmed (National, B.C., Prairie, Quebec, Atlantic)
	• Demonstrate a commitment to customers and service	They facilitate collaboration, cooperation and coalitions among diverse groups and perspectives aimed at learning to improve service	Confirmed	Confirmed (National, B.C., , Prairie, Ontario, Quebec,
	• Mobilize knowledge	They employ methods to gather intelligence, encourage open exchange of information, and use quality evidence to influence action across the system	Unaddressed	Confirmed (National)
	• Navigate socio-political environments	They are politically astute, and can negotiate through conflict and mobilize support	Unaddressed	Confirmed (Prairie, Ontario, Quebec, Atlantic)
Systems transform-ation	Successful leaders			
	• Demonstrate systems/critical thinking	They think analytically and conceptually, questioning and challenging the status quo, to identify issues, solve problems and design and implement effective processes across systems and stakeholders	Confirmed	Confirmed (National, B.C., Prairie, Atlantic)
	• Encourage and support innovation	They create a climate of continuous improvement and creativity aimed at systemic change	Unaddressed	Confirmed (National, B.C., Prairie, Atlantic)
	• Orient themselves strategically to the future	They scan the environment for ideas, best practices and emerging trends that will shape the system	Unaddressed	Confirmed (B.C., Prairie, Atlantic)
	• Champion and orchestrate change	They actively contribute to change processes that improve health service delivery	Confirmed	Confirmed (National, B.C., Prairie, Ontario, Atlantic)

*Columns 1-3 were reproduced (with only minor edits) with permission from representatives of two of LEADS' three co-developers (Bill Tholl from the Canadian Health Leadership Network and Graham Dickson from Royal Roads University)

Key features of the health system context in Canada

The following key features of the health system context in Canada are particularly germane to fostering leadership for health-system redesign:

- stewardship of the health system is primarily the responsibility of provincial and territorial governments, although the federal government has available to it certain policy levers to foster leadership and/or spur health system redesign, such as transfer payments, setting priorities for research funding, and acting as a facilitator for collaborative pan-Canadian initiatives;
- most provincial governments have devolved responsibility for decisions related to the planning, funding and integration of healthcare to provincial, regional or district health authorities, however, provinces differ in whether hospitals and other healthcare institutions are formally part of these authorities or are simply funded by them; and
- provincial governments have retained responsibility for decisions related to the remuneration of physicians who, for the most part, continue to work in private practice, often with fee-for-service payment, but with a growing trend in primary care toward blended-remuneration methods that include some form of capitation payment.

All of these features combine to make for a very decentralized set of health systems across the country with significant potential for rapid shifts in priorities in response to changes in the governing party and interest-group pressure, all of which has significant implications for the type and quality of leadership needed for health-system redesign.

Box 2: Equity considerations

A problem may disproportionately affect some groups in society. The benefits, harms and costs of elements of an approach 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.

This issue brief strives to address all people, but (where possible) it also gives particular attention to two groups:

- emerging clinical leaders who could benefit from mentorship, particularly those challenged by the transition from clinical leadership positions to organization- and/or system-level leadership positions; and
- leaders with responsibility in/for rural and remote areas.

Many other groups warrant serious consideration as well, 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.

THE PROBLEM

The problem of insufficient leadership capacity in Canada can be understood in relation to four contributors to the problem:

1) links between leadership, its antecedents and its consequences have not been well established;
2) leadership programs and initiatives aren't yet getting us to where we need to be;
3) existing health system arrangements complicate the situation significantly; and
4) progress is being made, but slowly.

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 insights into alternative ways of framing the problem was sought using the qualitative research "hedge" in MedLine. Grey literature was sought by reviewing the websites of a number of Canadian and international organizations.

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.

Links among leadership, its antecedents and its consequences have not been well established

While two of the conclusions of the cross-national study were that leadership capacity in Canada is insufficient and certain leadership capabilities are underdeveloped, the study reports did not situate these findings within a broader understanding of the links among leadership, its antecedents and its consequences:

- factors and strategies → leadership → objectives being met → improved outcomes

We summarize in this section what is known from systematic reviews about:

- the factors associated with successful leadership at the organization level and strategies to enhance leadership capacity;
- the impact of leadership on healthcare organizations' ability to meet their own objectives and contribute to health-system objectives; and
- the impact of leadership on the patient experience of care, the health of populations and the per capita cost of healthcare (i.e., the 'Triple Aim' dimensions).

Most people care about leadership, not for its own sake, but for what it can achieve. And if leadership can help to ensure that objectives are met and outcomes improved, then more people may become interested in leadership per se, the factors that influence it, and the strategies that can enhance it. Canadian health systems may well be underperforming relative to other high-income countries' health systems in a number of areas(23-25). But the challenge ahead is to determine how leadership contributes to this challenge and how fostering leadership can translate into health-system redesigns that in turn translate into significant improvements in performance.

Systematic reviews have identified the factors positively associated with successful leadership at the organization level (with one high-quality review and two medium-quality reviews emphasizing a broad range of factors, such as select leadership styles, organizational climate and structure, and performance feedback and educational activities, while another high-quality review and one medium-quality review singled out emotional intelligence as key) (Table 5). No systematic reviews have been conducted to identify the factors associated with successful leadership at the system level. Systematic reviews have also identified strategies to enhance leadership capacity (with one medium-quality systematic review finding that incorporating guidelines, audit and quality-improvement techniques in medical school curricula was highly valued by medical students, while another medium-quality review found that organizational approaches such as strategic planning and employing change theory was associated with enhanced leadership capacity in long-term care).(26) For those who want to know more about the systematic reviews contained in Table 5 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 1.

Table 5: What is known from systematic reviews about the factors associated with successful leadership and/or strategies to enhance leadership capacity

Potential outcomes	Factors and strategies
Successful leadership at the organizational level	Factors positively associated with the outcome • One high-quality review and two medium-quality reviews found that successful nursing leadership at the organizational level was associated with the following factors: o leadership styles that include being facilitative and modelling desired behaviours; o higher levels of education; o length of time in a leadership role, and being older; o managerial competencies and personality traits such as openness, extroversion and motivation; o organizational climate and structure that enable leaders to better support their staff; and o performance feedback and educational activities (both formal and informal) as well as professional development activities and multi-professional collaboration.(27;28) • One high-quality review and one medium-quality review found emotional intelligence to be associated with positive nursing leadership outcomes.(28;29) Factors negatively associated with the outcome • No harms were identified in any of the systematic reviews
Successful leadership at the level of the health system	No systematic reviews were found
Improvement in leadership capacity at the organization or system level	Strategies that may positively affect the outcome • One medium-quality review found that when included in medical school curricula, guidelines, audit and quality-improvement techniques were valued by medical students and, in general, students had positive attitudes towards multidisciplinary teams and believed that doctors should lead these teams.(30) • One medium-quality review found that a variety of organizational approaches – strategic planning, budgetary planning, human resource recruitment and retention strategies, supervision and mentoring, employing change theory, policy development and regulatory compliance – were associated with enhanced leadership capacity in long-term care.(26) Strategies that may negatively affect the outcomes • No harms were identified in any of the systematic reviews Other • One medium-quality review also found that there is a current lack of emphasis on leadership and management within medical education.(30)

Systematic reviews suggest that leadership may have a measurable impact on healthcare organizations' ability to meet their own objectives (with two high-quality reviews speaking most directly to the positive influence of select leadership styles/behaviours and strong leadership on the working environment and quality improvement, respectively) and contribute to health-system objectives (with one medium-quality review speaking to the positive influence of leadership and communication on collaboration among leaders in primary care and public health) (Table 6). For those who want to know more about the systematic reviews contained in Table 6 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 2.

Table 6: What is known from systematic reviews about the effects of leadership on the achievement of organizational and system objectives

Potential outcomes	Observed benefits or harms based on systematic reviews
Health care organizations' ability to meet their own objectives	Benefits • One high-quality review found that certain leadership styles and behaviours (motivation, consideration, trust, flexibility, respect and support) helped to create a healthy working environment.(28) • One high-quality review found that strong leadership was strongly associated with high-performing projects, a team's perception of success, and team effectiveness, and is one of the factors most consistently associated with quality-improvement success.(31) • One medium-quality review found that relationally focused nursing leadership was associated with more positive work environment outcomes than task-focused nursing leadership.(32) • One medium-quality review found that nursing leadership has an indirect role in influencing nurses' motivation to perform through four factors, including autonomy, relationship building, resource accessibility and nursing leadership practices.(33) • One medium-quality review found that leadership involvement in quality-improvement collaboratives can help ensure progress towards meeting the goals of these approaches, and quality-improvement collaboratives may contribute to change sustainability, overcoming implementation barriers, promoting continuous learning, and fostering inter-organizational support.(34) • One low-quality review found that the leadership role of senior management is essential for quality and safety improvement, and a lack of leadership was associated with low-quality services.(35) • One low-quality review found that enhanced leadership and staff training may facilitate successful implementation of accreditation programs in public hospitals.(36) • One low-quality review found that leadership development programs may facilitate organizational technology adoption, and facilitate network development, increasing tacit knowledge exchange.(37) • One review in progress will assess the impact of leadership on health information technology adoption in healthcare-providing organizations, although the results have not yet been published.(38) Potential harms • No harms were identified in any of the systematic reviews Uncertainty regarding benefits and harms • One medium-quality review found little evidence to support the importance of leadership skills for nursing home nurses.(26) • One low-quality review found that there was no substantial evidence supporting lasting effects and changes in organizational cultures after introducing the Six Sigma, Lean/Toyota Production System, and Studer's Hardwiring Excellence strategies in healthcare organizations.(39)
Health care organizations' ability to contribute to health-system objectives	Benefits • One medium-quality review found that leadership and communication can lead to strong collaboration between leaders in primary care and public health, which may lead to improvements in health-related outcomes, health access and reductions in disparities.(40) • One low-quality review focused on implementing clinical information systems found that there is some evidence to suggest clinical leadership is instrumental in implementing interventions in the healthcare system.(41) Potential harms • No harms were identified in any of the systematic reviews

Systematic reviews suggest that leadership may also have a measurable impact on the patient experience (with one high-quality review speaking most directly to the positive influence of select leadership styles on patient quality of life) and improving health (with one medium-quality review speaking most directly to the positive influence of some types of leadership on the health of patients, if not populations), however, this is not a particularly robust evidence base (Table 7). As well, no systematic reviews have addressed the influence of leadership on the per capita cost of healthcare. For those who want to know more about the systematic reviews contained in Table 7 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 3.

Table 7: What is known from systematic reviews about the effects of leadership on achieving each of the 'Triple Aim' dimensions

Potential outcomes	Observed benefits or harms based on systematic reviews
Improving the patient experience of care (including quality and satisfaction)	Benefits • One high-quality review found that participatory, consultative, transformational and transactional nursing leadership styles were all associated with patient quality of life (with the transformational style associated with the most positive outcomes).(28) • One high-quality review found that fostering joint professional responsibility and teamwork may improve patient safety.(42) • One high-quality review found that local opinion leaders may successfully promote evidence-based practice, although with varied effectiveness.(43) • One medium-quality review found significant evidence to suggest a positive association between positive nursing leadership behaviours, styles or practices and increased patient satisfaction, and also found that the positive effects of nursing leadership on patient satisfaction declined as nurse leaders' span of control widened (i.e., increases in the total number of staff reporting directly to the manager.(44) An update of the review found the same results.(45) • One medium-quality review found that task-oriented nursing leadership was associated with family satisfaction with resident care, and manager support was associated with lower patient length of stay.(45) • One medium-quality review found that emotionally intelligent nursing leadership was associated with productive assessments of the emotional side of patients.(29) • One low-quality review found that clinician leaders play a role in improving healthcare provision, albeit with limited influence, and that the leadership of senior management is essential for quality and safety improvement.(35) Potential harms • No harms were identified in any of the systematic reviews
Improving the health of populations	Benefits • One medium-quality review found that adverse events and complications in nursing home residents were reduced with positive nursing leadership behaviours, and that transformational and resonant leadership were associated with lower patient mortality.(44) • One medium-quality review found moderate evidence to suggest that leadership is associated with job well-being and employee health.(46) Potential harms • No harms were identified in any of the systematic reviews
Reducing the per capita cost of health care	No systematic reviews were found

*Source: http://www.ihi.org/offerings/initiatives/tripleaim/pages/default.aspx

Leadership programs and initiatives aren't yet getting us to where we need to be

There is a wide variety of leadership programs and initiatives in Canada (Table 8). However, they primarily target:

- leaders in (or seeking to be in) positions of administrative authority, not potential future clinical leaders (with LEAD and CanMEDS being exceptions) or emerging leaders (with the Canadian College of Health Leaders and Emerging Health Leaders being examples of exceptions), which is all the more important to note given the age distribution of existing leaders;
- physician leaders (with the Physician Management Institute) and to a lesser extent nursing leaders, not clinical leaders in other health professions;
- clinical and administrative (especially health authority and hospital) leaders, not leaders in primary and community care, governance (with the Effective Governance for Quality and Patient Safety Program and the Institute of Corporate Directors being examples of exceptions) or government (with government-specific programs, such as those run by the Office of the Chief Human Resources Officer for federal government employees, being examples of exceptions);
- leaders primarily interested in developing leadership capabilities, not leaders jointly interested in developing leadership capabilities and undertaking a supported health-system redesign project (with Improving and Driving Excellence Across Sectors and the Executive Training for Research Application program being examples of exceptions);
- individual leaders, not interprofessional team leaders (with the Dorothy Wylie Nursing/Health Leaders Institute being an example of an exception) or interprofessional teams (with the Executive Training for Research Application program and Saskatchewan Leadership Program being examples of exceptions); and
- individuals, not organizations seeking to put in place key leadership responsibilities (with Accreditation Canada being an example of an exception).

