

Health System Reconfiguration

Creating A High Performing Healthcare System for Ontario: Evidence Supporting Strategic Changes in Ontario

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INTRODUCTION

How can Ontario achieve a high performing healthcare system that improves health outcomes and patient experiences while limiting the increases in expenditures? Significant evidence exists about the ideas, models, and structures of high performance in a range of healthcare systems. What are these ideas? How can these be applied in the Ontario context? This paper reviews the evidence on high performing healthcare systems, their characteristics, key drivers, and what Ontario can learn from them. While Ontario has demonstrated innovative initiatives that have the potential to transform our healthcare landscape, we face several barriers in scaling-up and spreading these initiatives. To scale-up, we must take a system-wide perspective on innovation and its spread (Naylor et al., 2015), foster the local skills needed to redesign care systems, and support leaders at all levels in this transformation.

Canadians are concerned about the future state of healthcare, and growing apprehensive with the limited changes at the system level to address growing needs. In shaping the future of Ontario's healthcare system, we must consider the changes required to achieve high-performance, engage staff across the system, and integrate the vision of patients, families and caregivers in developing plans to improve patient experiences and outcomes.

In what follows, we review local evidence on what patients and caregivers in Ontario's healthcare system want to experience when they receive care, the international evidence on the attributes of 'high-performing' healthcare systems that support optimal patient experience and outcomes, and the results of deliberations from expert panel discussions. This work draws on and augments foundational work by Baker and colleagues in the *Quality by Design* project (Baker, et al., 2008) that presented detailed case studies of high performing healthcare systems. Key lessons from this research were synthesized with other evidence of high performance and applied to the Canadian context. This review creates a framework for assessing policy directions and organizational strategies to guide efforts to improve health outcomes and patient experiences of care while containing costs.

METHODS

To examine attributes of high performance and how these might be realized in Ontario, this document draws from evidence of patient experiences navigating Ontario's healthcare system, a review of international evidence on high performing healthcare systems and the results of two decision-maker and one patient in-person panel consultations. Taken together, these sources provide a comprehensive examination of patient preferences and values in healthcare system encounters, the organizational and systems-level features to support high performance, and insights on new directions for Ontario drawn from health system leaders.

Evidence on patient experiences and expectations in Ontario has been informed by extensive work conducted by The Change Foundation who examined what patients and caregivers value in their experiences and encounters with the health care system. The Change Foundation consultations and review processes gathered evidence from focus groups with Ontario patients and caregivers, surveys of patients in Ontario as well as reviews of relevant literature. This evidence has been confirmed and updated with a patient and caregiver panel serving as experts and providing current insights on patient and caregiver experiences in Ontario. The panel was held in September 2015 in Toronto, and 12 patients and caregivers attended. Panelists were recruited through standing patient groups at Cancer Care Ontario,

Health Quality Ontario, Patients Canada, and The Change Foundation. In advance of the session they were provided with background materials summarizing what has been learned so far from patients and caregivers about their experiences in Ontario's healthcare system, as well as evidence on high performing health care systems. The session consisted of presentations of this material, followed by a guided discussion amongst participants to reflect on prior Change Foundation findings, as well as participants' experiences and insights as patients in Ontario's healthcare system.

To examine what organizational and systems-level features support high performance, evidence was drawn from case studies of high performing healthcare systems internationally to determine their key characteristics or attributes. Work by Baker and colleagues in *High Performing Healthcare Systems: Delivering Quality By Design* (2008) and other international studies, policy documents and reviews, was used to identify elements of a high performing healthcare system. This evidence provides an overview of key components and initiatives that drive high performance in healthcare, and the paths, processes and implements used to achieve this state.

This international evidence has been augmented with findings from the two Ontario-based decision-maker expert panel discussions held in July 2015 in Toronto. Participants were provided with background documents in advance of each meeting detailing evidence on patient experiences in Ontario and international evidence on high performance. Each session began with a summary presentation of this material, including case examples, and was followed by semi-structured discussion around characteristics of high performance, their applicability in Ontario, and the future action needed for Ontario's healthcare system to achieve a state of high performance. In total, 22 decision-makers and health system leaders participated in these sessions (12 in one group, and 10 in the second). These individuals included Presidents and CEOs of a range of healthcare organizations across Ontario, as well as senior clinicians and program directors.

PATIENT EXPERIENCES OF ONTARIO'S HEALTHCARE SYSTEM

What would a high performing healthcare system look like for patients accessing care in that system? Patients' views offer important insights into what constitutes a high performing health care system. In general, citizens in Canada are attached to and proud of their health care system, support the principles of the *Canada Health Act*, and are concerned about the future and sustainability of Canada's healthcare system (Mendelsohn, 2002). Their ongoing support for the healthcare system assumes continued improvement in the quality and accessibility of health care, and sustainability of the system (Soroka, 2007). While patients largely support the current organization and financing of Canada's health system, they have important contributions to make reflecting their care experiences and their values.

Examining the care experiences of patients and their caregivers in Ontario, The Change Foundation has identified a number of negative and positive experiences for patients as they navigate Ontario's healthcare system (The Change Foundation, 2008). They have also outlined the expectations that the public should have of the healthcare system (The Change Foundation, 2011). We also know that many citizens in Ontario, whether they have interacted with the healthcare system or not, share many of these concerns (PWC & MASS LBP, 2011).

Evidence gathered by The Change Foundation indicates that in their encounters with the healthcare

system, patients and caregivers have faced several barriers, and desire better service and communication. Specifically, patients want clear, consistent, reliable and respectful communication and exchanges of information with healthcare providers. They want to be asked for relevant information only once rather than repeating themselves to many providers. Further, they want to insure that their healthcare providers are communicating with each other as well as communicating with patients (The Change Foundation 2008, 2011, 2012). Patients and caregivers also desire coordinated and connected care: they want transitions between care settings that are clear, smooth, timely, and convenient. They want a comprehensive range of care services offered to patients, and they seek a system where patients are not “lost in transition”, and are provided with the care and support services they need (The Change Foundation 2008, 2011). As well, patients and caregivers are interested in being engaged in decisions about their care, and want to feel there is a collective responsibility in meeting their care needs. Additionally, they are concerned about equity issues, and want to ensure that those who face challenges, due to geography, mental competence, or availability of a caregiver did not face barriers in accessing health care services (The Change Foundation 2008, 2011).

Many of these concerns and desires were echoed in the patient and caregiver panel session. Participants expressed a strong interest in strengthening communications between clinicians and patients, as well as improving communication at the systems and inter-organizational level. They spoke of the need for true patient-centred care, where care is focused around outcomes that patients want and is tailored to individual needs. They also expressed concerns about access and coordination issues, especially access to specialist care and overuse of emergency departments in response to uncertainties and limitations of health care services or gaps in care. Access considerations also included issues of access to community services to keep individuals at home as long as possible.

Given the many frustrations that panelists had faced, some spoke to a need for individual patient and caregiver responsibility to advocate for themselves in the healthcare system. Others, however, recognized that many individuals could not advocate for themselves, and so efforts are needed to limit the need for patients to be their own advocates. Rather, the health system should recognize and respond to patient needs. Some patients felt there should be more patient education about the healthcare system – even before services are needed. To this end, these patients and caregivers wanted to be engaged in health care – not just their own care but also at the policy level, and wanted greater transparency and accountability in the system.

In general, improved system navigation was as important for patients as the technical quality of the services they receive, perhaps because many patients assume that the quality of care will be excellent. Thus both improved patient experience and clinical and organizational excellence are necessary to ensure that patients are provided with appropriate, effective and safe care.

Overall then, patients and caregivers seek improved communications with their healthcare providers and easily navigated journeys through the healthcare system. Patients want to be involved in the design of healthcare, and are concerned about equity and access issues. To achieve this state of optimal care from a patient’s perspective, there must be a strong foundation of quality and high-performance at the organizational and systems levels. The evidence on developing and sustaining high-performance and optimizing patients’ experiences in the healthcare system provides the means to meet the goals and needs of patients.

HIGH PERFORMING HEALTHCARE SYSTEMS

There has been significant attention to studying, measuring, and analyzing high performing health systems at the organizational or systems level. Appendix 1 summarizes studies that examined high performance in healthcare systems internationally. Though this literature has been less explicit to how these system-level attributes will directly be experienced by patients, it does indicate the ways in which the organization of healthcare systems can improve and support optimal patient experiences. High performance is a product of healthcare systems that “have created effective frameworks and systems for improving care that are applicable in different settings and sustained over time” (Baker et al., 2008). There is general consensus across health system experts that maintenance of the status quo will not yield high performance, and changes should be made based on the best national and international evidence; yet, there is disagreement about the most effective and affordable means to improve performance (Baker, et al., 2008). High performing healthcare systems are thus dynamic and become high performing through ongoing and emergent processes (Bate, Mendel, & Robert, 2008).