Table 8: Examples of leadership programs and initiatives in Canada*

Audience focus (jurisdictional focus)	Sponsor	Program (if applicable)	Activities
Future physician leaders	University of Toronto	Leadership Education and Development (LEAD)	• Six graduate courses and two summer-long practicum experiences for medical students enrolled in the program
Future physician specialist leaders	Royal College of Physicians and Surgeons of Canada	CanMEDS	• Existing CanMEDS (2005) framework for physician specialty training includes some leadership competencies in the manager role and may in 2015 include a new leadership role
Nursing leaders (national)	Academy of Canadian Executive Nurses	N/A	• Membership-based association that seeks to support the development of current and emerging executive nurse leaders
Nursing leaders (Ontario)	Registered Nurses' Association of Ontario	N/A	• Annual conference on nurse executive leadership
Physician leaders (national)	Canadian Medical Association	Canadian Society of Physician Executives	• Annual conference on physician leadership • Short face-to-face courses • Leadership certification (see Table 9)
	Canadian Medical Association	CMA Coaching Connections	• Personalized leadership coaching

	Canadian Medical Association	Physician Management Institute	• Short face-to-face courses • Short online courses through the American College of Physician Executives
Physician leaders (Ontario)	Ontario Medical Association	Physician Leadership Development Program	• Short face-to-face course that includes an independent project, readings and executive coaching
Professional and managerial 'lean' leaders (Saskatchewan)	Saskatchewan Health (through a partnership with John Black and Associates)	Lean Leader Program	• 80 days of training for any prospective lean leader and 22 days of training for physician lead leaners
Professional and managerial leaders (Ontario)	Improving and Driving Excellence Across Sectors (IDEAS)	N/A	• One two-day and one nine-day face-to-face course on quality improvement, change management and leadership, coupled with an improvement-project activity
Interprofessional (nursing and health) leaders	Dorothy Wylie Nursing/Health Leaders Institute	N/A	• Two-part, seven-day, inter-professional, residential leadership program
Interprofessional (physician and operational) leaders	Saskatoon Health Region (on behalf of a number of partners)	Saskatchewan Leadership Program	• Nine-month-long mix of periodic face-to-face and online training for those who are three to seven years or one to two years away from a leadership position or who are currently in a physician or operational leadership position
Interprofessional health leadership teams (national)	Canadian Foundation for Healthcare Improvement	Executive Training for Research Application	• Fourteen-month combined face-to-face and online, team-based and improvement-project-centred training
Future health leaders (national)	Universities across Canada	Health administration, management and leadership training programs**	• Undergraduate and graduate degrees in health administration, management and leadership
	Universities across Canada	Health administration, management and leadership training programs	• Short courses in health administration, management and leadership (e.g., Advanced health leadership program)
All emerging health leaders (national)	Emerging Health Leaders	Canadian Health Leadership Network (see below)	• Mentoring • Educational events
All health leaders (national)	Canadian College of Health Leaders***	N/A	• Short online courses • Mentorship • National health leadership conference (in partnership with the Canadian Healthcare Association – see below) • B.C. health leaders conference (in partnership with the Health Care Leaders Association of B.C.) • Awards for excellence in health leadership • Fellowship designation • Leadership certification (see Table 9)
	Canadian Foundation for Healthcare Improvement	E-learning and workshops focused on healthcare	• 90-minute live webinars • Online workshops that combine live webinars with supported independent study • One-day face-to-face 'Improvement workshops'

		improvement	• Two-day face-to-face workshop seminars (in partnership with the Institute for Healthcare Improvement)
	Canadian Healthcare Association	CHA Learning	• Range of online courses that combine home-study units and webinars, including on health governance
	Canadian Health Leadership Network	N/A	• Dialogue and engagement about health leadership • Research, knowledge mobilization and evaluation about health leadership • LEADS framework and tools promotion • Health leadership strategy development
All health leaders (B.C.)	BC Health Leadership Development Collaborative	N/A	• Coaching • Mentorship • New manager training • Experienced leader program • Senior leadership program (in development)
All hospital leaders (Ontario)	Ontario Hospital Association	N/A	• Governance conference, course and guide (through the Governance Centre for Excellence) • Leadership competency models
All board members and leadership teams (national)	Canadian Foundation for Healthcare Improvement and Canadian Patient Safety Institute	Effective Governance for Quality and Patient Safety Program	• Toolkit • Educational session
All board members (national)	Institute of Corporate Directors with five business schools	Directors Education Program	• Twelve-day face-to-face course (not health system specific)
Public servants (national)	Office of the Chief Human Resources Officer	N/A	• Training in particular competencies • Temporary assignments for professional development • Support for succession planning and management
All health organizations (national)	Accreditation Canada	Leadership standards	• Key leadership responsibilities that organizations must have in place, namely: 1) creating and sustaining a caring culture; 2) planning and designing services; 3) allocating resources and building infrastructure; and 4) monitoring and improving quality and safety

*note that only select leadership development programs that operate at the provincial level have been included (most of which, because of time constraints, are from Ontario and Saskatchewan, with one exception) and that the contents of this table were derived from website reviews (not direct contact with each organization or program)
**search under: 1) 'Business, management, marketing and related support services' for 'Hospital administration/management,' 'Non-profit/public/organizational management' or 'Organizational leadership'; 2) 'Health professions and related clinical sciences' for 'Health services administration' or 'Medical/health management and clinical assistant/specialist'; or 3) 'Public administration and social service professions' for 'Public administration' or 'Public policy analysis'
***previously the Canadian College of Health Service Executives

Moreover, these leadership programs and initiatives typically:

- are voluntary and not required for certification, except for those individuals who choose to participate (again voluntarily) in one of Canada's three leadership-certification programs (Table 9);
- do not use common leadership frameworks or curricula, except for a small number of organizations now using the LEADS framework,(47) such as the BC Health Leadership Development Collaborative, Saskatchewan Leadership Program, Canadian College of Health Leaders and Canadian Medical Association which, as members of CHLNet, helped to develop the framework;
- do not make publicly available on their websites any formative or summative evaluations; and
- are not captured through any continuously updated inventory of leadership programs and initiatives.

As such, these programs and initiatives do not yet appear to be getting us to where we need to be.

Table 9: Leadership certifications available in Canada

Primary focus	Certification	Sponsor
Physician leaders	Canadian Certified Physician Executive	Canadian Medical Association and Canadian Society of Physician Executives
All health leaders	Certified Health Executive	Canadian College of Health Leaders
All corporate directors	ICD.D	Institute of Corporate Directors

The situation in Canada contrasts sharply with the situation in Australia (which boasts Health Workforce Australia's Leadership for Sustainable Change program) and in England (which boasts the NHS Leadership Academy).

Existing health system arrangements complicate the situation significantly

A variety of existing delivery, financial and governance arrangements contribute to the problem and make it difficult to establish the magnitude of the problem, undertake initiatives to address it, and track progress in addressing it.

Examples of complicating delivery arrangements in leadership development in Canada include:

- lack of agreement about the terminology, frameworks, curriculum standards and performance metrics for leadership-development initiatives;
- no centralized tracking system exists for education and continuing professional development related to leadership (e.g., what could be called a 'Canadian leadership passport'), although there are systems maintained by membership organizations (such as the Canadian College of Health Leaders) that track completion of their own leadership-development courses;
- no continuously updated database exists with which to monitor leadership capacity (e.g., number, training and age of leaders), which stands in contrast to the situation for the physicians, nurses and other health professionals (for whom databases are maintained by the Canadian Institute for Health Information), and the last leadership gap analysis was conducted in 2007 (by the Conference Board of Canada);
- no efforts underway to support the type of needs-based human-resource (leadership) planning that exists for health professionals;
- few opportunities exist to recognize and celebrate exemplary leadership (exceptions include the MacNaught-Taillon award and awards sponsored by the Canadian College of Health Leaders, among others); and
- limited research and knowledge-translation capacity in the field of leadership and no coordination of this capacity through one or more centres of excellence.

Delivery arrangements within health systems also complicate matters in three key ways:

- physicians remain a dominant provider group with more autonomy and higher incomes than most other provider groups, which makes it easier for them to choose to pursue leadership-development opportunities;
- differences across provinces and territories and over time in how health-service delivery is organized (e.g., hospitals retain significant independence in Ontario, but are integrated within health regions in other provinces; authority to govern and manage healthcare in Alberta has transitioned from 17 regional health authorities to nine health authorities and to one provincial health authority); and
- policy leaders turn over quickly (for a wide variety of reasons, including elections, career progression and blame avoidance, among others), making it difficult for clinical and administrative leaders to undertake health-system redesign over long periods of time and to sustain it.

Two existing financial arrangements also complicate the fostering of leadership for health-system redesign:

- physicians differ in whether they need to pay for leadership development out of their professional income or can access funding through provisions in physician-services agreements; and
- organizations and governments differ in whether they need to pay for leadership development out of their clinical care budgets (with the opportunity cost seen as being reductions in patient care) or from a dedicated funding pool, and in their degree of certainty that they will reap the benefits directly (with the spillover effects to the rest of the system discounted).

Lastly, a set of unique governance arrangements complicate efforts in this domain:

- decision-making about healthcare is highly decentralized in Canada yet with significant interconnections among clinical, administrative and policy authority, little current centralizing influence and no widely endorsed vision for health-system redesign (or approach to leadership development to achieve a vision);
- organizational authority for ensuring that leadership development in general and coaching, mentoring and succession planning in particular is in place for leaders at all organizational levels, is neither explicit nor concentrated in a single role (e.g., chief talent officer) and the exercise of such authority is not supported by an organization that is analogous to Health Workforce Australia or the NHS Leadership Capacity (in England); and
- policy authority for hospital-based and physician-provided care is highly concentrated in provincial health ministers and select other senior leaders, which ensures that healthcare issues are highly visible and that any failures to address healthcare issues is highly traceable to single elected officials (which creates political pressure for scapegoating and other behaviours that challenge leaders located outside government).

Progress is being made, but slowly

All of this said, there are some 'bright spots on the horizon.' The Canadian Health Leadership Network (CHLNet), a network of 37 provincial and national organizations, has endorsed the use of the 'LEADS in a Caring Environment Framework' as a pan-Canadian approach to supporting Canadian health leaders (although its uptake has not yet been documented) and has committed to develop a Canadian Health Leadership Strategy (and this issue brief will serve in part to support its development).(47;48) CHLNet has also partnered with the Canadian College of Health Leaders to develop a not-for-profit support system for health organizations that use LEADS for comprehensive leadership-talent management. The Canadian Foundation for Healthcare Improvement's EXTRA program has been a major contributor to leadership development across the country, and is seeking ongoing support in order to continue.