From a review of evidence on high performance garnered from international healthcare organizations and systems, we identify and outline 12 key attributes of high performing healthcare systems. Each of the following attributes is both important in itself, and also interrelated with a number of other attributes in promoting and sustaining high performance in healthcare systems. Ultimately, no one of these organizational or systems features in isolation will produce optimal patient care and experiences. These attributes will need to be taken up together to produce patient care that is seamless and patient-centred, where outcomes are based on evidence, and delivered safely and efficiently. These processes are notably difficult to achieve, complex, and interdependent (Baker, et al., 2008), and face challenges of implementation, diffusion and sustainability (Bate, et al., 2008). They require attention to both short-term demands and the foresight to build long-term improvement goals (Baker & Denis, 2011).

12 Key Attributes of High Performing Healthcare Systems

1. Focusing on Quality and System Improvement as the Core Strategy
2. Developing Leadership Skills
3. Enhancing System Governance
4. Investing in Capacity to Support Improvement
5. Improving Accountability and Performance Measurement
6. Enabling Comprehensive Information Infrastructures
7. Strengthening Primary Care
8. Improving Integration and Care Transitions
9. Enhancing Professional Cultures and Engaging Clinicians
10. Engaging Patients, Caregivers and the Public
11. Attending to Access and Equity Issues
12. Considering Population Health and Chronic Disease Management in Care Management Strategies

1. Focusing on Quality and System Improvement as the Core Strategy

The development of an explicit quality agenda by senior leadership is a key factor in promoting a high performing healthcare system (Baker & Denis, 2011; VanDeusen Lukas et al., 2007). Leadership must develop unambiguous quality goals and support efforts to improve performance. This leadership and investment helps to prioritize quality goals across organizations and support a culture of performance improvement within healthcare systems. Quality must become a collective endeavor, enabling high performance and improvements in patient care and experiences (Bate, et al., 2008).

At the organizational level, a quality agenda includes an organization's articulation of a vision and mission, which are translated into organizational strategies. While it is common for healthcare organizations to identify quality goals, high performing healthcare organizations ensure that these goals are aligned with other priorities, linked to "big dot" measures, and communicated and monitored throughout the organization.

At the systems level, quality councils and regulatory and legislative commitments to quality can promote organizational initiatives around quality and system improvement reinforced through their capability in providing external measuring and quality directions (Denis, et al., 2011). Quality councils can set quality standards, support and monitor healthcare organizations and systems, and initiate connections between local healthcare systems and quality improvement bodies, such as the Institute for Healthcare Improvement (IHI). National or regional improvement bodies such as the former NHS Institute for Innovation and Improvement provide resources and support to local delivery organizations, supporting improvement at local levels (The King's Fund, 2010). These external bodies have the ability to standardize reporting requirements of organizations and document and publicize quality issues (Silow-Carroll, et al., 2007).

The existence of national or systems-level strategies around quality have been described as a requirement for achieving the mission of high performance, and facilitating the process to implement these initiatives (The Commonwealth Fund, 2006). This highlights the important role of governments in enabling the system requirements necessary for achieving high performance in health systems (Ham, 2010).

In Ontario, a quality agenda has been articulated in terms of a commitment to quality, and accompanying policies and infrastructures through the *Excellent Care for All Act*, passed in 2010. The Act defines a high performing health care system, where "health care organizations are responsive and accountable to the public, and focused on creating a positive patient experience and delivering high quality care". The legislation also created Health Quality Ontario (HQQ), building on the earlier Ontario Health Quality Council and other bodies, with an expanded mandate and resources. This move signaled a provincial commitment to support quality improvement, promote evidence-based healthcare, and monitor and report on health system performance and outcomes. HQQ provides key resources on quality, and quality improvement support, augmenting local initiatives and facilitating healthcare organizations and regional health systems to improve their performance.

Embedding quality improvement into healthcare systems can, however, pose several challenges. Such initiatives require additional resources. Leaders must develop strategies that are consistent and coherent across an organization or regional health system, eschewing a collection of projects. Indeed, these

initiatives may require a significant overhaul of the dominant logic of an organization or health system, necessitating cognitive shifts in key actors and a reorganization of priority areas. Despite these strategic and implementation challenges, system redesign with a focus on quality and system improvement is the key driving force in achieving high performance.

In some cases, reliance on external quality improvement agencies and public policies around improvement may come into conflict with the priorities of individual organizations. External reporting and measuring requirements must be adapted to local settings and given local meaning, with quality agendas adapted to fit their settings. As an example, Primary Care Trusts (PCTs) in the NHS were subject to annual assessments against a core set of standards. At the Birmingham East and North (BEN) PCT, national measures were adapted to fit their own scorecard and discussed regularly at their performance report updates (Baker et al., 2008)¹. This adaptation to local contexts allows both for conformity with national requirements, and locally meaningful adaptation and use of these standards to best meet the interests of the organization. Individual organizations must consider how to make local adaptations that address external requirements while also focusing on relevant local issues.

The importance of a focus on quality and system improvement was echoed in decision-maker panel discussions, where participants spoke to a need to develop an aligned, consistent, strategic plan for the healthcare system in Ontario, centering on quality and improved performance. Panelists stressed a need to facilitate and initiate action in health care improvement through the development of a system strategic plan, facilitated by a conversation amongst leaders on how to accomplish this. The current environment was described as one where many organizations are not clear on goals and where leadership actions are not always aligned. The creation of this strategic plan would require accountability mechanisms with clear expectations of performance targets for providers, organizations and the province.

Another aspect of these panel discussions on strategic plans and actions was the need for standardization and alignment in policies and agendas. Several panelists spoke to the need for greater standardization and alignment to reduce duplication within the system, allow for a sharing of services, and a common quality focus. Ideally, this standardization should simplify the healthcare system, using the best available evidence to determine what the options are, and what steps to take. To this end, panelists spoke to a need to develop capacity to adopt and implement new initiatives and develop a common focus to align models and advance strategies.

2. Developing Leadership Skills

Leaders play an important role in high performing healthcare systems, in shaping improvement strategies and implementing change within organizations and systems at large (Baker, 2011; VanDeusen Lukas, et al., 2007). Senior leadership is crucial, but leadership needs to be distributed across the system, with agreement on the methods and strategies to drive this change, and local leaders, champions, and change agents with the potential to accomplish this (Perla, Bradbury, & Gunther-Murphy, 2013; Silow-Carroll, et al., 2007).

¹ Primary care trusts in the English National Health Services were disbanded in 2013 after the passing of *Health and Social Care Act 2012* and clinical commissioning groups assumed their work.

Effective leadership must be consistent and supportive of quality improvement activities (Baker, 2011; Perla, et al., 2013). While leaders can identify models for improvement from other jurisdictions, they must adapt these to their own settings (Bate, et al., 2008). Effective leadership must also buffer and respond to external shocks and short-term factors that might undermine the success of initiatives (Baker & Denis, 2011). Leadership is thus important both within individual organizations, and at the provincial or systems level to respond effectively to external disruptions, including budget reductions and policy changes. These levels of leadership must be aligned in their strategic direction, and should include strategies for mobilization of professionals and front-line workers (Baker & Denis, 2011).

The complex nature of healthcare organizations requires distributed leadership to ensure successful system transformation. Many individuals must assume leadership roles within their individual units (Bate, et al., 2008). Physician leadership plays a particularly important role, where engaged physicians undertake leadership positions amongst other physicians and staff members (Baker, 2011; McGrath, et al., 2008).

An example of distributed leadership and its impact can be found at the Reinier de Graaf Groep hospital in the Netherlands. Leadership extended from the executive board that championed quality goals, “cluster” leaders across divisions who engaged with front line clinicians to initiate and implement quality improvement projects, and micro-system leaders who led individual quality projects. This collective leadership led to a cohesive quality process, with high levels of trust between individuals in all levels of leadership positions, and achieved quality improvement goals (Bate, et al., 2008).

Leadership changes can alter strategies, sometimes risking a loss of momentum, experience and knowledge. Clear plans for succession, identification of emerging leaders and leadership education and development can help mitigate these risks. Attention to leadership transitions and succession can strengthen prior organizational commitments and ensure continuity of a quality agenda (Baker, 2011). The Reinier de Graaf Groep example demonstrates the impact of effective leadership across an organization in helping to create a reservoir of leadership talent, not just through reliance on a singular person or executive board.

3. Enhancing System Governance

Governance structures at both the organizational and systems levels can impede or facilitate high performance. Organizational governance plays an important role in improving quality and safety, and boards need to create an environment where clinical staff and leadership are committed to quality and patient safety efforts. (Baker, Denis, et al., 2010). Governance skills are often difficult to develop, especially around quality and safety (Baker, Denis et al., 2010). Yet these skills are increasingly important to ensure consistent strategy and leadership. The success of Jönköping County Council, Sweden, in their efforts to improve performance were greatly aided by the close connection between leadership and governance, where a stable majority of politicians were elected to the Council’s assembly and led by the same Chair through the near two decade tenure of the CEO who led the initial efforts (Baker et al., 2008).

Attention to the structure and governance of a healthcare system can reduce fragmentation. The Veterans Health New England Healthcare System is one of 21 Veterans Integrated Service Networks (VISNs) in the United States, established in the mid 1990s that transformed the Veterans Health Administration (VHA) from a hospital care system to a *health* care system with a focus on integrated regional care that emphasizes primary care in the community. VISN 1 (the New England region of the VHA) has focused on standardization and systemization, developing a systems view of the network to improve patient access and flow. Through the establishment of a networked model of governance, supports were streamlined through all levels of care, promoting safety. Budgets were centralized and planning was integrated to coordinate care pathways and save resources (Baker, et al., 2008). Additional improvements in care at the VISN 1 rested on this structural foundation, highlighting the importance of enhancing or rethinking governance structures as a way to focus on system-level issues and improve patient care.

Establishing systems-level governance within healthcare can improve care, but such re-structuring can be a resource intensive process, requiring significant negotiation and stakeholder buy-in. Efforts to integrate care between sectors rely both on effective governance as well as improved communications and coordination between providers. At Jönköping County Council, integration was facilitated both by an alignment between governance and leadership in the Council and by efforts to redesign care pathways between settings. Larger, more fragmented healthcare systems face important challenges in ensuring alignment that may require stronger system governance and incentives.

Conversations around governance emerged in both decision-maker panels. Members of the first group discussed a need to rethink the structure, governance and funding of Ontario's current healthcare system and models of organizing care. This discussion was part of a larger conversation about regionalization, centralization and de-centralization of governance structures. To some extent, these discussions were echoed in the second group, though they also questioned whether changes in funding structures were sufficient to support the behaviours and culture change needed for system transformation. Decisions about the larger health care system structure need to be accompanied by decisions about capacity planning and creating the leadership, knowledge and skills to ensure effective performance.

The second group spent significant time discussing the benefits of greater focus on discrete populations in developing a vision of healthcare in Ontario. These discussions suggested the need to identify key population and patients groups and to shape services for them. This more explicit focus on populations would require greater coordination across sectors and system leadership capable of articulating these goals and the means to achieve this. In the current system, organizations have limited accountability for population outcomes. Panelists spoke to the need for accountability, responsibility and engagement with populations in developing health system interventions. By determining the levers needed to ensure better health for populations, and identifying crucial segments of the population (e.g., seniors, or those in rural communities), health systems can experiment with different delivery models, and new relationships between providers

4. Investing in Capacity to Support Improvement

Effective leadership and governance strategies must be linked to organizational and system capability for improving performance. This capability requires investments to give individuals and teams the knowledge, skills and confidence needed to plan and implement improvements (Bevan, 2010). High performing healthcare systems support staff in learning how to develop, test and scale-up new initiatives and interventions (Baker & Denis, 2011). More broadly, these organizations develop an interest and commitment to integrate these ongoing improvement efforts into daily work. Teams in high performing organizations become dissatisfied with current performance and seek to improve (Baker, et al., 2008).

High performing healthcare systems draw upon resources and ideas from other organizations or national bodies, and are involved in networks that allow for learning from other health organizations (Baker & Denis, 2011; Silow-Carroll, et al., 2007). Membership in formal or informal networks enables organizations to compare performance and learn from within and across jurisdictions, sharing best practices (Baker & Denis, 2011). Through these networks, data can be shared across organizations facilitating healthy competition (Baker, et al., 2010). Within networks, high performing organizations can provide support to poorly performing ones to enable them to improve (Ham, 2013).

One example of the role of learning and developing capacity through relationships with external organizations comes from the case of the Birmingham East and North Primary Care Trust (BEN PCT) and Heart of England Foundation Trust (HEFT) in the U.K. The Birmingham trusts linked with a number of “mentor” organizations, including Kaiser Permanente in the U.S. to learn from their improvement practices. Developing the relationship and trust between staff in these organizations enabled the BEN PCT and HEFT to benefit greatly from these connections, and to adapt business models and approaches to their own region (Baker, et al., 2008).

Linkages with improvement collaboratives can also support effective learning environments. For example, the Veterans Health Administration (VHA) in New England participated in the Institute for Healthcare Improvement (IHI) initiatives on reducing wait times, improving patient flow, and a number of patient safety initiatives. Similarly, Jönköping County Council’s participation in the Robert Wood Johnson Foundation’s Pursuing Perfection initiative encouraged systems thinking, streamlining of processes, and cost savings. Jönköping staff have developed a longstanding relationship with the IHI, with their senior leaders attending IHI conferences and borrowing insights and initiatives, facilitating constant learning and adaptation of ideas from international bodies (Baker et al., 2008).

Learning within health systems or organizations occurs both from top-down and bottom-up; and can be exploratory and adaptive (Bate, et al., 2008). The successes of learning initiatives, both large and small, should be celebrated to reward accomplishments (Silow-Carroll, et al., 2007). Learning from quality improvement initiatives can thus become a culture-building process: as organizations or systems build learning and improvement into their activities, cultures can shift towards high quality environments (Bate, et al., 2008). Learning initiatives at Intermountain Healthcare in Utah, for example, drove their journey to high performance, and local data from their information systems were used to support projects in their Advanced Training Program (ATP). This program covers quality improvement theory, measurement, healthcare policy, and leadership, introducing tools from a variety of approaches. The ATP course has become a requirement for all senior managers and leaders at Intermountain, and is open to external

participants. Their experience with this learning program has enabled Intermountain to become a leader in education around healthcare quality improvement, and focused their efforts on building capacity around health quality learning initiatives (Baker et al, 2008). This program has been spread to many other environments, including Ontario.

The BEN PCT and HEFT example highlights the importance of building trust between organizations in order for networks to be effective. This may be difficult when different bodies in the network have different goals and purposes, limiting the adaptability and scalability of new initiatives. As with many of the previous attributes of high performance, organizations must pursue locally meaningful initiatives, and use their positions within the network to borrow and test ideas from elsewhere, adapting them to local settings. In Canada, the autonomy of healthcare organizations can both be a benefit in promoting and incubating new innovations, but can also limit the dissemination of innovations (Baker & Denis, 2011). To address this, organizations or regional health authorities ought to share new innovations with each other and promote network structures to facilitate sharing.

Local Health Integration Networks (LHINs) in Ontario provide linkages and coordination between organizations who want to share best practices; however, additional efforts to learn from other organizations and policies that assist in identifying and spreading innovative new care delivery practices in Ontario could accelerate improvement. The province, through Health Quality Ontario or other bodies, can also play an important role in facilitating networks between organizations, regions, and national and international bodies to encourage testing or scaling up of new initiatives as well as more general sharing of quality improvement models or ideas between organizations or systems. This will require investments at provincial, regional, and organizational levels, as well as a willingness to reshape the learning strategy to fit emerging needs. Systems-level resources are needed to support inter-organizational and systems learning, where successful initiatives can be scaled up or spread to other locations.

Implementing a focus on learning requires investment, both in facilitating these efforts, and dedicated staff time and resources within the delivery sectors to integrate new practices and policies.

5. Improving Accountability and Performance Measurement

Performance measurement systems allow healthcare organizations to collect and report a range of meaningful indicators to assess current performance and monitor the impact of efforts to improve care. There is growing interest in metrics that draw from patient outcomes to drive continuous quality improvement (Ham, 2010). Several experts propose collecting cost and outcomes data for every patient, assessing health status, process of recovery, and sustainability of health (Porter & Lee, 2013). Performance data are essential for guiding improvement. Making these metrics transparent and available to patients and the public may also drive higher performance by ensuring attention to critical performance issues (The Commonwealth Fund, 2006).

Accountability requirements establish quality targets and timeframes for improvement. Useful accountability metrics include measures of health outcomes, quality of care, access to care, efficiency, and equity (The Commonwealth Fund, 2006). Funders and regulators create accountability agreements;

indeed as Brown and colleagues note, “accountability is a core feature of healthcare reform” (Brown, et al. 2006). Accountability is structured around agreements on goals and measures both within organizations and between organizations and external or independent regulators (The King’s Fund, 2010). Boards often play an important role in monitoring the progress of organizations and systems as they move towards a quality agenda, and taking appropriate actions where necessary (Baker, et al., 2010). Attention to accountability and performance measurement should be coupled with action, impacts should be measurable, and actions should be taken if performance goals are not achieved (Baker, et al., 2010).

One of the most elaborate performance accountability systems among the high performing systems analyzed by Baker and colleagues (2008) was developed at the VHA New England. The VHA established detailed performance expectations and reporting across their regions and networks, with an emphasis on standardizing and quantifying performance. Detailed performance contracts were implemented throughout all levels of the system, with each network monitoring a basic set of measures for cost, quality, and access, and with these measures evolving according to emerging system priorities. Indicators are reviewed through an external peer review program, and directors and managers frequently assess this data. Through this standardization of performance measures and accountability, the VHA was able to closely monitor and adapt their services and programs, leading to system-wide improvements (Baker et al., 2008). These measures were reviewed on an ongoing basis and evolved with the strategic goals of the VHA.