As well, the Council of the Federation has shown through the Health Care Innovation Working Group that provinces and territories can collaborate on shared agendas and build provider groups (e.g., Canadian Medical Association, Canadian Nurses Association and Health Action Lobby) into the process, however, to date it has not prioritized leadership as a shared pan-Canadian challenge.

Additional equity-related observations about the problem

One additional dimension of the problem that warrants additional discussion is how the groups prioritized in this brief – emerging clinical leaders who could benefit from mentorship (particularly those challenged by the transition from clinical leadership positions to organization- and/or system-level leadership positions) and leaders with responsibility in/for rural and remote areas – may be disproportionately affected by aspects of the problem or its causes.

One of the contributors to the problem identified above is that links among leadership, its antecedents and its consequences have not been well established, and this is particularly true for the prioritized groups, given that we found only three systematic reviews that specifically focused on them when looking for research evidence about leadership, its antecedents and consequences. Related to what is known about the factors associated with successful leadership or about strategies to enhance leadership capacity (addressed in Table 5), one high-quality review was found that included studies focused on emerging clinical leaders as well as those with responsibility in rural and remote areas, and it found that providing mentorship to staff can lead to professional growth, and is an essential attribute that a leader requires in order to assist the development of staff.(28) A low-quality review that addressed the effects of leadership on organizational and management outcomes (addressed in Table 6) focused on determining whether the Six Sigma, Lean/Toyota Production System and Studer's Hardwiring Excellence transformational strategies resulted in positive organizational transformation.(39) This review included several studies that focused on how these strategies engage potential clinical leaders, often those in the early stages of their careers and under direct supervision from senior members of clinical staff, and it concluded that these approaches resulted in positive organizational transformation (particularly cultural). Finally, a medium-quality review that focused on how leadership contributed to achieving the 'Triple Aim' dimensions and included a study that focused on emerging clinical leaders found that certain leadership styles, such as communication openness, formalization, participation in decision-making and relationship-oriented leadership, were associated with improved patient satisfaction and outcomes.(44).

Unfortunately no systematic reviews addressed the other contributors to the problem among the two prioritized groups.

THREE ELEMENTS OF A POTENTIAL APPROACH TO ADDRESS THE PROBLEM

A variety of approaches could be used to address the problem of insufficient leadership capacity in Canada. One bold approach, with three elements, was selected by the Steering Committee and select key informants as worthy of deliberation. The three elements include:

1) create and implement a pan-Canadian initiative that will support a dramatic enrichment of leadership capacity;
2) create and implement a pan-Canadian succession-planning project; and
3) coordinate research and knowledge-mobilization efforts about health leadership in Canada (which includes documenting and sharing best practices in leadership and leadership enhancement for health-system redesign).

The second and third elements could be nested within the first element or each undertaken as a stand-alone initiative.

Regrettably none of these approach elements has been the principal focus of a systematic review of the research literature, and those systematic reviews that relate in some way to each element are often of indirect interest and of low or medium quality. As well, each element brings with it a set of implementation challenges, which are the focus of the next section. All of this said, decisions can and often need to be made without supportive research evidence, and in this case these decisions can be informed by the tacit knowledge, views and experiences of dialogue participants. Ideally such decisions are subjected to the monitoring of their implementation and evaluation of their impacts.

Box 4: Mobilizing research evidence about elements of an approach to address the problem

The available research evidence about approach elements was sought primarily from Health Systems Evidence (www.healthsystemsevidence.org), which is a continuously updated database containing more than 3,700 systematic reviews and nearly 2,000 economic evaluations about delivery, financial and governance arrangements within health systems and about implementation strategies within health systems. The reviews were identified by first searching for the terms 'leadership' or 'management' (with or without the term 'capacity.' Additional reviews were identified by searching the sub-categories within the Health Systems Evidence taxonomy that most closely match each approach element.

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 approach elements 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 relevance to the issue. (See the 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 a lack of attention to equity considerations, primary research could be commissioned or an approach element 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 approach element may want to search for a more detailed description of the element or for additional research evidence about the element.

Element 1 – Create and implement a pan-Canadian initiative that will support a dramatic enrichment of leadership capacity

This approach element is arguably partially underway with the support of the Canadian Health Leadership Network. Sub-elements might include:

- undertake a consultative process to develop a pan-Canadian health leadership initiative;
- as part of this process, promote a national dialogue about the pros and cons of:
  - voluntary turn-over (especially when it's related to perceptions about how to 'get ahead' most quickly and to burn-out) and imposed turn-over (especially when it's related to perceptions about the need to be seen to take action in the short term to address a system failure that may take significant time to address comprehensively);
  - positioning the use of funds to support the development of leadership capacity as coming at the expense of paying for front-line care rather than as an investment in a social good;
  - changes in the degree of centralization and decentralization of decision authority in terms of the implications for leadership and for developing leadership capacity;
  - lacking explicit or concentrated organizational authority for ensuring that coaching, mentoring and succession planning is in place for leaders at all organizational levels (and not having such authority supported by a dedicated pan-Canadian organization); and
  - having concentrated policy authority among a small group of leaders in the country's health systems and the related incentives to engage in blame avoidance; and
- informed by the process, create and implement a pan-Canadian leadership initiative that will cohere the efforts of many organizations in a mutually supportive fashion.

One medium-quality systematic review was identified on the topic of undertaking a consultative process and it identified some potential benefits as well as the factors that need to be considered to build successful collaboration (however, this review was not focused specifically on leadership). One low-quality review identified a number of important components of succession planning, which is one potential focus for a national dialogue. No systematic reviews (or economic evaluations) were identified about other potential areas of focus for a national dialogue.

For those who want to know more about the systematic reviews contained in Table 10 (or obtain citations for the reviews), a fuller description of the systematic reviews is provided in Appendix 4.

Table 10: Summary of key findings from systematic reviews relevant to Element 1 - Create and implement a pan-Canadian initiative that will support a dramatic enrichment of leadership capacity

Category of finding	Summary of key findings
Benefits	• **Undertake a consultative process to develop a pan-Canadian health leadership initiative** o Although the authors did not focus on the effects of collaboration on developing leadership initiatives, one medium-quality review found that collaboration between primary care and public health is associated with improved chronic disease management, communicable disease control and maternal and child health.(40)
Potential harms	• No systematic reviews identified potential harms
Costs and/or cost-effectiveness in relation to the status quo	• No economic evaluations or costing studies were identified that provided information about costs and/or cost-effectiveness of this element in relation to the status quo
Uncertainty regarding	• Uncertainty because no systematic reviews were identified o **Promote a national dialogue about the pros and cons of:**

benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)	▪ voluntary turn-over (especially when it's related to perceptions about how to 'get ahead' most quickly and to burn-out) and imposed turn-over (especially when it's related to 'scapegoating' for a system failure); ▪ positioning the use of funds to support the development of leadership capacity as coming at the expense of paying for front-line care rather than as an investment in a social good; ▪ changes in the degree of centralization and decentralization of decision authority in terms of the implications for leadership and for developing leadership capacity; and ▪ having concentrated policy authority among a small group of leaders in the country's health systems and the related incentives to engage in 'scapegoating' and other harmful behaviours • Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review o Not applicable (no 'empty' reviews were found) • No clear message from studies included in a systematic review o Not applicable
Key elements of the policy option if it was tried elsewhere	• **Undertake a consultative process to develop a pan-Canadian health leadership initiative** o One medium-quality review found that the following groups of factors need to be considered to build successful collaboration (and as such should be considered when implementing this option in other settings): ▪ at the systemic level: government involvement, policy and fit with local needs, funding and resources, power and control, and education and training were influential factors; ▪ at the organizational level: a common agenda, adequate knowledge and resource, leadership, management and accountability, geographic proximity of partners and shared protocols, tools and information are influential factors; and ▪ at the individual level: shared purpose and philosophy, clearly defined roles and positive relationships, as well as effective communication and decision-making strategies, were found to be influential interpersonal factors.(40) • **Promote a national dialogue about the pros and cons of lacking explicit or concentrated organizational authority for ensuring that coaching, mentoring and succession planning is in place for leaders at all organizational levels (and not having such authority supported by a dedicated pan-Canadian organization)** o One low-quality review found that there are no best practices for the implementation of succession planning, although some important components of succession planning were identified, which include: strategic planning, identifying the desired skills and needs for succession candidates, finding and mentoring succession candidates, resource allocation toward leadership development, aligning learning and development needs of succession candidates with organizational growth requirements and evaluation.(49)
Stakeholders' views and experience	• No reviews provided information about stakeholders' views and experiences

Element 2 - Create and implement a pan-Canadian succession-planning project

This approach element could be nested within element 1 or undertaken as a stand-alone initiative. Sub-elements might include:

- develop curriculum standards for health leadership at undergraduate and graduate levels and for continuing professional development;
- mandate a credentialing mechanism for all health system leaders;
- encourage the Canadian Institute for Health Information (or another organization) to institute a continuously updated database with which to monitor leadership capacity and to conduct periodic leadership gap analyses;
- conduct periodic human resource planning to identify and address gaps in leadership capacity;
- create a 'Canadian leadership passport' (i.e., a centralized tracking system for education and continuing professional development related to health leadership);
- develop and maintain a continuously updated inventory for professional development, coaching and mentoring programs focused on health leadership;
- increase the scale of existing health leadership programs and/or establish new ones when gaps are identified;
- conduct and make publicly available formative and summative evaluations of health leadership programs; and
- recognize and celebrate exemplary leadership through existing and new awards.

Systematic reviews were identified for four of these sub-elements, however, the links to leadership were often tenuous, and seven of eight were of low or medium quality. The high-quality review was more an example of the type of summative evaluation that can be produced (as were the other reviews in this category), and one medium-quality review suggested some points to address in a curriculum targeting undergraduate medical students.

For those who want to know more about the systematic reviews contained in Table 11 (or obtain a citation for the reviews), a fuller description of the systematic reviews is provided in Appendix 5.

Table 11: Summary of key findings from systematic reviews relevant to Element 2 - Create and implement a pan-Canadian succession-planning project

Category of finding	Summary of key findings
Benefits	• **Develop and maintain a continuously updated inventory for professional development, coaching and mentoring programs focused on health leadership** o One low-quality review found that regional health information systems led to better flow of information, collaboration and data exchange, improved communication and coordination within a region, better process design, and initiated changes in organizational culture, but also found that there were differences in organizational culture, vision and expectations.(50) • **Conduct and make publicly available formative and summative evaluations of health leadership programs** o One high-quality review found that leadership from top management can influence quality-improvement success.(31) o One medium-quality review found that relationally focused nursing leadership practices demonstrate more positive outcomes than task-focused leadership styles, as task-focused leaders fail to develop and maintain relationships with staff members in order to tune into emotional needs.(32) o One medium-quality review found that nursing leadership indirectly influences motivation to

	perform through autonomy, relationship building, resource accessibility and leadership practices.(33) o One medium-quality review found that leadership involvement in quality-improvement collaboratives can help improve the goals of these approaches, and quality-improvement collaboratives may contribute to change sustainability, overcoming implementation barriers, promoting continuous learning, and fostering inter-organizational support.(34) o One low-quality review found some evidence to suggest that leadership is one factor that dominates in the implementation of innovations in nursing.(51)
Potential harms	• **Encourage the Canadian Institute for Health Information (or another organization) to institute a continuously updated database with which to monitor leadership capacity and to conduct periodic leadership gap analyses** o One low-quality review found that lack of formalized support for novel (albeit clinical) information systems may result in user dissatisfaction(41).
Costs and/or cost-effectiveness in relation to the status quo	• No economic evaluations or costing studies were identified that provided information about costs and/or cost-effectiveness of element 2 in relation to the status quo
Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)	• Uncertainty because no systematic reviews were identified o **Mandate a credentialing mechanism for health system leaders** o **Conduct periodic human resource planning to identify and address gaps in leadership capacity** o **Create a 'Canadian leadership passport' (i.e., a centralized tracking system for education and continuing professional development related to health leadership)** o **Increase the scale of existing health leadership programs and/or establish new ones when gaps are identified** o **Recognize and celebrate exemplary leadership through existing and new awards** • Uncertainty because no studies were found despite an exhaustive search as part of a systematic review o Not applicable (no 'empty' reviews were found) • No clear message from studies included in a systematic review o Not applicable
Key elements of the policy option if it was tried elsewhere	• No systematic reviews were identified that provided information that could be used to determine what key aspects of element 2 need to be considered if it was tried elsewhere
Stakeholders' views and experience	• **Develop curriculum standards for health leadership at the undergraduate and graduate level** o One medium-quality review found that medical students: ▪ valued guidelines, audit and quality-improvement techniques; ▪ had mixed attitudes to the principles of managed care, which the authors suggest may reflect the current lack of emphasis given to leadership and management within medical education; and ▪ had positive attitudes about multidisciplinary teams and believe that doctors should lead these teams.(30)

Element 3 - Coordinate research and knowledge-mobilization efforts about health leadership in Canada

This approach element could also be nested within element 1 or undertaken as a stand-alone initiative, and it includes documenting and sharing best practices in leadership and leadership enhancement for health-system redesign. Sub-elements might include:

- establish guidance for leadership-related terminology, critical success factors and metrics of success (or more generally for the development of the discipline of leadership);
- undertake periodic priority-setting processes for research (short-term requirements for evidence briefs, medium-term requirements for systematic reviews, and long-term requirements for new primary research) and for knowledge translation;
- coordinate existing research and knowledge-translation capacity in the discipline of health leadership through one or more centres of excellence; and
- one-stop shop for research, evidence-based tools, etc., focused on health leadership.