However, performance measurement and accountability tools may create a double-edged sword. Developing elaborate performance accountability structures may limit local flexibility and performance and contribute to a fragmented system where there is less capability to respond to areas of poor performance across organizations (Baker, et al., 2008). Accountability mechanisms also need to consider the levels of practitioner autonomy, so that providers are both capable and responsible (Ham, 2003). Performance measurement is critical to improvement. However, healthcare systems must avoid an over-reliance on performance measures that generate compliance, not commitment, or fail to address meaningful goals for practitioners and patients.

Indeed, a number of experts suggest that reliance on performance measures to stimulate performance, especially when these are tied to rewards, can encourage gaming within the system and disengage care providers from their patients. This concern was echoed by decision-maker panelists who noted that over-reliance on monitoring metrics might interfere with efforts to improve patient care. Caution is needed in linking performance measures to rewards or initiating pay for performance systems. The use of performance measures also faces the challenge of interpretation, and the selection of priority areas that are measured may lead to the erosion of performance in areas that are not measured (Baker et al., 2008). Overall then, use of performance measures and accountability mechanisms can enhance organizational learning and incent high performance, but such measures must be carefully selected and used to support improvements in patient care and system performance.

Individuals in both decision-maker panel groups called for a need to examine which performance measure will inform efforts to achieve high performance in Ontario. They noted that the Commonwealth Fund indicators show that Canada is performing poorly against other major national healthcare systems. Greater publicity around these results might stimulate policy initiatives and local efforts to improve performance.

Panel members spoke about the need for additional reliable and aligned system metrics. The Canadian Institute for Health Information (CIHI) might define and collect these metrics; and the design and selection of metrics should be linked to strategic goals. There was also some interest in measuring and understanding variation across provinces and across populations within provinces, as this might motivate provinces to perform better.

The patient and caregiver panel also addressed accountability, calling for increased system and provider accountability to patients and the public in healthcare. Increased accountability requires greater transparency and attention to measuring not only the outcomes from *individual* encounters, but also shared accountability between sectors in coordinating care to patients, particularly those with complex care needs.

6. Enabling Comprehensive Information Infrastructures

Performance measurement, improvement and accountability within high performing health systems require information infrastructures that can track and monitor progress and provide timely feedback. Information infrastructures allow teams to assess their performance, and give managers an understanding of where to focus and what progress is being made on strategic and operational goals (Baker, et al., 2008). Information infrastructures are the technical backbone that supports performance improvement. Growing numbers of healthcare organizations are developing electronic health records and decision support systems to support clinical decision-making. Ideally, these systems should be interoperable to facilitate information sharing and comparisons within and between providers in broader healthcare systems (The Commonwealth Fund, 2006). These infrastructures should also be patient-focused and be accessible to all parties involved in their care (Porter & Lee, 2013).

The key role of information infrastructures in achieving high performance is highlighted at Intermountain Healthcare, where their use of an integrated electronic medical record allows for detailed analyses of clinical practice and outcomes. This system allows clinicians to examine patient records individually as they treat patients, to compare results with colleagues, and track efforts to improve care over time, accessible from multiple sites. The Intermountain system links clinical practice data with clinical and financial outcomes in real time (Baker & Denis, 2011), providing an ability to measure, understand and feedback data on clinical variation and outcomes (James & Savitz, 2011).

Coupled with their attention to accountability and performance measurement, the New England VHA has become a leader in their information technology systems. Though they faced some initial resistance to electronic charting of patient data, these systems facilitated their implementation of clinical practice guidelines and clinical reminders, as well as a standardized staffing model for primary care clinics allowing pay for performance of physician reimbursement, and overall improvements in the coordination of care (Baker et al., 2008).

There are multiple, well known challenges in integrating interoperable information infrastructures into health systems. These networks require significant financial investments to build, as well as resources for training staff in using them. It can be difficult to integrate these systems into health systems that have existing electronic records. Both Intermountain Healthcare and the VHA have made long-term

investments into their information infrastructures and managed resistance from staff along the way, but other settings may face ongoing challenges. Despite the upfront costs and resources needed to implement these systems, information technology can align clinical and other systems and lead to long-term savings alongside better quality, and better-managed care over time.

Broad-scale information infrastructures have faced significant implementation challenges in Canada, due to the large-scale investments required to initiate fully interoperable platforms. Greater efforts are needed to provide such infrastructure to support the implementation of decision support tools for clinicians, provide measurement tools, and support care transitions and transmission of information across care settings. Facilitation of these infrastructures, and their use in guiding and measuring clinical practice must be supported at a provincial level to allow for coordination and interoperability.

There was discussion of the importance of information infrastructures in both the decision-maker and patient/caregiver panel consultations, especially the role of electronic health records in improving patient care. Decision-makers described how electronic health records have the capacity to make clinical care more efficient by allowing providers to focus on patient care and reducing the time spent in multiple efforts at collecting patient information. There was a call for investments into clinical analytics in electronic health records to facilitate real-time patient engagement and provide ongoing feedback. Panelists suggested that quality and safety measures need to be reported from these information systems to facilitate efficient and high-quality care. Patient and caregiver panelists also spoke to the value of information infrastructures and electronic health records in improving communication and tracking patients through the healthcare system in a way that is accessible to patients.

7. Strengthening Primary Care

Enhancing primary care and strengthening its linkages to acute and community based care can improve health services, promoting high performance (Baker & Denis, 2011). Starfield (2005) and others have argued that investments in primary care are key to producing better health outcomes. Researchers have shown that improved access to primary healthcare delivered by inter-professional teams can improve patient health and patient experiences (Denis, et al., 2011). A focus on primary care also facilitates coordination of care across sectors (The Commonwealth Fund, 2006). This attention to primary care may involve practice networks, multi-specialty physician group practices, or integrated services with a focus on primary care (Guterman et al., 2011), and may require commitments from organized medical associations (Denis, et al., 2011).

There are many examples of high performing healthcare systems where a focus on primary care has facilitated improvements in performance. At both Intermountain Healthcare and the Henry Ford Health System, for example, clinical strategies focused on primary care improved the experiences of patients, reduced morbidity and mortality and saved costs. A focus on primary care, however, may require significant reorganization and reprioritization within healthcare systems. This will be especially challenging within a healthcare system that is fragmented, and one that has not historically prioritized primary care. These systems will require a shift in focus, as well as efforts to improve the coordination and integration, key issues that are discussed next in this report.

Several Canadian provincial governments have played a significant role in supporting the development of primary care teams through training initiatives and increased funding for professionals such as nurse practitioners (Baker & Denis, 2011). The introduction of family health teams in Ontario has been an important step in this direction; yet the effectiveness of these teams in terms of improved patient care is uncertain, and the inclusion and use of professionals other than physicians in these models is underdeveloped in many settings (Denis et al, 2011).

One decision-maker panel discussed the issue of primary care in Ontario, and voiced concerns about the continuing heterogeneity of primary care models. Panel members also questioned the capacity of primary care teams to be the coordinators of the system, and stressed the need for increased efforts at integration across the system, and not just through primary care providers, though primary care providers do need to be involved in coordination and handovers. The patient and caregiver panel reported mixed experiences with primary care models, especially the fee for service model employed by most primary care physicians. They felt that this model had negatively affected the time and consideration they were given and ultimately detracted from their care.

8. Improving Integration and Care Transitions

Closely connected to the need for improvements in primary care, high performing health care systems focus efforts to ensuring integration of care and effective care transitions across the continuum. Effective teamwork and communications by providers in care networks form an important component of effective transitions (Denis, et al., 2011). This teamwork may be facilitated by education, common patient records or through other linkages between providers as a standard component of care delivery. Integration should bridge organizational boundaries enabling the coordination of health care delivery needs in different settings (VanDeusen Lukas, et al., 2007).

One approach used to facilitate improved patient coordination and care transitions at Jönköping County Council was to focus on the needs of the patient, using the persona of “Esther”. Esther is a fictitious 88-year-old woman living in the community with multiple chronic conditions. Based on their understanding of her needs, Esther’s movements through care settings were mapped by providers who were then able to identify improvements in care and patient flow. To improve care for patients like Esther, the Jönköping staff redesigned the intake and transfer process across the continuum of care, instituted open access scheduling, team-based telephone consultation, integrated documentation and communication and strategies to educate patients in self management, yielding a reduction in hospital admissions, a redeployment of resources to the community, a reduction in hospital use for heart failure, and a reduction in wait times (Baker, et al., 2008).

Similar integration initiatives may be challenging in Ontario’s healthcare delivery environment, where autonomy in the governance and management of delivery organizations can lead to fragmentation that complicates care transitions. LHINs have worked at integrating local healthcare services, improving access and improving patient experience, but current efforts are have been only partly successful in creating effective care transitions and improving team-based care across organizations. The Health Links initiative

has supported voluntary efforts to develop care plans for seniors and others with complex conditions, bringing care providers together to collaborate in patient care. However, the impact of these efforts on patients is still in development and not yet fully assessed.

Effective transitions can be facilitated by well-designed clinical information infrastructures, such as was done at Intermountain Healthcare through their clinical integration strategy. However, as noted earlier, this will require significant investments in technology and an overhaul of current practices. Facilitating integration requires coordination across a diverse set of organizations and actors, with interventions to address current coordination challenges. However, improved integration and care transitions would advance patient experiences, reduce mortality and morbidity, and decrease patients' length of stay in hospitals.

Both decision-maker panels in addition to the patient and caregiver panel emphasized their interest in improved care integration. There was significant conversation about what could be done to facilitate coordination across sectors in Ontario's healthcare system, and what structures and processes could be put in place to accomplish this. Several decision-maker panelists suggested that increased efforts should be made to more fully exploit the capacity of existing structures, such as family health teams and Health Links, and to invest additional resources into supporting coordination. Panel members stressed the need to enable the right mix and type of providers who could provide appropriate care in different settings, creating better cross-continuum teamwork. It was also noted that patients and caregivers are important resources in facilitating integration and transitions.

9. Enhancing Professional Cultures and Engaging Clinicians

The engagement of physicians and other clinicians in quality initiatives is essential to achieve high performance in healthcare systems. Clinical engagement is the critical ingredient that links bottom-up change efforts to top-down approaches to quality and performance improvement (Ham, 2003). Physician engagement may be facilitated by payment methods or financial incentives that support their involvement. For example, shifts from fee-for-service models to bundled payments or medical home models have facilitated improved performance in the U.S. (The Commonwealth Fund, 2009). Other funding approaches such as bundled care around an acute care event, or global fees that cover all care during a specified time interval for a patient have also been suggested to improve quality of care (Guterman, et al., 2011). Yet payment is not the only issue in ensuring effective engagement since continued clinical autonomy can be a barrier for the effective management of clinical practice (Lewis & Sullivan, 2013; Denis and Baker, 2016).

An example of effective physician engagement can be drawn from the experience of the Calgary Health Region (2003-2008), where leadership developed a Physician Partnership Steering Committee to help redesign care. This initiative provided pilot funding for physician-led projects aimed at improving service delivery, and led to initiatives around the standardization of orders, medication safety and performance data, among others (Baker, et al., 2008). At Intermountain Healthcare, physicians assume leadership roles in the system as well as in clinical programs, worked with frontline clinical staff and held clinical teams accountable for performance (Baker et al., 2008).

There is growing evidence that health system reforms need to address more than economic issues to ensure integration across care systems (Burns and Muller, 2009) and high performance. Physicians and other clinicians need to assume leadership roles, create effective clinical governance and implement improvements in care to create higher performance (Denis et al, 2011). Given the importance of clinician engagement in introducing new initiatives, physicians need to be engaged in system and organizational level decisions. The health system reform necessary to create high performance relies on engaging physicians and other clinicians, and linking organizational and system changes to professional roles.

The focus of professional roles in health system transformation needs to go beyond engagement in improvement. High quality and efficient care relies on the full use of all healthcare providers, and their work in healthcare teams. The effective redesign of clinical care will require optimal use of healthcare professionals and the rethinking of roles, relationships and patterns of work within and across a range of clinical settings (Nelson, et al. 2014; Wagner, 2000)

While clinician leadership is demonstrably important in implementing quality and improvement initiatives, managing and incentivizing physicians to take on these roles can be difficult. This continues to be true in Ontario where most physicians are independent agents whose practices are independent of organizational mandates. Creating a broader context for physician leadership and engagement is key to large-scale transformation.

The decision-maker panel discussions echoed the importance of physician engagement and leadership, which were seen to be key in advancing policy and organizational models supporting high performance. Panel participants noted the importance of integrating physicians into improvement strategies in order for systems to perform better. In one session, participants discussed whether it was possible or desirable to make physicians employees of healthcare organizations to support leadership and quality improvement efforts. There were also calls for an alignment of incentives for physicians to improve quality and care, potentially through funding reform. Alongside this discussion of a need to look for new models to engage clinicians, there was significant hopeful discussion about the capacity, engagement and interest increasingly evident in young clinicians involved in quality improvement and health system design.

10. Engaging Patients, Caregivers and the Public

An emerging set of initiatives in Canada and elsewhere focus on patients, caregivers and the public and their role in designing high quality healthcare (Baker, 2011). Patient engagement includes not only individual participation in choices about care but patient involvement in the improvement of care processes. Such engagement is a feature of a high performing healthcare system and a facilitator of system improvement. Engaging patients can simplify care process redesign (McGrath, et al., 2008), and promote better understanding of how patients navigate diverse healthcare organizations, assisting in optimizing care pathways. Patient involvement in healthcare systems provides new insights on where to focus improvements while enhancing patients' dignity and respect (The King's Fund, 2010). Patient, caregiver and public engagement can also serve as an accountability mechanism, to insure that health systems are acting in a way that benefits patients (Guterman, et al., 2011). These engagement initiatives require support from leaders and investments in orienting and recruiting patient and family members, as well as supporting staff in interacting effectively with patients on improvement teams.

The impact of patient engagement in high performing health system can be seen in the experience of Southcentral Foundation in Anchorage, Alaska. The Southcentral Foundation engaged their patients as “customer/owners” in the design of care through an in-depth consultation process (Baker & Denis, 2011). From this consultation, the Nuka Model emerged, reflecting the Alaskan Native population’s vision of a high-performing health system, based on the principles that (i) customers drive everything, (ii) a healthcare team that people know and trust, (iii) customers should face no barriers in seeking care, and (iv) staff members and supporting facilities are vital to success. Patients benefited from a holistic vision of health that drew from their values and involved them in the design and evaluation of their care (Baker & Denis, 2011). Greater involvement of patients and the public in governance and in the design of healthcare services and health policy creates the potential for improving services (Denis et al, 2011). Other useful examples of such involvement include the Citizen’s Council at the National Institute for Health and Care Excellence (NICE) in the U.K., where the public is involved in setting national policies on diverse healthcare and delivery issues.

However, effective and meaningful patient, caregiver and public engagement can be challenging to implement in a meaningful fashion. While many organizations have attempted to engage patients and include patient voices into the design of their care, there is limited evidence on how best to do this, and how to ensure that patients and the public are seen as equal partners in healthcare system design. Effective patient engagement will therefore need to be accompanied by significant efforts to empower and educate patients, their caregivers and the public, and meaningful efforts are needed to ensure their inclusion into healthcare decision-making. Leading practices from successful organizations, such as Kingston General Hospital and Thunder Bay Regional Health Sciences Centre should be shared so that patient engagement can become a standard practice.

At the provincial level in Ontario, specific investments and efforts could be made for developing effective patient engagement strategies. Patient engagement and the use of patient perspectives in healthcare decision-making and health system design can influence the setting of health system priorities. Patient and caregiver participants in the panel identified the importance of engaging patients and caregivers not only in decisions about care, but also at the policy level, stating that patients have the capacity and interest to participate in healthcare policy making. These patient engagement initiatives must be integrated into current and ongoing health system design initiatives, rather than conducted as parallel efforts.

These elements were also discussed during decision-maker expert panel sessions, where panelists spoke to a need to attend to the relational aspects of care through building capacity in incorporating patient experience into health policy decisions and structure. Panel members also discussed how patient values should be described and defined in patients’ terms rather than those of policy makers in order to facilitate more meaningful patient and caregiver engagement. To this end, it was noted that patients should be provided with their own health care data along with information on health system performance in order to enable them to be a part of health system and care decisions. Panelists noted the impact of patient and caregiver engagement on clinicians and a need to connect and integrate these patient engagement strategies to other elements of high performance.

11. Attending to Access and Equity Issues

Access issues have been highlighted as a key concern in a number of healthcare systems (The Commonwealth Fund, 2006), especially access to primary care and care in the community (The King's Fund, 2010). Attention to equity has also drawn attention at the national or provincial level following recognition of continuing disparities in access to services and variation in outcomes between populations (The King's Fund, 2010). Indeed, high performing healthcare systems should hold a commitment to serve the community as part of their mission (Guterman, et al., 2011), including a reduction of inequalities in health outcomes, and equity in financing and access (The King's Fund, 2010).

Chris Ham, the CEO of the King's Fund in the U.K., has argued that the most important characteristic of a high performing healthcare system is ensuring universal coverage for all individuals in that system (Ham, 2010). Though the Ontario Health Insurance Plan insures residents of Ontario for most healthcare costs, there continue to be concerns about meeting the needs of those in rural or underserved locations, and access to prescription pharmaceuticals among other issues. Attention to these access and equity issues will create a healthcare system where different groups of patients have similar access to care.

Broader priorities such as this one face significant implementation challenges in a complex healthcare system. Attention to access and equity issues is especially difficult in the demographically and socio-economically diverse population, and the expansive geography of Ontario. These initiatives will require significant investments at the provincial level, and require coordination across many sectors, within and beyond the healthcare domain. Nonetheless, this remains an important priority area to consider as Ontario moves toward a high-performing healthcare system.