Three medium-quality reviews and one low-quality review addressed the first sub-element, and specifically critical success factors for clinical leadership that could be incorporated into any guidance about such factors. No systematic reviews (or economic evaluations) were identified about other potential components of a coordinated research and knowledge-mobilization effort.

For those who want to know more about the systematic reviews contained in Table 12 (or obtain a citation for the reviews), a fuller description of the systematic reviews is provided in Appendix 6.

Table 12: Summary of key findings from systematic reviews relevant to Element 3 - Coordinate research and knowledge-mobilization efforts about health leadership in Canada

Category of finding	Summary of key findings
Benefits	• **Establish guidance for leadership-related terminology, critical success factors and metrics of success (or more generally for the development of the discipline of leadership)** o One medium-quality review found that modelling (demonstration of newly learned skills in the practice setting) is an important aspect of successful nursing leadership, that financial resources invested in educational programs for leadership competencies development are well placed, and that education and length of time in a leadership role are associated with increased leadership effectiveness.(52) o One medium-quality review found that emotional intelligence is valued in nursing leaders, has a positive impact on nurses' job performance and satisfaction, and is vital to creating a supportive environment and facilitating positive empowerment processes leading to subjective well-being.(29) o One medium-quality review found little support for the importance of leadership skills for nursing home nurses, and recommended that promising enhancement programs are systematically evaluated to build the evidence base.(26) o One low-quality review found that clinician leaders play a role in improving healthcare provision, but their influence is limited, and that leadership of senior management is essential for quality and safety improvement.(35)
Potential harms	• No systematic reviews were identified that provided information about the potential harms of Element 3
Costs and/or cost-effectiveness in relation to the status quo	• No economic evaluations and costing studies were found that provided information about the cost and/or cost-effectiveness of element 3 in relation to the status quo

Uncertainty regarding benefits and potential harms (so monitoring and evaluation could be warranted if the option were pursued)	• Uncertainty because no systematic reviews were identified o **Undertake periodic priority-setting processes for research (short-term requirements for evidence briefs, medium-term requirements for systematic reviews, and long-term requirements for new primary research) and for knowledge translation** o **Coordinate existing research and knowledge-translation capacity in the discipline of health leadership through one or more centres of excellence** o **Establish a one-stop shop for research, evidence-based tools, etc., focused on health leadership** • Uncertainty because no studies were identified despite an exhaustive search as part of a systematic review o Not applicable (no 'empty' reviews were found) • No clear message from studies included in a systematic review o Not applicable
Key elements of the policy option if it was tried elsewhere	• No systematic reviews were identified that provided information that could be used to determine what key aspects of element 2 need to be considered if it was tried elsewhere
Stakeholders' views and experience	• No reviews provided information about stakeholders' views and experiences

Additional equity-related observations about the three elements

Only two systematic reviews provided findings specifically about the groups prioritized for this issue brief, namely emerging clinical leaders who could benefit from mentorship (particularly those challenged by the transition from clinical leadership positions to organization- and/or system-level leadership positions) and leaders with responsibility in/for rural and remote areas.

The first review pertained to element 3, which involves coordinating research and knowledge-mobilization efforts about health leadership in Canada, and more specifically documenting and sharing best practices in leadership and leadership enhancement for health-system redesign. This medium-quality review found that emotional intelligence is a critical success factor in enhancing leadership capacity and that leaders' emotional intelligence is positively associated with job performance and satisfaction.(29) One of the included studies explored the relational dynamics between senior organizational managers and their superiors, and therefore might also be considered relevant to emerging clinical leaders who would benefit from senior mentorship during transitions from clinical to organization- and system-level leadership positions from senior leaders. Thus the review may provide support for emotional intelligence as an attribute of senior leaders who can mentor emerging leaders.

The second review pertained to element 2, which involves creating and implementing a pan-Canadian succession-planning project, and more specifically encouraging the Canadian Institute for Health Information (or another organization) to institute a continuously updated database with which to monitor leadership capacity and to conduct periodic leadership gap analyses. The low-quality review included one study that was conducted in a rural setting and found evidence of the importance of leadership in the successful implementation of information systems and promoting user acceptance.(41) However, the parallels between novel clinical information systems and a leadership capacity database are limited at best.

IMPLEMENTATION CONSIDERATIONS

A number of barriers might hinder implementation of the approach elements, which needs to be factored into any decision about whether and how to pursue any given element (Table 13). While potential barriers exist at the levels of providers, organizations and systems (if not patients/citizens, who are unlikely to be aware of or particularly interested in these approach elements), perhaps the biggest barrier lies in making the case for a 'burning platform,' given how challenging it is to confirm (or refute) the assertion that investing in leadership will support health-system redesign and ultimately have an impact on the 'Triple Aim' dimensions.

Table 13: Potential barriers to implementing the approach elements

Type	Provisional / Draft Responses		
	Element 1 – Create and implement a pan-Canadian leadership initiative	**Element 2 – Create and implement a pan-Canadian succession-planning project**	**Element 3 - Coordinate research and knowledge-mobilization efforts about health leadership in Canada**
General	• Challenging to confirm or refute the assertion that investing in leadership will support health-system re-design and ultimately have an impact on the 'Triple Aim' dimensions		
Element-specific	• Patient/citizen o Patients/citizens are unlikely to be aware of such action	• Patient/citizen o Patients/citizens are unlikely to be aware of such action	• Patient/citizen o Patients/citizens are unlikely to be aware of such action
	• Provider o Providers may continue to argue that such an initiative comes at the expense of front-line care if they don't see tangible improvements o Physicians may resist efforts that do not place them 'first among equals'	• Provider o Providers may resist a credentialing mechanism for health system leaders given they face such a mechanisms for their clinical responsibilities	• Provider o Providers are unlikely to be aware of such action
	• Organization o Health authorities and healthcare organizations may not 'buy into' a pan-Canadian initiative	• Organization o Educational organizations may resist efforts to establish curriculum standards or to conduct and make publicly available formative and summative evaluations o Health authorities and healthcare organizations may not 'buy into' a pan-Canadian project	• Organization o Research organizations may resist efforts to prioritize this particular area of inquiry over others o Health authorities and healthcare organizations may resist efforts to define and document best practices in leadership and leadership enhancement
	• System o Provincial health ministers and other senior leaders may not 'buy into' a pan-Canadian initiative or invest the necessary resources o Federal government is unlikely to support pan-Canadian initiatives that touch so directly on the management of provincial health systems	• System o Provincial health ministers and other senior leaders may not 'buy into' a pan-Canadian project or invest the necessary resources o Federal government is unlikely to support pan-Canadian initiatives that touch so directly on the management of provincial health systems	• System o Provincial health ministers and other senior leaders may resist efforts that involve defining and documenting best practices in leadership and leadership enhancement

On the other hand, a number of potential windows of opportunity may facilitate the approach elements (Table 14), which also needs to be factored into any decision about whether and how to pursue any given element. These potential windows of opportunity include forums where next steps have been or can be advocated for, and other windows that can be created through the momentum already established by the Canadian Health Leadership Network, the PHSI project of which this issue brief is an output, and related initiatives.

Table 14: Potential windows of opportunity for implementing the approach elements

Type	Provisional / Draft Responses		
	Element 1 – Create and implement a pan-Canadian leadership initiative	**Element 2 – Create and implement a pan-Canadian succession-planning project**	**Element 3 - Coordinate research and knowledge-mobilization efforts about health leadership in Canada**
General	• Past or upcoming forums where next steps have been or can be advocated for o Policy forum on health leadership to be held in Montréal in February 2014 o Council of Deputy Ministers of Health to be held in spring 2014 o Council of the Federation to be held in July 2014		
Element-specific	• Canadian Health Leadership Network has built a network of 37 provincial and national organizations focused on health leadership and committed to develop a Canadian Health Leadership Strategy (the first draft of which is now available)(48)	• Canadian Health Leadership Network has endorsed the use of the 'LEADS in a Caring Environment Framework' as a pan-Canadian approach to supporting Canadian health leaders and created (in partnership with the Canadian College of Health Leaders) a LEADS collaborative to support the use of the framework • Canadian Foundation for Healthcare Improvement is seeking to renew a commitment to fund the Executive Leadership for Research Application (EXTRA) program	• The PHSI project, of which this issue brief is an output, has brought together key leadership researchers and knowledge brokers

REFERENCES

1. Paradigm Freeze: Why It Is So Hard to Reform Health-Care Policy in Canada. Montreal and Kingston, Canada: McGill-Queen's University Press; 2013.
2. Ham C, Baker G, Docherty J, Hockey P, Lobley K, Tugendhat L et al. The Future of Leadership and Management in the NHS: No More Heroes. London, England: The King's Fund; 2011.
3. Dickson, G, Tholl, B, Davies, M, McDade, K, McGuire, A, Power, C, Rowlands, G, Tepper, J, Anis, A, Backman, A, Baker, R, Black, C, Blais, R, Denis, J-L, Lavis, JN, Lindstrom, R, Persaud, D, Philippon, D, and Tamblyn, R. Leadership and Health System Redesign: Application to CIHR's Partnerships for Health System Improvement. Victoria, Canada: Royal Roads University; 2009.
4. Luthans F, Avolio B. Authentic Leadership: A Positive Developmental Approach. In: Cameron K, Dutton J, Quinn R, editors. Positive Organizational Scholarship: Foundations of a New Discipline.San Francisco, United States of America: Berrett-Koehler; 2003. p. 241-58.
5. Heifetz R, Linsky M, Grashow A. Practice of Adaptive Leadership: Tools and Tactics for Changing Your Organization and the World. Cambridge, United States of America: Harvard Business Press; 2009.
6. Dickson G, Tholl B. Leadership in Health Systems Redesign Research Project: Partnerships for Health System Improvement (PHSI) Cross Case Analysis Final Report. Victoria, Canada: Royal Roads University; 2013.
7. Denis J, Langley A, Rouleau L. The practice of leadership in the messy world of organizations. Leadership 2010;6(1):67-88.
8. Ford R. Complex leadership competency in health care: Towards framing a theory of practice. Health Services Management Research 2009;22(3):101-14.
9. Graen G, Alvares K, Orris J, Martella J. Contingency model of leadership effectiveness: Antecedent and evidential results. Psychological Bulletin 1970;74(4):285-96.
10. Chreim S, Williams BE, Janz L, Dastmalchian A. Change agency in a primary health care context: The case of distributed leadership. Health Care Management Review 2010;35(2):187-99.
11. Greenleaf R. Servant Leadership: A Journey into the Nature of Legitimate Power and Greatness. Mahwah, United States of America: Paulist Press; 1997.
12. Hersey P, Blanchard K. Management of organizational behaviour. 5th ed. Englewood Cliffs, United States of America: Prentice Hall; 1998.
13. Avolio B, Walumbwa F, Weber T. Leadership: Current theories, research, and future directions. Annual Review of Psychology 2009;60:421-49.
14. Dickson G, Tholl B, MacPhee M. Leadership in Health Systems Redesign Research Project: Partnership in Health System Improvement (PHSI) National Node Final Case Report. Victoria, Canada: University of British Columbia; 2013.
15. Gorley C. BC Node Case Study Report: Exploring Leadership During Implementation of the Integrated Primary and Community Care Initiative in the Chilliwack Community Based Service Delivery Area. Victoria, Canada: Royal Roads University; 2013.
16. Marchildon G, Philippon D, Fletcher A. PHSI Leadership and Health System Redesign Project: Prairie Node Case Study Final Report. Regina, Canada: University of Regina; 2013.