In one decision-maker panel, access and equity for those in remote areas was cited as a key priority area. These discussions included a need to attend to culturally safe care and access to services, as well as reliable transportation to care. Virtual care and the infrastructures to support this were seen to be an important aspect of this access. Ontario already has developed an important telemedicine network, which is a crucial resource to link providers and care for Ontario's dispersed population. As well, there was extensive conversation about the importance and need for developing a population-level view and strategy in Ontario. This would address access and equity issues through examining the needs of various patient segments so that strategies could be developed to the unique access and equity needs of each of these sub-populations.

12. Considering Population Health and Chronic Disease Management in Care Management Strategies

Policy makers in many jurisdictions increasingly recognize that healthcare alone does not create health. Other services, including social services, education and public health, contribute in important ways to outcomes and patient experiences. Population health initiatives can contribute to “bending of the curve” of health care needs and costs: secondary prevention can reduce the use of health services (Lewis & Sullivan,

2013). Other healthcare systems have identified the need for greater attention to health promotion and prevention, and the management of chronic diseases to reduce the burden on individuals and healthcare systems at large (The King's Fund, 2010).

Although there are considerable resources focused on major health promotion issues, such as tobacco control, food labeling, and nutrition, these efforts tend to be separate from care delivery and thus not always targeted to individuals. Increased efforts to motivate and inform citizens need to be integrated into primary and community based care. Individuals should be provided with the resources to self-manage their conditions outside of the formal healthcare system (Ham, 2010), and this should be incorporated into system-level priorities. Like equity and access issues, these public health and disease prevention efforts will be broad in scope, and likely extend beyond the traditional boundaries of the healthcare system.

The aging of the Canadian population and the growing impact of chronic disease and multi-morbidity also require additional, concomitant shifts in the organization of health care services. There are major gaps in the current system in meeting the needs of patients with chronic disease, improving the coordination of care between hospital-based and community-based practitioners, and enabling individuals to manage their chronic conditions at home (Naismith, et al., 2010). More efforts are needed to re-organize services to recognize the increasing demands of chronic disease. Health Links has promoted more organized and seamless care for complex patients, but many patients with chronic disease still face challenges in identifying and accessing the programs and services they require.

One decision-maker panel discussion addressed these issues at length, considering the responsibilities of the healthcare system to attend to social determinants of health and social care outside the formal healthcare system. The focus of this discussion was the need for prevention initiatives, social supports to address mental health, and public education about health and disease management. These initiatives require significant leadership to re-define and connect the healthcare system to services beyond physician and hospital services. Panelists also directed attention to the need to increase focus on improving the health of Aboriginal communities.

Summary

Efforts to advance the attributes of a high performing health care system require deliberate strategy and investment. Each attribute of high performing healthcare systems presents challenges, and the development of a system that supports such performance requires not just a few of these attributes but sustained efforts to achieve all attributes (Baker, et al., 2008; VanDeusen Lukas, 2007). Creating the environment that supports such transformation requires broad support from all levels: from the development of supportive policies to the daily work of front line teams. High performing healthcare systems provide a different experience for patients and providers. Patients accessing care within this system can communicate effectively with their care teams, access care when necessary, and experience seamless care transitions. As health delivery organizations and systems continue to learn and measure their performance, working towards a culture of quality and improvement, patients will experience increasingly safe, effective, efficient and high quality care. At the same time providers in high performing healthcare systems should have an easier time in delivering the care their patients need and coordinating that care with others.

There is much to be learned from international examples of high performance. Yet there is much work still to be done to adapt these lessons to the Ontario context. Consultations in our decision-maker panels with Ontario health system leaders echoed the importance of many of the characteristics of high performance, and the need to organize and galvanize policy and local action in these areas. These leaders identified current examples already present in Ontario to support the broader attributes and panelists spoke to a need to refocus governance and leadership around the needs of populations with greater attention to equity, access and population health. New initiatives that focus on developing high performing health care systems can be advanced through a more aligned and focused strategic plan, focusing on quality and system improvement, leadership and governance structures to accomplish this, better, more aligned measures and metrics that capture system improvement in more informative and patient-focused ways, more comprehensive information infrastructures to make providers' day to day work easier, a focus on improving integration and coordination, engaging clinicians, managers, staff, and most importantly patients and their caregivers in improvement efforts and patient-centred care.

Ontario has demonstrated significant progress in many current, albeit mostly small-scale, efforts to improve quality, safety, and achieve high performance. Efforts are needed to scale-up these initiatives in a focused and efficient way. Achieving these attributes of high performance, and aiming for the best health care system, will provide patients with excellent clinical care and healthcare experiences and ensure the most effective use of societal resources to create and enhance the health of the province's population.

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Appendix 1: Studies of High Performing Healthcare Systems

Study	Goals	Methods	Findings
<i>Baker et al. (2008) High Performing Healthcare Systems: Delivering Quality By Design</i>	To investigate a small number of high-performing healthcare systems to examine their leadership strategies, organizational processes, and investments made to create and sustain improvements.	Case studies of high performing healthcare systems that have invested in improvement resources and demonstrated measurable performance improvements over time. Determined by nominations from experts in quality improvement and health systems monitoring, as well as two Canadian systems selected by the study advisory committee. <ul style="list-style-type: none"> • Birmingham East and North Primary Care Trust and the Heart of England Foundation Trust • Veterans Affairs New England Healthcare System • Jönköping County Council • Intermountain Healthcare • Henry Ford Health System • Calgary Health Region • Trillium Health Centre 	Attributes of successful improvement: <ul style="list-style-type: none"> • Culture, leadership, strategy and policy, structure, resources, information, communication channels, skills training, physician involvement Lessons learned from case studies <ol style="list-style-type: none"> 1. Policy and leadership matter and accountability must be clear 2. Need tools to implement policy 3. Aim for rapid transformation 4. Integrate key providers into the system and engage them in quality improvement initiatives 5. Let people experiment and organize their own work 6. Carefully calibrate incentives and avoid unintended consequences of these 7. Need dissatisfaction with the status quo 8. Learn from Canadian success stories

Study	Goals	Methods	Findings
<p><i>Baker & Denis (2011). A Comparative Study of Three Transformative Healthcare Systems: Lessons for Canada</i></p>	<p>Provide an overview of three transformative healthcare systems and identify lessons Canada can learn from these systems.</p>	<p>Case studies of:</p> <ul style="list-style-type: none"> • Jönköping County Council in Sweden • Intermountain Healthcare in Salt Lake City, Utah • Southcentral Foundation in Anchorage, Alaska <p>Exemplary systems analyzed with attention to the strategies they have adopted, investments they have made, and their enabling mechanisms.</p>	<p>Key lessons learned from cases:</p> <ul style="list-style-type: none"> • Each system adopted quality and safety as a core strategy • Substantial investments in building skills and knowledge to support improvement • Importance of robust primary care teams • Importance of engaging patients in their care and the design of care • Need to develop professional cultures that support teamwork, continuous improvement and patient engagement • Need improvements in transitions of care and improved integration • Importance of information infrastructures in analyzing and improving care • Need effective learning strategies and methods to test and scale up • Need alignment in leadership systems • Need to identify larger forces that shape environments and respond effectively through buffering short term and external factors <p>Implications for Canadian healthcare systems</p> <ul style="list-style-type: none"> • Need supportive institutions and context – e.g. quality councils • Importance of capacity building around governance and leadership • Need to focus on primary care and integration and link indicators with improvement strategies • Importance of learning within and across jurisdictions • Importance of patient engagement

Study	Goals	Methods	Findings
<i>Bate, Mendel & Robert (2008). Organizing for Quality: The Improvement Journeys of Leading Hospitals in Europe and the United States</i>	<p>Mapping out an organizational perspective on high-quality healthcare.</p> <p>Examining a multiplicity of factors and processes in high-quality healthcare systems.</p>	<p>Case studies selected by peer recommendations from international experts working in the improvement field in the U.S. and U.K., and from surveys of award and recognition recipients.</p> <ul style="list-style-type: none"> • Children’s Hospital of San Diego, California • Royal Devon and Exeter NHS Foundation Trust • Cedars-Sinai Medical Center, California • Reinier de Graaf Groep hospital, Delft, The Netherlands • Luther-Midelfort Mayo Health System, Wisconsin • Peterborough and Stamford Hospitals NHS Foundation Trust • HIV/AIDS treatment center in Albany, New York <p>Within each organization, high-performing micro-systems were identified.</p>	<p>Major challenges faced by QI teams:</p> <ul style="list-style-type: none"> • Challenge of implementation • Challenge of diffusion or spread • Challenge of sustainability <p>Common challenges in QI:</p> <ul style="list-style-type: none"> • Structural –organizing and coordinating quality efforts • Political – addressing politics of change • Cultural – giving quality organizational significance and meaning • Educational – learning processes that support QI • Emotional – Linking QI efforts to deeper commitments and beliefs • Physical and technological – designing of infrastructure to support QI <p>Need to think about quality in terms of:</p> <ul style="list-style-type: none"> • Dynamics rather than variables • An ongoing, emergent process • Bottom-up, exploratory learning • Growth rather than structure • A human and organizational accomplishment

Study	Goals	Methods	Findings
<p><i>Denis, Davies, Ferlie & Fitzgerald (2011). Assessing Initiatives to Transform Healthcare Systems: Lessons for the Canadian Healthcare System</i></p>	<p>Guided by questions of:</p> <ul style="list-style-type: none"> • Where and when has change occurred in the Canadian healthcare system since the 2003 Health Accord? • What were the barriers to transformation? • What lessons can be learned from these experiences? 	<p>To identify the need for health system transformation, reports produced since 2003 by governmental agencies that monitor and assess the evolution of healthcare systems were identified through websites of provincial governments and federal government departments and agencies. The authors also identified reports published by the OECD on healthcare system performance and searched websites of international think tanks, and major health policy journals.</p> <p>A working session on healthcare system transformation with three U.K. experts in health policy and management was organized to identify six themes that represent pathways for healthcare system transformation. This was followed by a search for works that supported the development of each of these themes.</p>	<p>Identification of levers for change:</p> <ul style="list-style-type: none"> • Financial levers • Governance levers • Legislative levers • Delivery arrangements • Shaking up a dominant logic <p>Themes for healthcare system transformation</p> <ul style="list-style-type: none"> • Strategic realignment efforts – to focus on primary healthcare, chronic diseases, population health improvement • Organizations as the engine for delivery and change – draw from inter-professional teams, and the implementation of well-organized organizational arrangements • Professional cultures –need for clinical leaders and physician managers • Creating an enabling environment that supports improvement – develop effective governance, define targets and benchmarks • Patient engagement – deliberative processes should be used where appropriate and designed according to context • Evidence-informed policy and decision-making

Study	Goals	Methods	Findings
<p><i>Ham (2010). The Ten Characteristics of the High-Performing Chronic Care System</i></p>	<p>To describe the characteristics of the high-performing chronic care system and four implementation strategies needed to achieve this system</p>	<p>Review of international evidence on gaps in the quality of chronic care, tracing the history of approaches to prioritize chronic care, especially Wagner et al.'s Chronic Care Model. Drawing from the model, characteristics of a high-performing chronic care system were described, using evidence from research with personal experience of policy making at the NHS and a review of policies in the U.S. and New Zealand.</p>	<p>Ten characteristics of a high performing chronic care system:</p> <ol style="list-style-type: none"> 1. Ensuring universal coverage 2. Care that is free at the point of use 3. Delivery system should focus on the prevention of ill health 4. Priority given to patients to self manage their conditions 5. Priority given to primary health care 6. Population management is emphasized 7. Care should be integrated to enable primary health care teams to access specialist advice and support when needed 8. Need to exploit the potential benefits of information technology 9. Ensure that care is effectively coordinated 10. Link the above nine characteristics into a coherent whole as part of a strategic approach to change <p>Four Implementation Strategies:</p> <ol style="list-style-type: none"> 1. Physician leadership 2. Measuring patient outcomes and using results to drive continuous improvement 3. Find the best way to align incentives in support of strategies 4. Community engagement

Study	Goals	Methods	Findings
<p><i>McCarthy & Blumenthal (2006). Stories from the Sharp End: Case Studies in Safety Improvement</i></p>	<p>To describe natural experiments in health care safety to show opportunities and barriers for improvement.</p>	<p>Case studies of ten examples of safety improvement in health care institutions. Cases identified by leaders in patient safety.</p> <ul style="list-style-type: none"> • Sentara Norfolk General Hospital, Norfolk, VA • US Dept. of Veterans Affairs National Center for Patient Safety, Ann Arbor, MI • Kaiser Permanente, CA • Missouri Baptist Medical Center, St. Louis, MO • Johns Hopkins Hospital, Baltimore MD • OSF St. Joseph Medical Center, Bloomington, IL. 	<p>Acquiring a safety culture involves</p> <ul style="list-style-type: none"> • Seeking to become informed about system vulnerabilities • A reporting culture, including near misses, through internal and external reporting systems • A just or blame-free culture • A flexible culture to encourage teamwork and collaboration • A learning culture where system reforms are undertaken based on data and knowledge <p>Policy Implications</p> <ul style="list-style-type: none"> • Need to link safety goals to safety culture • Need to encourage collaboration • Need to offer incentives • Need to leverage public data • Need to advance education and research

Study	Goals	Methods	Findings
<p><i>Perla, Bradbury & Gunther-Murphy (2013). Large-scale Improvement Initiatives in Healthcare: A Scan of the Literature</i></p>	<p>To provide a scan of the literature on current thinking and practice in large-scale improvement initiatives in healthcare, and to capture and organize lessons learned to close the gap between common practice and best practice.</p>	<p>Scan of the literature using a modified Delphi technique with three expert reviewers, limited to large-scale spread efforts in hospitals and health care systems. Main factors that emerged during the scan were linked to secondary factors.</p>	<p>Four primary drivers of improvement in healthcare:</p> <ol style="list-style-type: none"> 1. Planning and Infrastructure – need to articulate vision and aim, develop an intervention, solid management, sufficient resources, including IT infrastructures 2. Individual, Group, Organizational and System Factors – champions or change agents and leadership are important, as well as institutional/system culture and capacity and continuous learning networks 3. Process of Change – need to select the process of change carefully and have a clear model to drive the work, as well as a spread mechanism 4. Performance measures and evaluation – need a data infrastructure and measurable impact <p>Recommendations to inform large-scale improvement initiatives</p> <ol style="list-style-type: none"> 1. More systematic approaches to evaluate large-scale initiatives 2. More work to understand the economic and infrastructure requirements of large-scale spread 3. More guidance needed to establish learning networks and evaluate their impact 4. Creation of a repository of different approaches of large-scale spread

Study	Goals	Methods	Findings
<p><i>Silow-Carroll, Alteras & Meyer (2007). Hospital Quality Improvement: Strategies and Lessons from U.S. Hospitals</i></p>	<p>To examine the dynamics of hospital performance and the degree to which hospitals are improving over time, and how they achieve and sustain that improvement.</p>	<p>Quantitative analysis of quality and efficiency trends using three hospital databases with case studies at four hospitals that were among top improvers.</p> <ol style="list-style-type: none"> 1. Beth Israel Medical Center, NYC 2. Legacy Good Samaritan hospital, Portland, Oregon 3. Rankin Medical Center, Brandon Mississippi 4. St. Mary's Health Care System, Athens Georgia <p>Cases were identified as those who displayed significant, steady improvement in a composite quality measure, based on risk-adjusted mortality, complication, and morbidity rates from 2002-2004.</p>	<p>Identification of a quality improvement sequence followed by top improvers:</p> <ol style="list-style-type: none"> 1. A trigger prompts the hospital to begin or renew an emphasis on quality improvement 2. Organizational and structural changes occur to monitor performance, identify deficiencies, and devise and test solutions 3. Hospitals meet quality standards, and being part of a system allows them to compare themselves to other hospitals and share best practices 4. A new problem solving process evolves 5. New protocols and practices emerge 6. Improved outcomes serve as a motivation <p>Lessons learned:</p> <ul style="list-style-type: none"> • Set short-term attainable goals and celebrate achieving them • Keep staff involved in problem identification and solving • Nurture leaders and champions • By patient but unrelenting • Balance quality and financial goals

Study	Goals	Methods	Findings
<p><i>VanDeusen Lukas et al (2007). Transformational Change in Healthcare Systems: An Organizational Model</i></p>	<p>To address question of how can health care systems transform to provide consistently safe, high-quality care for patients. Development of a conceptual model for moving organizations from short-term, isolated performance improvements to sustained, reliable, organization-wide and evidence-based improvements.</p>	<p>Longitudinal comparative case studies in 12 health care systems, using a mixed-methods evaluation design (semi-structured interviews and document review) over 3.5 years. Using these data, a model was produced and validated to describe elements or drivers critical to a health care organization’s success in moving to patient care transformation.</p>	<p>Identification of five critical elements to transform healthcare systems:</p> <ol style="list-style-type: none"> 1. Impetus to transform 2. Leadership commitment to quality 3. Improvement initiatives that actively engage staff in meaningful ways 4. Alignment to achieve consistency of organization-wide goals with resource allocation and actions 5. Integration to bridge traditional intra-organizational boundaries between individual components