17. Baker G, Aggarwal M, Barnsley J. Ontario Node Leadership Case Study: The Role of Leadership in the Development of Family Health Teams and Nurse Practitioner Led Clinics in Ontario. Toronto, Canada: University of Toronto; 2013.
18. Blais R, Denis J, Clavel N, Lajeunesse J, Chagnon F. Quebec Node Leadership Case Study Overall Report - New Primary Care Models in Quebec: The Challenges of Creating Family Medicine Groups. Montréal, Canada: Université de Montréal; 2013.
19. Solberg S. Fostering Leadership for Health System Redesign in Canada: Exploring Implementation of a Leadership Framework in Relation to Core Drivers of Management and Employee Engagement - An Atlantic Case Study. St. John's, Canada: Memorial University; 2013.
20. Calnan K, Gilbert S, LeBlanc D, Persaud D. PHSI Atlantic Node: NS Final Report. Halifax, Canada: Dalhousie University; 2013.
21. Baker G, Aggarwal M, Barnsley J. Ontario Node Leadership Case Study: The Role of Leadership in the Development of Family Health Teams and Nurse Practitioner Led Clinics in Ontario. Toronto, Canada: University of Toronto; 2013.
22. Canadian Health Leadership Network. Health Leadership Benchmarking Study: Preliminary Findings. Ottawa, Canada: Canadian Health Leadership Network; 2014.
23. The Commonwealth Fund. International profiles of health care systems 2013. London (UK): The Commonwealth Fund; 2013.
24. OECD. Health at a glance 2013: OECD indicators. Paris (France): OECD Publishing; 2013.
25. Health Council of Canada. Better Health, Better Care, Better Value for All: Refocusing Health Care Reform in Canada. Toronto, Canada: Health Council of Canada; 2013.
26. Harvath T, Wafford K, Smith K, Miller L, Volpin M. Enhancing nursing leadership in long-term care: A review of the literature. Research in Gerontological Nursing 2008;1(3):187-96.
27. Cummings G, Lee H, Macgregor T, Davey M, Wong C, Paul L et al. Factors contributing to nursing leadership: A systematic review. Journal of Health Services Research and Policy 2008;13(4):240-8.
28. Pearson A, Laschinger H, Porritt K, Jordan Z, Tucker D, Long L. Comprehensive systematic review of evidence on developing and sustaining nursing leadership that fosters a healthy work environment in healthcare. International Journal of Evidence-based Healthcare 2007;5(2):208-53.
29. Akerjordet K, Severinsson E. Emotionally intelligent nurse leadership: A literature review study. Journal of Nursing Management 2008;16(5):565-77.
30. Abbas MR, Quince TA, Wood DF, Benson JA. Attitudes of medical students to medical leadership and management: a systematic review to inform cirriculum development. BMC Medical Education 2011;11:93.
31. Kaplan H, Brady P, Dritz M, Hooper D, Linan W, Froehle C et al. The influence of context on quality improvement sucess in health care: A systematic review of the literature. The Milbank Quarterly 2010;88(4):500-59.
32. Cummings G, Macgregor T, Davey M, Lee H, Wong C, Lo E et al. Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. International Journal of Nursing Studies 2010;47(3):363-85.
33. Brady Germain P, Cummings G. The influence of nursing leadership on nurse performance: A systematic literature review. Journal of Nursing Management 2010;18(4):425-39.
34. Nadeem E, Olin S, Hill L, Hoagwood K, Horwitz S. Understanding the components of quality improvement collaboratives: A systematic literature review. The Milbank Quarterly 2013;91(2):354-94.

35. Ovretveit J. Leading improvement. Joural of Health Organization and Management 2005;19(6):413-30.

36. Ng G, Leung G, Johnston J, Cowling B. Factors affecting implementation of accreditation programmes and the impact of the accreditation process on quality improvement in hospitals: A SWOT analysis. Hong Kong Medical Journal 2013;19(5):434-46.

37. Williams I, Dickinson H. Can knowledge management enhance technology adoption in healthcare? A review of the literature. Evidence & Policy 2010;6(3):309-31.

38. Ingebrigsten T, Georgiou A, Hordern A, Prgomet, Li Y, Magrabi F. A systematic review of the impact of leadership on health information technology adoption in healthcare providing organizations. PROSPERO; 2013.

39. Vest JR, Gamm LD. A critical review of the research literature on Six Sigma, Lean and StuderGroup's Hardwiring Excellence in the United States: The need to demonstrate and communicate the effectiveness of transformation strategies in healthcare. Implementation Science 2009;4:35.

40. Martin-Misener R, Valaitis R, Wong S, Macdonald M, Meagher-Stewart D, Kaczorowski J et al. A scoping literature review of collaboration between primary care and public health. Primary Health Care Research & Development 2012;13:327-46.

41. Kelay T, Kesavan S, Collins RE, Kyaw-Tun J, Cox B, Bello F et al. Techniques to aid the implementation of novel clinical information systems: A systematic review. International Journal of Surgery 2013;11(9):783-91.

42. Gordon M, Darbyshire D, Baker P. Non-technical skills training to enhance patient safety: A systematic review. Med Educ 2012 November;46(11):1042-54.

43. Flodgren G, Parmelli E, Doumit G, Gattellari M, O'Brien MA, Grimshaw J et al. Local opinion leaders: Effects on professional practice and health care outcomes. Cochrane Database of Systematic Reviews 2011;(8):CD000125.

44. Wong CA, Cummings GG. The relationship between nursing leadership and patient outcomes: a systematic review. J Nurs Manag 2007 July;15(5):508-21.

45. Wong CA, Cummings GG, Ducharme L. The relationship between nursing leadership and patient outcomes: a systematic review update. J Nurs Manag 2013 July;21(5):709-24.

46. Kuoppala J, Lamminpaa A, Liira J, Vainio H. Leadership, job well-being, and health effects: A systematic review and a meta-analysis. The Journal of Occupational and Environmental Medicine 2008 August;50(8):904-15.

47. Dickson G, Lindstrom R. Systems Transformation: LEADS in a Caring Environment - Leadership Capabilities Framework. Victoria, Canada: Leaders for Life; 2010.

48. Canadian Health Leadership Network. A Canadian Health Leadership Strategy: Moving Forward. Ottawa, Canada: Canadian Health Leadership Network; 2014.

49. Carriere B, Muise M, Cummings G, Newburn-Cook C. Healthcare succession planning: An integrative review. The Journal of Nursing Administration 2009;39(12):548-55.

50. Maenpaa T, Suominen T, Asikainen P, Maass M, Rostila I. The outcomes of regional healthcare information systems in health care: A review of the research literature. International Journal of Medical Informatics 2009 November;78(11):757-71.

51. Holleman G, Poot E, Mintjes-de Groot J, van Achterberg T. The relevance of team characteristics and team directed strategies in the implementation of nursing innovations: A literature review. International Journal of Nursing Studies 2009;46(9):1256-64.

52. Cummings G, Lee H, Macgregor T, Davey M, Wong C, Paul L et al. Factors contributing to nursing leadership: A systematic review. Journal of Health Services Research and Policy 2008;13(4):240-8.

53. Lartey S, Cummings G, Profetto-McGrath J. Interventions that promote retention of experienced registered nurses in health care settings: A systematic review. Journal of Nursing Management 2013.

APPENDICES

The tables in the appendices provide detailed information about the systematic reviews identified for the antecedents and consequences of leadership and for each element of a potentially comprehensive approach for improving leadership capacity. Each row in a table corresponds to a particular systematic review and, in the case of reviews about approach elements, the reviews are organized by element (first column). The focus of the review is described in the second column. Key findings from the review that relate to the approach element 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 health 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.

Columns 6-8 convey information about the utility of the review in terms of local applicability (i.e., the proportion of studies that were conducted in Canada), applicability concerning prioritized groups (i.e., the proportion of studies included in the review that deal explicitly with one of the prioritized groups), and issue applicability (i.e., the proportion of studies focused on leadership). A similar approach is taken for economic evaluations and costing studies.

In the case of reviews about the antecedents and consequences of leadership, column 9 (appendix 2), columns 9-10 (appendix 1) and columns 9-11 (appendix 3), provide additional details about key findings.

All of the information provided in the tables in the appendices was taken into account by the issue brief's authors in compiling Tables 10-12 in the main text of the brief.

Appendix 1: What is known from systematic reviews about the factors associated with successful leadership, or about strategies to enhance leadership capacity

Title	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 one of the prioritized groups	Proportion of studies that focus on leadership	Factors found to be associated with successful leadership	Strategies found to enhance leadership capacity
Factors contributing to nursing leadership: A systematic review(27)	Examining the factors that contribute to nursing leadership and the effectiveness of educational interventions in developing leadership behaviours among nurses.	Studies that examined the influence of a leadership development program reported significant increases in leadership behaviours post-intervention. However, the authors noted that the positive results should be viewed with cautious optimism. Researchers pointed to the importance of modelling in a leaders' role. As leaders learn new skills, they should demonstrate, model and use these skills in the practice setting. Furthermore, there is evidence that the financial resources invested in educational programs for leadership competencies development are well	2006	4/9 (AMSTAR rating from Program in Policy Decision-making)	2/24	0/24	0/24	Factors that were reported to be associated with successful leadership include the following: modelling leadership behaviours, leadership style, structuring and consideration behaviours, managerial competencies, role-taking and effectiveness, previous nursing education, personality traits (openness, extroversion and motivation), leadership motivation, being older, facilitative leadership style, overall organizational climate,	Not reported in detail

Title	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 one of the prioritized groups	Proportion of studies that focus on leadership	Factors found to be associated with successful leadership	Strategies found to enhance leadership capacity
		placed. There is evidence that nursing leaders with higher levels of education and experience lead to increased leadership effectiveness. These results suggest the length of time in a leadership role and practices can promote leadership competency. Contact between leader and followers is an important step to provide opportunities for both parties to use and develop their leadership skills.						performance feedback, educational activities (both formal and informal).	
A comprehensive systematic review of evidence on developing and sustaining nursing leadership that fosters a healthy work environment in health care: A systematic	The objective of the review was to appraise and synthesize the best available evidence on the feasibility, meaningfulness and effectiveness of nursing leadership attributes that contribute to the development and sustainability of nursing leadership	Nursing leadership is identified as a key issue in addressing the shortage of nurses. The review considered interpretive, critical and textual data to look beyond effectiveness, towards meaningfulness,	2003	10/10	7/44	5/44	44/44	The following factors were identified: collaboration; leader education; leader emotional intelligence; creating a positive work climate; professional development for leaders; leaders' role in the	Not reported in detail

Title	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 one of the prioritized groups	Proportion of studies that focus on leadership	Factors found to be associated with successful leadership	Strategies found to enhance leadership capacity
review(28)	to foster a healthy work environment.	feasibility, and applicability. There is no specific style or attribute of a leader that necessarily leads to a healthy work environment. Four leadership styles were positively associated with patient quality of life: participatory, consultative transformational and transactional. Among these styles, transformational leadership was associated with the most positive outcomes. Besides leadership style, certain behaviours and characteristics of leaders demonstrated						professional development of their staff; and organizational structure that enables leaders to better support their staff.	

Title	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 one of the prioritized groups	Proportion of studies that focus on leadership	Factors found to be associated with successful leadership	Strategies found to enhance leadership capacity
		correlations with positive outcomes. These included motivation, consideration, trust, flexibility, respect and support. Leaders who seemed to create a healthy working environment were supportive of professional growth among staff. Encouraging multi-professional collaboration was seen as important for those in leadership roles.							
Attitudes of medical students to medical leadership and management: A systematic review to inform curriculum development(30)	The review focused on what is known concerning the knowledge, skills and attitudes of medical students regarding leadership and management. Authors reported the results pertaining to the	Students were found to value guidelines, audit and quality-improvement techniques. There was found to be mixed attitudes towards the principles of	2009	6/9	0/26	0/26	Not reported in detail	Not reported in detail	Not reported in detail

Title	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 one of the prioritized groups	Proportion of studies that focus on leadership	Factors found to be associated with successful leadership	Strategies found to enhance leadership capacity
	attitudes of students to provide evidence to inform curriculum development in this developing field of medical education.	managed care among students. The authors suggest that this may reflect the current lack of emphasis given to leadership and management within medical education. In general, students have positive attitudes about multidisciplinary teams and believe that doctors should lead these teams. Doctors are increasingly seen as needing to develop leadership and management skills.							
Emotionally intelligent nurse leadership: A literature review study(29)	The aim of this review was to establish a synthesis of the literature on the theoretical and empirical basis of emotional intelligence and it's	Self-awareness was found to enable one to become emotionally intelligent, and also provides the ability to connect the thoughts, emotions	2007	6/9	0/18	Not reported in detail	18/18	Factors identified were: self-awareness, encouragement, positive expectations, opportunities to learn new skills,	Not reported in detail

Title	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 one of the prioritized groups	Proportion of studies that focus on leadership	Factors found to be associated with successful leadership	Strategies found to enhance leadership capacity
	linkage to nurse leadership, focusing on subjective well-being and professional development.	and actions of nurses in a leadership role with staff. Leaders with emotional intelligence can foster an awareness of what a team is able to create through encouragement, positive expectations and opportunities to learn new skills. They value personal responsibility, innovation and initiative. Emotionally intelligent leaders use self-control against criticism and feel less threatened by potential changes, thereby stimulating creativity among team members. Emotional						accepting change/promot-ing creativity, the ability to perceive, express and manage emotions of oneself and others.	

Title	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 one of the prioritized groups	Proportion of studies that focus on leadership	Factors found to be associated with successful leadership	Strategies found to enhance leadership capacity
		intelligence might offer a framework for professional development, leadership capacity, and educational development among nurses. The ability to perceive, express and manage emotions of oneself and others is the cornerstone of developing leadership skills to promote both intellectual and emotional growth. Emotional intelligence was associated with positive empowerment processes as well as positive organizational outcomes.							
Enhancing nursing leadership in long-term care. A review of the	The review focuses on examining programs designed to enhance nursing leadership in long-term care, the	Researchers found little evidence to support the general consensus that leadership skills are	2007	4/9 (AMSTAR rating from Program in Policy Decision-making)	0/15	Not reported in detail	Not reported in detail	Factors found included: communication, inspiration/motivation, conflict	Strategies found to enhance leadership capacity included:

Title	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 one of the prioritized groups	Proportion of studies that focus on leadership	Factors found to be associated with successful leadership	Strategies found to enhance leadership capacity
literature(26)	outcomes associated with leadership in long-term care, and outlining recommendations for programs to enhance nursing leadership in nursing home settings.	important for nursing home nurses. Although some leadership enhancement programs appear promising (e.g., Learn, Empower, Achieve, and Produce), there is insufficient strong evaluative data to adopt any particular program. Researchers recommend that quality-improvement initiatives in nursing homes should include provision for leadership enhancement, specifically including: 1) content on interpersonal skills, clinical skills, organizational skills and management skills; 2) specific leadership competencies for nurses at each level in the organization; 3) leadership enhancement that is tailored to the needs of those in different						resolution skills, relationship building skills, and self-awareness.	strategic planning, policy development, negotiation, team building, adopting and implementing change theory, recruitment/ retention strategies, human resources policies and procedures, regulatory compliance, financial/bud-getary planning, employee supervision/ mentoring, and quality improvement.

Title	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 one of the prioritized groups	Proportion of studies that focus on leadership	Factors found to be associated with successful leadership	Strategies found to enhance leadership capacity
		settings; 4) an educational component as well as ongoing mentorship; and 5) plans for systematically evaluating the effectiveness and outcomes.							

Appendix 2: What is known from systematic reviews about the effects of leadership on organizational and management outcomes

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on organizational and/or management outcomes
A critical review of the research literature on Six Sigma, Lean and StuderGroup's Hardwiring Excellence in the United States: The need to demonstrate and communicate the effectiveness of transformation strategies in healthcare(39)	The review focused on the effectiveness of three popular healthcare transformational strategies: Six Sigma, Lean/Toyota Production System, and Studer's Hardwiring Excellence	Reviewed literature reported that transformational strategies are successful in improving certain health-related processes and outcomes, and that their applications are diverse. However, it was noted that very few articles met inclusion criteria, and the few that did had methodological limitations. In addition, there was no substantial evidence for lasting effects, and changes in organizational cultures were not considered.	2007	1/10 (AMSTAR rating from Program in Policy Decision-making)	0/19	9/19	0/19	These leadership/management strategies are helpful in promoting organizational transformation, but there was no specific discussion of how leadership (in and of itself) affected organizational transformation.
Leading improvement (35)	The review aimed to provide informed guidance pertaining to safety and quality improvement,	Clinician leaders play a role in improving healthcare provision, but their influence is limited. In addition, senior leaders are not the only ones who must engage in a leadership position.	Not reported	1/9 (AMSTAR rating from Program in Policy Decision-making)	Not reported	Not reported	Not reported	The leadership role of senior management is essential for quality and safety improvement. Lack of leadership is associated with low-quality services. However, the role of senior leaders is more

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on organizational and/or management outcomes
	as well as evidence-based materials for leadership education programs.	A "best evidence guidance" is provided as a checklist for senior leaders. The need for further leadership research is reported, especially the need for observational/controlled studies.						limited in healthcare than in any other sector.
Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review(32)	The review focused on examining the relationships between different styles of leadership and outcomes for the nursing workforce and their work environments	In general, relationally focused leadership practices demonstrate more frequent and positive outcomes than task-focused leadership styles. When healthcare leaders focus primarily on the task to be completed, such as in dissonant leadership, they often fail to develop or maintain relationships with staff members or to be tuned to their emotional needs. On the other hand, by tuning in to the emotional needs of staff, leaders work with others to understand their issues, concerns. As healthcare systems face a shortage of leaders,	2009	5/9 (AMSTAR rating from Program in Policy Decision-making)	7/53	Not reported in detail	53/53	Relationally-focused leadership, as opposed to task-focused, can lead to improved completion of tasks. Factors that negatively influence a nurse's relationship with his or her leader may contribute to poor patient outcome. In addition, effective leadership may help improve nurse retention.

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on organizational and/or management outcomes
		nurses and other health professionals, these strategies become crucial to ensure effective leadership.						
The influence of nursing leadership on nurse performance: A systematic literature review(33)	The review focused on exploring leadership factors that influence nurse performance, and specifically, the role that nursing leadership behaviours play in nurses' perceptions of performance motivation	This review examined the relationship between factors that nurses perceive as influencing their motivation to perform. Nurses did not directly perceive nurse leaders as influencing their motivation to perform. Nursing leadership was found to have a direct influence on four of the factors nurses perceive as influencing their motivation to perform: autonomy, relationship building, resource accessibility and nursing leadership practices. As a result, researchers suggest nursing leadership has an indirect influence on nurses' perceptions of factors influencing their motivation to perform.	Not reported in detail	5/10 (AMSTAR rating from Program in Policy Decision-making)	4/8	0/8	4/8	Nurse leadership has direct influence on the following four factors, which are perceived by other nurses to improve their performance: autonomy, relationship building, resource accessibility, and nursing leadership practices. Interestingly, nurses do not perceive senior leaders to have an influence on their motivation to perform.
Understanding the components of quality improvement collaboratives: A systematic literature review(34)	The review focused on examining common components of quality-improvement	Researchers identified 14 cross-cutting structural and process-oriented components, which included: in-person learning sessions, telephone meetings, data	2012	4/11 (AMSTAR rating from Program in Policy Decision-making)	Not reported in detail	0/20	2/20	Leadership involvement in the execution of QICs can help improve the goals of these collaboratives and similar approaches.

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on organizational and/or management outcomes
	collaboratives (QIC) in healthcare and exploring relations between QIC components and outcomes at the patient or provider level.	reporting, feedback, training in QI methods and use of process-improvement methods. Each included study implemented six or seven QIC components on average. Although some studies reported positive findings for provider outcomes, these authors stressed that the results should be taken with caution as the outcome measures were largely derived from medical records and did not directly assess changes in provider behaviour. Researchers suggest future research to continue studying the effectiveness of QIC, the competence and skill of the QIC faculty and the quality of implementation of QIC components.						QICs may contribute to change sustainability, overcoming implementation barriers, promoting continuous learning, and fostering inter-organizational support.
A scoping literature review of collaboration between primary care and public health(40)	The review focused on building successful collaborations between primary care (PC) and public health	Successful collaboration was thought to occur when there were improvements in health-related outcomes and health access, as well as reductions in health disparities. Organizational changes such as team	2008	4/10 (AMSTAR rating from McMaster Health Forum)	Not reported in detail	Not reported in detail	Not reported in detail	Strong leadership from policymakers is needed to support collaboration between PC and PH. The focus should be on enhancing communication and cooperation. Leaders from both PC and PH

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on organizational and/or management outcomes
	(PH) outcomes of these collaborations, and success markers.	dynamic improvement, implementation of collaborative initiatives, and sustained programs aided in the collaboration process. At the interactional level, collaboration improved with better health-related knowledge, attitudes, behaviours and capacities.						must be engaged in the process of unifying the vision of both sectors.
Factors affecting implementation of accreditation programs and the impact of the accreditation process on quality improvement in hospitals: A SWOT analysis(36)	The review focused on identifying factors that influence implementation of hospital accreditation programs and assessing the impact of the accreditation process on quality improvement in public hospitals.	Internal positive factors that may facilitate successful implementation of accreditation programs are: increased staff engagement and communication, multidisciplinary team building, positive change in organizational culture, enhanced leadership and staff training, increased integration and utilization of information, and increased resources dedicated to continuous quality improvement (CQI). Barriers include organizational resistance to change, increased staff workload, lack of awareness on CQI, insufficient staff training	2011	3/9 (AMSTAR rating from Program in Policy Decision-making)	Not reported in detail	0/26	3/26	Enhanced leadership is one of many factors that can facilitate the successful implementation of accreditation programs.

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on organizational and/or management outcomes
		and support for CQI, lack of applicable accreditation standards for local use and lack of performance outcome measures. Researchers identified the need for a process of political, social and professional preparation before starting any policy-planning process.						
The influence of context on quality improvement success in health care: A systematic review of the literature(31)	The review focused on examining contextual factors associated with quality improvement (QI) success, and understanding the current stage of development of this field of research.	Researchers identified more than 66 contextual factors that could relate to QI success. Out of these factors, organizational characteristics, leadership from top management, competition, organizational culture, years involved in QI, and data infrastructure/information systems were predominantly examined in studies. With the exception of ownership, teaching status and competition, all of the factors generally influenced QI success. Current research suffers from conceptual ambiguity and methodological weaknesses, which include the use of poorly validated measurement instruments,	2009	7/10 (AMSTAR rating from Program in Policy Decision-making)	Not reported in detail	0/47	0/47	Strong leadership was reported to be strongly associated with high-performing projects, a team's perception of success, and team effectiveness. In general, strong leadership is one of the factors most consistently associated with QI success.

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on organizational and/or management outcomes
		the failure to use multivariable analyses, and the use of subjective measures of QI success.						
Techniques to aid the implementation of novel clinical information systems: A systematic review(41)	The focus of this review was on identifying and evaluating techniques that aid the implementation of novel clinical information systems (CIS) within healthcare settings.	There is some evidence for the effectiveness of five techniques mentioned in the review for CIS implementation: 1) system piloting; 2) eliciting acceptance; 3) use of stimulation; 4) training and education; and 5) provision of incentives. Positive impacts on clinical effectiveness were linked with the completion of tasks on the CIS, diagnostic accuracy and error rates. In one study, it aimed to bridge the gap between user dissatisfaction and satisfaction by focusing on eliciting user acceptance and engagement with clinicians. User dissatisfaction may have stemmed from the formalized lack of	2013	3/9 (AMSTAR rating from Program in Policy Decision-making)	1/18	1/18	1/18	The authors suggest further assessment of the role of clinical leadership and its ability to play many roles in the CIS implementation. This includes clear specifications for the CIS design team, facilitation of system piloting and the development of communication between clinical users and technical developers. There is some evidence to suggest clinical leadership to be instrumental in implementing interventions in the healthcare system.