Appendix 2: High Performing Healthcare Systems Example Cases

High Performing Healthcare System	Details/ Population Served	Characteristics of High Performance	Resources Used to Achieve High Performance
<i>Intermountain Health Care, Utah & Idaho, U.S.</i>	<p>Non-profit health care system serving patients and communities in Utah and Idaho.</p> <p>32,000 staff in 23 hospitals, 150+ outpatient clinics, counseling centres, home health agencies, and 100+ medical group practices; 3,200 affiliated physicians. Estimated care to 50 per cent of Utah</p>	<ul style="list-style-type: none"> • Recognized as a top integrated health system, best and most technologically advanced hospital • Reputation for clinical excellence • Clinical information system (HELP) to allow users to assess performance and identify need for improvements • Ability to measure, understand, and feed back to clinicians and leadership clinical variation and outcomes data 	<ul style="list-style-type: none"> • Foundation of evidence-based medicine and clinical process management • Focus on processes of care delivery that underlie treatments • Adding guidelines to improve care into physician checklists, order sets and clinical flow sheets; clinicians adapted guidelines to each patient’s particular needs to develop “shared baselines” • Development of “clinical integration” strategy to identify areas whose cost and performance suggested they were priority areas • Using existing management structure to oversee the delivery of clinical care • Identifying key processes representing care continuum • Creating information systems • Revising structure to use data for accountability and change • Aligning financial incentives with physician performance

High Performing Healthcare System	Details/ Population Served	Characteristics of High Performance	Resources Used to Achieve High Performance
<i>Henry Ford Health System, Detroit, MI</i>	<p>Non-profit healthcare enterprise in Detroit, MI.</p> <p>Services > 1 million residents. Includes five hospitals as a comprehensive integrated system providing primary, preventive, acute and specialty services, as well as community-based services. Employs 900 physicians and researchers in 24 medical centres</p>	<ul style="list-style-type: none"> • Ranked as top integrated healthcare system in MI and 6th in the U.S. in 2004 • Overall high national rankings across all facilities • Reduction in surgical infection rates • Reduced ICU length of stay, reduced infections • Rapid acting response teams • Reduction in mortality 	<ul style="list-style-type: none"> • Modeled after the Mayo clinic • Strategic areas of importance identified (people, service, quality and safety, growth, research and education, community, finance) • Signed up for all six interventions in the IHI 100,000 Lives Campaign, supported across departments • Use of self-assessment against the Baldrige criteria • Initiative to improve heart failure, coronary artery disease, diabetes, depression with Big Three automobile companies • Staff training initiatives • Use of patient satisfaction surveys • Establishment of Office of Clinical Quality and Patient Safety, including the System Quality Forum arm, Annual Quality Expo • Physician involvement in improvement
<i>Veterans Affairs New England Healthcare System</i>	<p>Eight medical centres, 38 community-based outpatient clinics, six nursing homes, four domicilliaries, serves more than 237,000 veterans</p>	<ul style="list-style-type: none"> • Integration of services into service lines (primary care, specialty and acute care, mental health, spinal cord, geriatrics) • Improved patient flow in in-patient, operating room and emergency departments • High satisfaction amongst patients 	<ul style="list-style-type: none"> • Use of IT • Network to streamline supports • Use of performance measurement and reporting • Leadership, and leadership training and opportunities • Quality management office position established • Realigned payment policies – salaried physicians with some pay for performance • Participation in IHI improvement collaboratives • Symbiotic relationship with Dartmouth to produce programs and initiatives

High Performing Healthcare System	Details/ Population Served	Characteristics of High Performance	Resources Used to Achieve High Performance
<i>Birmingham East and North Primary Care Trust and Heart of England Foundation Trust (NHS, U.K.)</i>	One of 152 PCTs in the NHS. Serves population of 433,000 in the eastern half of England's second largest city, <6,000 staff members, 84,000 inpatients, 350,000 outpatients, 140,000 emergency cases/year.	<ul style="list-style-type: none"> • Receipt of numerous awards for improvement, innovation, service delivery • Clinical improvement projects have addressed diabetes, COPD, CVD, elderly, home care and integrated care • Award winning musculoskeletal orthopaedic triage service • Improved vascular clinic and telemedicine system 	<ul style="list-style-type: none"> • Pilot sites for Making the Shift project (NHS Institute for Innovation and Improvement), initiatives to move services from hospitals to primary care • Adoption of Kaiser Permanente's population management strategy for chronic diseases • Improvement processes aligned with system strategy, culture and operations • Physician leadership • Accountability and performance measurement across organizations, and tracking of these measures. • Aligned, shared goals and pictures of success
<i>Southcentral Foundation, Alaska</i>	Non-profit organization, serves 45,000 in Anchorage, Alaska plus 10,000 more in remote villages. 1,500 staff, 80 physicians.	<p>Transformed delivery of care and become recognized for their focus on patients and excellent outcomes</p> <ul style="list-style-type: none"> • Development of Nuka model that reflects the Alaska Native population's vision of a high performing system • Achieved significant improvements in same-day access to care (decreasing emergency room use), decrease in specialty care 	<ul style="list-style-type: none"> • Leadership agenda of improving quality of care while limiting increases in cost • Shift from focus on activity to an emphasis on relationships with patients, or serving their "customer-owners" • Frequent meetings amongst healthcare team members • Attention to recruitment of staff, including physicians, and employee familiarity with basic QI methods • Strategic plan linked to budget plans

High Performing Healthcare System	Details/ Population Served	Characteristics of High Performance	Resources Used to Achieve High Performance
<i>Jönköping County Council, Småland, Sweden</i>	Serves 330,000, employs 9000 staff and 900 physicians in three hospitals and community clinics; primary, secondary and tertiary care	<ul style="list-style-type: none"> • International recognition for large-scale improvements in healthcare • Reduced rates of sepsis • Gains in chronic disease management • Cost savings • Best overall rankings in efficiency, timeliness, safety, patient centredness, equity and effectiveness in Sweden • Won Swedish quality award for healthcare on multiple occasions 	<ul style="list-style-type: none"> • Participation in the “Pursuing Perfection” project (Robert Wood Johnson Foundation, IHI) to create system transformation • Stable leadership at the senior executive level and county council – drawing from US improvement strategies • Created a common vision of what they were trying to achieve and communicated to staff • Use of “Esther” to bring clinicians and managers to a common understanding of improvements needed to transform the system • Establishment of “Qulturum”, a learning centre to facilitate group meetings and learning • “Passion for Life” initiative borrowed from the U.K. to engage patients in QI techniques • Numerical data to measure and understand performance

High Performing Healthcare System	Details/ Population Served	Characteristics of High Performance	Resources Used to Achieve High Performance
<i>Calgary Health Region, Calgary, AB</i>	Serves population of 1.2 million in Calgary and rural communities; 25,000 staff members, 2,200 physicians; 100 locations: 12 hospitals, three comprehensive health centres, 40 care centres, and community care	<ul style="list-style-type: none"> • Integrated care for patients across different organizations • Improved access and flow to clinical services • Effective information infrastructure linked to quality and safety improvement • Reduced mortality rates and length of stay for acute myocardial infarction rates • Prostate Cancer Rapid Access Clinic reduction in time to diagnosis • Reporting of close calls and adverse events • Reduced wait times and improved outcomes for hip and knee replacement 	<ul style="list-style-type: none"> • Restructuring to emphasize regional activities and accountabilities • Reorganized leadership structure • Development of strategic directions: responsiveness to public expectations, support for health care service providers, service delivery in the community, leadership and innovation, balancing needs, building relationships, education and research • Engaged physicians in service improvements • Quality councils and committees established at all levels of the organization, IHI QI training for leaders • Adoption of Balanced Scorecard to monitor performance
<i>Reinier de Graaf Groep Hospital System, Delft, The Netherlands</i>	Hospital system employing 3000 individuals, 165 medical specialists, serving a population of approximately 250,000 residents	<ul style="list-style-type: none"> • Selected for IHI Pursuing Perfection initiative, and winner of several Dutch awards • Focus on varicose surgery as site of improvement 	<ul style="list-style-type: none"> • Multi-level leadership that is distributed across different parts of the organization – leadership as a collective activity • Routinization of actions to positively affect outcomes • Quality as an integral part of the organization

High Performing Healthcare System	Details/ Population Served	Characteristics of High Performance	Resources Used to Achieve High Performance
<i>National Health Service (NHS), U.K.</i>	Publicly-funded, single-payer healthcare system in the U.K.	<ul style="list-style-type: none"> • Improved access (reduced wait times in hospitals, increased primary care services) • Improved patient safety reporting • Tackled health promotion and management of long-term conditions • Improved clinical effectiveness in cancer and cardiovascular disease • Reduced inequalities in health outcomes, reduced infant mortality and improved life expectancy 	<ul style="list-style-type: none"> • Creation of NICE in delivering evidence-based guidance on drugs and treatments • Government campaign to reduce rates of healthcare associated infections • Smoking legislation • Incentives for GPs to manage patients with chronic conditions, as well as multidisciplinary support • Creation of patient experience survey • Legal requirements on NHS to ensure equitable access for all patients • Strengthened accountability through the use of targets and direct performance management • Government established independent regulators to inspect and assure the quality of health care organizations • Changes to make professions more responsive to the public rather than professional interests

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