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on organizational and/or management outcomes
		support from clinicians within the implementation program. The authors state the role of leadership should be further assessed and evaluated in the context of CIS implementation.						
Can knowledge management enhance technology adoption in healthcare? A review of the literature(37)	The purpose of this review was to identify that there is no single knowledge-related 'magic bullet' in order to develop an analytical framework for the future assessment of knowledge-based interventions and their impact on technology adoption.	The review demonstrates little focus on the association between knowledge management and technology adoption. The authors note the major gap between the impact of networks and leadership development. The findings also suggest that there is a shortage of data related to the efficiency of knowledge management interventions, which reflects the difficulty of generating evidence base for this study.	2009	1/9 (AMSTAR rating from Program in Policy Decision-making)	Not reported in detail	Not reported in detail	Not reported in detail	Leadership development programs may facilitate technology adoption. Leadership from all levels of organization may facilitate network development and increase tacit knowledge exchange.

Appendix 3: What is known from systematic reviews about the effects of leadership on achieving the 'Triple Aim' goals

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on each of the 'Triple Aim' goals		
								Improving the patient experience of care (including quality and satisfaction)	Improving the health of populations	Reducing the per capita cost of health care
The relationship between nursing leadership and patient outcomes: A systematic review(44)	The purpose of the review was to examine findings relating to the relationship between nursing leadership and patient outcomes.	There is significant evidence to suggest positive association between positive leadership behaviours, styles or practices and increased patient satisfaction. The findings suggest that an emphasis on developing transformational nursing leadership is vital to improving patient outcomes. Researchers decided on four key themes: 1) patient satisfact;on, 2) patient mortality and patient safety outcomes; 3) adverse events; and 4) complications.	2005	5/10 (AMSTAR rating from Program in Policy Decision-making)	1/7	1/7	4/7	Two of the three studies demonstrated an increase in patient satisfaction with significant association with positive leadership behaviours. The nurse manager span of control had a moderating influence on the relationship between leadership style and patient satisfaction. The researchers note a decline in positive effects of leadership style on patient satisfaction with a wide span of control (total number of staff reporting directly to the manager).	Three studies found that patient adverse events and complications in nursing home residents were reduced with positive leadership. Transfor-mational and resonant leadership were associated with lower patient mortality in four studies. Positive leadership practices include: communication openness, formalization, participation in decision-making and relationship-	Not reported in detail

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on each of the 'Triple Aim' goals		
								Improving the patient experience of care (including quality and satisfaction)	Improving the health of populations	Reducing the per capita cost of health care
									oriented leadership.	
The relationship between nursing leadership and patient outcomes: A systematic review update(45)	This study was an update of a systematic review(44) that examines the relationship between nursing leadership practices and patient outcomes.	There is evidence to suggest positive relationship between positive leadership and higher patient satisfaction, lower patient mortality and medication errors, restraint use and hospital-acquired infection. Outcomes were grouped into five categories: 1) patient satisfaction; 2) patient mortality; patient safety outcomes; 3) adverse events; 4) complications; and 5) patients' healthcare utilization.	2013	5/10 (AMSTAR rating from Program in Policy Decision-making)	Not reported in detail	0/13	13/13	Four studies showed significant associations between leadership and increased patient satisfaction. A study found that family satisfaction with resident care was related to task-oriented leadership due to facilitating patient care by providing direction, clarification of tasks and clear work expectations. Two studies did not demonstrate significant findings for the effects of leadership on patient healthcare utilization. However, one study found manager support to be associated with a lower patient length of stay through the		Not reported in detail

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on each of the 'Triple Aim' goals		
								Improving the patient experience of care (including quality and satisfaction)	Improving the health of populations	Reducing the per capita cost of health care
								human resource indicators of lower absenteeism, overtime and nurse-to-patient ratio.		
Leadership, job well-being, and health effects: A systematic review and a meta-analysis (46)	This systematic review aimed to determine the association between leadership and well-being at work and work-related health.	There is moderate evidence to suggest leadership is associated with job well-being. However there is weak evidence to suggest leadership is associated with job satisfaction, and an unclear relationship between job performance and leadership.	2005	5/11 (AMSTAR rating from Program in Policy Decision-making)	0/27	Not reported in detail	27/27	Not reported in detail	Not reported in detail	Not reported in detail
Emotionally intelligent nurse leadership: A literature review study(29)	The focus of this review was on establishing a theoretical and empirical basis for emotional intelligence and its linkage to nurse leadership, focusing on subjective	Emotional intelligent nurse leadership, characterized by self-awareness and supervisory skills, was associated with positive empowerment processes and organizational outcomes. There was significant evidence that	2007	6/9 (AMSTAR rating from Program in Policy Decision-making)	0/18	0/18	18/18	It is reported that leaders with high emotional intelligence make a greater number of rational decisions, which allows a productive assessment of the emotional side of their patients.	Not reported in detail	Not reported in detail

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on each of the 'Triple Aim' goals		
								Improving the patient experience of care (including quality and satisfaction)	Improving the health of populations	Reducing the per capita cost of health care
	well-being and professional development.	empathetic concern, perspective taking and empathetic match showed positive correlation with leadership. It is suggested that the most effective leaders were characterized by four leadership styles: visionary, coaching, affiliative and democratic. Emotional intelligence nurse leaders provide an authentic and supportive role in addition to fostering a healthy environment.								
Local opinion leaders: Effects on professional practice and health care outcomes(43)	The purpose of the review was to assess the effectiveness of the use of local opinion leaders in improving	The authors conclude that opinion leaders may successfully promote evidence-based practice, however, with varied effectiveness. Due to the few studies using	2009	10/10 (AMSTAR rating from Program in Policy Decision-making)	6/18	0/18	0/18	Not reported in detail	Not reported in detail	Not reported in detail

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on each of the 'Triple Aim' goals		
								Improving the patient experience of care (including quality and satisfaction)	Improving the health of populations	Reducing the per capita cost of health care
	professional practice and patient outcomes.	this method, the effectiveness and activities of opinion leaders were not clearly described. The authors suggest further studies to ensure a detailed description of the intervention and identifying the context in which opinion leaders are most effective.								
Non-technical skills training to enhance patient safety: A systematic review(42)	The focus of this systematic review was on investigating non-technical skills training and its educational interventions.	Five themes were generated from the review: 1) communication; 2) error; 3) information management; 4) teamwork and leadership; and 5) situational awareness. The lack of a theoretical model to guide non-technical skills-based patient safety training may reflect the deficiency within CRM training. The measured	2011	10/10 (AMSTAR rating from Program in Policy Decision-making)	0/22	0/22	3/22	Fostering joint professional responsibility and teamwork may improve patient safety.	Not reported in detail	Not reported in detail

Title	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 one of the prioritized groups	Proportion of studies that focused on leadership	Effects of leadership on each of the 'Triple Aim' goals		
								Improving the patient experience of care (including quality and satisfaction)	Improving the health of populations	Reducing the per capita cost of health care
		outcomes and the strength of the conclusions were variable, thus the methodological quality was poor for the reported studies on specific interventions. The authors suggest further research should explore and clearly describe interventions and its effectiveness and impact on patient outcomes.								

Appendix 4: Systematic reviews relevant to Element 1 - Create and implement a pan-Canadian initiative - system and organization-wide - that will support a dramatic enrichment of leadership capacity

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 one of the prioritized groups	Proportion of studies that focused on supporting research use
Undertake a consultative process to develop a pan-Canadian health leadership initiative	The purpose of the scoping literature review was to determine what is known about: 1) structures and processes required to build successful collaborations between primary care (PC) and public health (PH); 2) outcomes of such collaborations; and 3) markers of their success.(40)	The systematic-level factors that were found to influence collaboration included government involvement, policy and fit with local needs, funding and resource factors, power and control issues, and education and training. At the organizational level, a lack of a common agenda, knowledge and resource limitations, leadership, management and accountability issues, geographic proximity of partners, and shared protocols, tools and information sharing were influential factors To have a shared purpose, philosophy, clearly defined roles and positive relationships, and effective communication and decision-making strategies were found to be influential interpersonal factors. Benefits of collaboration that were reported include improved chronic disease management, communicable disease control and maternal child health.	2008	4/10	Not reported in detail	Not reported in detail	Not reported in detail

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 one of the prioritized groups	Proportion of studies that focused on supporting research use
		The authors suggest that future research efforts should be directed towards identifying the contexts and conditions for which the potential benefits of collaboration between primary care and public health overshadow the related costs and risks.					
Promote a national dialogue about the pros and cons of • voluntary turn-over (especially when it's related to perceptions about how to 'get ahead' most quickly and to burn-out) and imposed turn-over (especially when it's related to 'scape-goating' for a system failure) • positioning the use of funds to support the development of leadership capacity as coming at the expense of paying for front-line care rather than as an investment in a social good • changes in the degree of centralization and decentralization of decision authority in terms of the	The purpose of this integrative review was to aid leaders and managers to use succession planning as a tool in their recruitment, retention, mentoring, and administration activities, and also provide insights for future development of healthcare succession planning frameworks.(49)	Comparable to business succession planning, healthcare succession-planning models stress the importance of articulating future needs and identifying future leaders. All business models reviewed require candidacy development plans and a process for evaluation to monitor the performance of the succession planning framework. Key components of succession planning include strategic planning, identifying the desired skills and needs for succession candidates, finding and mentoring succession candidates, resource allocation toward leadership development, aligning learning and development needs of	2008	3/9	Not reported in detail	Not reported in detail	Not reported in detail

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 one of the prioritized groups	Proportion of studies that focused on supporting research use
implications for leadership and for developing leadership capacity • having explicit or concentrated organizational authority for ensuring that coaching, mentoring and succession planning is in place for leaders at all organizational levels**,** and not having such authority supported by a dedicated pan-Canadian organization • having distributed policy authority among a range of leaders in the country's health system in order to avoid incentives to engage in scapegoating and other harmful behaviours		succession candidates with organizational growth requirements, and evaluation. In all of the reviewed frameworks, strategic planning is a prerequisite to succession planning. Chief nursing officers and healthcare leaders should implement succession planning to avoid knowledge loss. Currently, there is no best-practices framework for the implementation of succession planning in healthcare contexts. Establishing team building, which wasn't identified specifically within the reviewed literature, can facilitate important personal interactions that encourage predecessors and successors to engage in an evaluation process that addresses the needs of stakeholders.					

Appendix 5: Systematic reviews relevant to Element 2 – Create and implement a pan-Canadian succession-planning project

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 one of the prioritized groups	Proportion of studies that focused on supporting leadership
Develop curriculum standards for health leadership at the undergraduate and graduate level	The review focused on what is known concerning the knowledge, skills and attitudes of medical students regarding leadership and management. The results pertaining to the attitudes of students were intended to provide evidence to inform curriculum development in this developing field of medical education.(30)	Students valued guidelines, audit and quality-improvement techniques. There was found to be mixed attitudes to the principles of managed care among students. The authors suggest that this may reflect the current lack of emphasis given to leadership and management within medical education. In general, students have positive attitudes about multidisciplinary teams and believe that doctors should lead these teams. Doctors are increasingly seen as needing to develop leadership and management skills.	2009	6/9	0/26	0/26	2009
Establish a credentialing mechanism for health system leaders	No systematic reviews were identified.	N/A	N/A	N/A	N/A	N/A	N/A
Encourage CIHI to institute a continuously updated database with which to monitor leadership capacity and to conduct periodic leadership gap analyses	The focus of this systematic review was on identifying and evaluating techniques that aid the implementation of novel clinical information systems	There is some evidence for the effectiveness of five techniques mentioned in the review for CIS implementation: 1) system piloting; 2) eliciting acceptance;	2013	3/9 (AMSTAR rating from Program in Policy	1/18	1/18	1/18

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 one of the prioritized groups	Proportion of studies that focused on supporting leadership
	(CIS) within healthcare.(41)	3) use of stimulation; 4) training and education; and 5) provision of incentives. Positive impacts on clinical effectiveness were linked with the completion of tasks on the CIS, diagnostic accuracy and error rates. In one study, it aimed to bridge the gap between user dissatisfaction and satisfaction by focusing on eliciting user acceptance and engagement with clinicians. User dissatisfaction may have stemmed from the formalized lack of support from clinicians within the implementation program. The authors state the role of leadership should be further assessed and evaluated in the context of CIS implementation.		Decision-making)			
Conduct periodic human resource planning to address gaps in leadership capacity	No systematic reviews were identified.	N/A	N/A	N/A	N/A	N/A	N/A
Create a 'Canadian leadership passport' (i.e., a centralized tracking system for education and continuing professional development related to health leadership)	No systematic reviews were identified.	N/A	N/A	N/A	N/A	N/A	N/A
Develop and maintain a continuously updated	The purpose of the review was	Four different types of regional	2008	3/9	1/24	0/24	0/24

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 one of the prioritized groups	Proportion of studies that focused on supporting leadership
inventory for professional development, coaching and mentoring programs focused on health leadership	to find out how health information systems have been implemented, and the outcomes.(50)	health information systems were found: 1) Regional Health Information Systems (RHIS); 2) The Regional Healthcare Information Organizations (RHIO); 3) the Disease Specific Regional Healthcare Information System (D-RHIS); and 4) Integrated Regional Healthcare Information System (I-RHIS). Main outcomes of RHIS included better flow of information, better collaboration, process design, and usability, and changes in organization culture. The review found differences which concern the RHIS in organizational culture, vision and expectations of leadership, and the non-existence of a consistent strategic plan. There was poor evidence on the system usability of the RHISs due to lack of region-wide management systems or user-friendliness.		(AMSTAR rating from Program in Policy Decision-making)			
Increase the scale of existing health leadership programs and/or establish new ones when gaps are identified	No systematic reviews were identified.	N/A	N/A	N/A	N/A	N/A	N/A

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 one of the prioritized groups	Proportion of studies that focused on supporting leadership
Evaluate the impacts of health leadership programs on health system performance	The focus of the review was on examining the relationships between different styles of leadership and outcomes for the nursing workforce and their work environments.(32)	In general, relationally focused leadership practices demonstrate more frequent and positive outcomes than task-focused leadership styles. When healthcare leaders focus primarily on the task to be completed, such as in dissonant leadership, they often fail to develop or maintain relationships with staff members or to be tuned to their emotional needs. On the other hand, by tuning in to the emotional needs of staff, leaders work with others to understand their issues, concerns. As healthcare systems face a shortage of leaders, nurses and other health professionals, these strategies become crucial to ensure effective leadership.	2009	5/9 (AMSTAR rating from Program in Policy Decision-making)	7/53	Not reported in detail	53/53
	The aim of the review was to explore leadership factors that influence nurse performance, and specifically, the role that nursing leadership behaviours play in nurses' perceptions of performance motivation.(33)	This review examined the relationship between factors that nurses perceive as influencing their motivation to perform. Interestingly, they did not directly perceive nurse leaders as influencing their motivation to perform. Yet, nursing leadership has a direct influence on four of the factors nurses perceive as influencing their motivation to perform: autonomy, relationship building, resource accessibility and nursing leadership practices. As a result, researchers suggest nursing leadership has an indirect influence	Not reported in detail	5/10 (AMSTAR rating from Program in Policy Decision-making)	4/8	0/8	4/8

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 one of the prioritized groups	Proportion of studies that focused on supporting leadership
		on nurses' perceptions of factors influencing their motivation to perform.					
	The purpose of the review was to examine the effectiveness of strategies for retaining experienced Registered Nurses.(53)	Studies included in this review showed little evidence of the effectiveness of any specific intervention targeting the retention of experienced nurses. Retention is influenced by several factors, such as flexible scheduling, money, health benefits, mentorship opportunities, organizational focus on retention, management practices and recognition, work environment and retirement plans. However, this review does not point to one particular intervention that will positively influence experienced nurse retention. Researchers showed that a combination of interventions is needed in healthcare settings to help increase the retention of their experienced nursing staff. Researchers suggest further research to focus on well-designed studies that examine the effectiveness of interventions that increase retention of experienced nursing staff.	Not reported in detail	4/9 (AMSTAR rating from Program in Policy Decision-making)	1/12	0/12	1/12
	The aim of the review was to examine the common components of qualityimprovement collaboratives (QIC) in healthcare, and exploring relations between QIC components and outcomes at the patient or provider level.(34)	In this review, researchers identified 14 cross-cutting structural and process-oriented components, which includes in-person learning sessions, telephone meetings, data reporting, feedback, training in QI methods, and use of	2012	4/11 (AMSTAR rating from Program in Policy Decision-making)	Not reported in detail	0/20	2/20

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 one of the prioritized groups	Proportion of studies that focused on supporting leadership
		process-improvement methods. Each study implemented six or seven QIC components on average. Although some studies reported positive findings for provider outcomes, these results should be taken with caution as the outcome measures were largely derived from medical records and did not directly assess changes in provider behaviour. Researchers suggest future research to continue studying the effectiveness of QIC, the competence and skill of the QIC faculty, and the quality of implementation of QIC components.					
	The purpose of the review was to identify factors that influence implementation of hospital accreditation programs, and assessing the impact of the accreditation process on quality improvement in public hospitals.(36)	The analysis aims to identify the internal strengths and weakness of an organization, and the external market opportunities and threats. Some internal positive factors that may facilitate successful implementation of accreditation programs are increased staff engagement and communication, multidisciplinary team building, positive change in organizational culture, enhanced leadership and staff training, increased integration and utilization of information, and increased resources dedicated to continuous quality improvement (CQI). Barriers include organizational	2011	3/9 (AMSTAR rating from Program in Policy Decision-making)	Not reported in detail	0/26	3/26

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 one of the prioritized groups	Proportion of studies that focused on supporting leadership
		resistance to change, increased staff workload, lack of awareness on CQI, insufficient staff training and support for CQI, lack of applicable accreditation standards for local use, and lack of performance outcome measures. Researchers identify the need for a process of political, social and professional preparation before starting any policy-planning process.					
	The review examined the contextual factors associated with quality improvement (QI) success, and understanding the current stage of development of this field of research.(31)	Researchers identified more than 66 contextual factors that could relate to QI success. Out of these factors, organizational characteristics, leadership from top management, competition, organizational culture, years involved in QI, and data infrastructure/information systems were predominantly examined in studies. With the exception of ownership, teaching status, and competition, all of the factors generally influenced QI success. Current research suffers from conceptual ambiguity and methodological weaknesses, which include the use of poorly validated measurement instruments, the failure to use multivariable analyses, and the use of subjective measures of QI success.	2009	7/10 (AMSTAR rating from Program in Policy Decision-making)	Not reported in detail	0/47	0/47
	The review examined the range of team-related characteristics or team-directed strategies that are	Due to weak research methods, the relationship between team characteristics and team-directed	2006	3/9 (AMSTAR rating from	0/9	0/9	2/9

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 one of the prioritized groups	Proportion of studies that focused on supporting leadership
	effective in improving outcomes for patients.(51)	strategies and change in healthcare is unclear. Team characteristics associated with implementation of innovations were identified in five studies, and these relate to trust and confidence, clear purpose and leadership dominate. Researchers suggest further research on team characteristics and team-directed strategies to focus on patient outcomes and time and costs invested in strategy delivery.		Program in Policy Decision-making)			
Recognize and celebrate exemplary leadership through existing and new awards	No systematic reviews were identified.	N/A	N/A	N/A	N/A	N/A	N/A

Appendix 6: Systematic reviews relevant to Element 3 – Coordinate research and knowledge-mobilization efforts about health leadership in Canada (which includes documenting and sharing best practices in leadership and leadership enhancement for health-system redesign)

Option element	Focus of systematic review/cost-effectiveness study	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on supporting leadership
Establish guidance for leadership-related terminology, critical success factors and metrics of success (or more generally for the development of the discipline of leadership)	The review aimed to provide informed guidance pertaining to safety and quality improvement, as well as evidence-based materials for leadership education programs.(35)	Clinician leaders play a role in improving health care provision, but their influence is limited. In addition, senior leaders are not the only ones who must engage in a leadership position. The leadership role of senior management is essential for quality and safety improvement. Lack of leadership is associated with low-quality services. However, the role of senior leaders is more limited in healthcare than in any other sector. A "best evidence guidance" is provided as a checklist for senior leaders. The need for further leadership research is reported, especially the need for observational/controlled studies.					
	The aim of the review was to examine the factors that contribute to nursing leadership, and the effectiveness of educational interventions in developing leadership behaviours among nurses.(27)	Studies that examined the influence of a leadership development program reported significant increases in leadership behaviours post-intervention. However, these positive results should be viewed with cautious optimism.	2006	4/9 (AMSTAR rating from Program in Policy Decision-making)	2/24	0/24	0/24

Option element	Focus of systematic review/cost-effectiveness study	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on supporting leadership
		Researchers pointed to the importance of modelling in a leaders' role. As leaders learn new skills, they should demonstrate, model and use these skills in the practice setting. Furthermore, there is evidence that the financial resources invested in educational programs for leadership competencies development are well placed. There is evidence that nursing leaders with higher levels of education and experience lead to increased leadership effectiveness. These results suggest the length of time in a leadership role and practices can promote leadership competency. Contact between leader and followers is an important step to provide opportunities for both parties to use and develop their leadership skills. .					
	The purpose of this review was to synthesize the literature on the theoretical and empirical basis of emotional intelligence and its linkage to nursing leadership.(29)	Emotional intelligence (EI) is seen as a continuum. There are eight EI competencies that significantly affect the organizational climate: developing others, teamwork, collaboration, organizational awareness, building bonds, visionary leadership, respect and open communication. In nurse leadership, a high degree of interpersonal sensitivity is valued even though it may	2007	6/9 (AMSTAR rating from Program in Policy Decision-making)	1/18	1/18	9/18

Option element	Focus of systematic review/cost-effectiveness study	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on supporting leadership
		represent a vulnerability factor in adverse situations. Findings show that leaders' EI has a positive impact on nurses' job performance and satisfaction, and it is vital to creating a supportive environment and facilitating positive empowerment processes leading to subjective well-being.					
	The aim of this review was to examine programs designed to enhance nursing leadership in long-term care, the outcomes associated with leadership in long-term care, and to outline recommendations for programs to enhance nursing leadership in nursing-home settings.(26)	Researchers found little evidence to support the general consensus that leadership skills are important for nursing-home nurses. Although some leadership enhancement programs appear promising (e.g., Learn, Empower, Achieve, and Produce), there is insufficient strong evaluative data to adopt any particular program. As a result, researchers recommend that quality-improvement initiatives in nursing homes should include provision for leadership enhancement, specifically including: 1) content on interpersonal skills, clinical skills, organizational skills and management skills; 2) specific leadership competencies for nurses at each level in the organization; 3) leadership enhancement that is tailored to the needs of those in different settings; 4) an educational component as well as ongoing mentorship; and 5) plans for systematically evaluating the effectiveness and outcomes.	N/A	N/A	N/A	N/A	N/A

Option element	Focus of systematic review/cost-effectiveness study	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada	Proportion of studies that deal explicitly with one of the prioritized groups	Proportion of studies that focused on supporting leadership
Undertake periodic priority-setting processes for research (short-term requirements for evidence briefs, medium-term requirements for systematic reviews, and long-term requirements for new primary research) and for knowledge translation	No systematic reviews were identified.	N/A	N/A	N/A	N/A	N/A	N/A
Coordinate existing research and knowledge-translation capacity in the discipline of health leadership through one or more centres of excellence	No systematic reviews were identified.	N/A	N/A	N/A	N/A	N/A	N/A
Establish a one-stop shop for research, evidence-based tools, etc., focused on health leadership	No systematic reviews were identified.	N/A	N/A	N/A	N/A	N/A	N/A

McMaster University

McMaster HEALTH FORUM

>> Contact us

1280 Main St. West, MML-417
McMaster University
Hamilton, ON Canada L8S 4L6
Tel: +1.905.525.9140 x 22121
Fax: +1.905.521.2721
Email: mhf@mcmaster.ca

>> Follow us

mcmasterhealthforum.org
healthsystemsevidence.org

tinyurl.com/mhf-iTunesU
tinyurl.com/mhf-YouTube
tinyurl.com/mhf-Facebook
tinyurl.com/mhf-Twitter

EVIDENCE >> INSIGHT >> ACTION