Accelerating Health System Transformation in Saskatchewan
Lessons Learned from the Saskatchewan Surgical Initiative (SkSI)

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MAIN MESSAGES FOR ACCELERATING HEALTH SYSTEM TRANSFORMATION

In 2010, the Saskatchewan government set out to “transform the surgical patient experience” through an aggressive, multi-year, system-wide strategy. While the Saskatchewan Surgical Initiative (SkSI) placed strong emphasis on wait time reduction for elective surgery, the breadth of the initiative also gave priority to quality, safety, patient experience, and sustainability. This was a more balanced approach than had been taken in previous efforts to address the elective surgery wait time issue within the province.

Through the systematic exploration of the single policy case study—the SkSI—this research identifies the critical factors that facilitate and inhibit major health system change. The main results demonstrate that achieving large-system change, within the context of the SkSI specifically, requires a complex and interdependent set of strategies, processes and organizational arrangements.

Key lessons to be drawn from the Saskatchewan Surgical Initiative Experience

Realizing a unified vision—system-wide reduction of elective surgical wait times—required clear goals and strategically staged “big, bold” targets.

More comprehensive performance information, pertaining to the quality of patient care and outcomes, is necessary to effectively implement and evaluate system-level initiatives, such as the SkSI, and support a more performance-based health system.

Through the rigorous application of Lean methodology—including Hoshin Kanri (strategic planning and deployment) as well as daily visual management—an environment has been created to: improve the alignment of front-line provider activity with the strategic direction at the organization and system levels; support the daily use of measurement to drive improvement efforts; foster a culture of continuous quality improvement; enable forums which allow for team engagement, knowledge sharing, mutual learning and enhanced accountability among stakeholders.

Leaders from across the system—from the executive levels to the front-line providers—need to be engaged in processes of collaboration, teamwork and collective decision-making to achieve large system change. Considerable investment is required to develop leadership capacity, both administrative and clinical, at all levels of the system.

The autonomy that physicians assume, for the most part, enables them to voluntarily opt in—or out—of participating in government-led initiatives, such as the SkSI. The government and decision-makers rely heavily on the “cooperation of the willing” to move such initiatives forward.

The challenge to meaningfully engage physicians is considerable. The evidence shows that presently there is insufficient involvement of physicians in collaborative processes and decision-making at both the regional and system levels.

Within the predominantly hierarchical structure, the network strategically established for the SkSI involved a broad and diverse group of stakeholders—including patient and family advisors—in ongoing system level leadership and governance. The groups’ collective ideas and energy fuelled the development and implementation of a comprehensive policy framework to address the wait time issue and improve the surgical patient experience.
EXECUTIVE SUMMARY

Over the last 10 to 20 years, increased pressure has been placed on healthcare systems to provide consistently safe, high quality care to citizens who need, want and deserve it. This demand has resulted largely from the growing complexity of science and technology, the increase in chronic conditions, a poorly organized delivery system and constraints on exploiting the revolution in information technology. Lately, the added importance of delivering healthcare in the most efficient manner and ensuring fiscal sustainability of the system has compounded the pressure.

Improved access to care is instrumental to achieving improved health, reduced health inequalities and enhanced responsiveness. Timely access to healthcare services, and more specifically, reducing lengthy wait times for non-urgent elective surgery, have consistently been established as one of the most important healthcare priorities for Canadians. Canada is not alone on this issue, as approximately half of all Organisation for Economic Co-operation and Development (OECD) countries consider timely access to be one of the most important health system issues. Health leaders must rethink and fundamentally reshape existing structures, processes and relationships to realize improved health system performance and patient outcomes. Over the past two decades, governments in many countries have tried to address the wait times issue with varying degrees of success. There is general consensus that Canada’s healthcare systems, for the most part, have been too slow in reducing wait times.

In 2010, in response to the Patient First Review, the Saskatchewan government set out to “transform the surgical patient experience” through an aggressive, multi-year, system-wide strategy. The overarching goal of the Saskatchewan Surgical Initiative (SkSI) was to reduce the wait times for elective surgery to no longer than three months by March 31, 2014. The SkSI strategically involved a broad and diverse group of stakeholders whose collective ideas and energy fuelled the development and implementation of a comprehensive plan to address the wait times issue. The policy framework targeted a “multifaceted attack” on both demand and supply side factors.

The main thrust of the SkSI was to expand surgical capacity, improve the efficiency of surgical care delivery and ultimately improve access for patients. While there was a strong emphasis placed on wait time reduction, the breadth of the initiative also gave priority to quality, safety, patient experience and sustainability. This was a more balanced approach than had been taken in previous efforts to address the wait times issue within the province.

Through the systematic exploration of the single policy case study—the SkSI—this research identifies the critical factors that facilitate and inhibit major health system change. The main results demonstrate that achieving large-system change, within the context of the SkSI, requires a complex and interdependent set of strategies, processes and organizational arrangements. Drawing on observational and interview data obtained over the course of this two-and-a-half-year study, the following section outlines important findings for accelerating health system performance.

Findings for Accelerating Health System Transformation

Using Performance Measurement More Comprehensively: Performance measurement gives policy-makers a major opportunity to achieve health system improvement and strengthen accountability. There is growing recognition that having the capacity to evaluate and report on quality is a critical building block for system-wide improvement of healthcare delivery and patient outcomes. Accurate measurement and reporting of performance, in regard to elective surgical wait times (intention to treat-treatment or “wait 2”), has been instrumental in supporting health system stakeholders to work toward achieving the SkSI wait time targets.
Considerable investment has been made to develop an environment conducive to the daily use of measurement to drive improvement efforts. Creating standardized and consistent structures and processes has facilitated interaction, transparent sharing of information, enabled greater collective understanding of the issues and encouraged mutual learning among health system administrators and clinicians. Beyond the direct measurement of elective surgical wait times (wait 2) there is concern with the choice of measures and quality of data available. Investment is required to better integrate the current information systems and further develop the capacity and capabilities required to produce more accurate and timely information in order to enhance decision-making. A robust and comprehensive performance measurement system is essential to support the move toward a more performance-based healthcare system.

**Lean and Continuous Quality Improvement:** Organizational learning or continuous quality improvement is the process of change that contributes to improved system performance and better patient outcomes. Saskatchewan is the first jurisdiction in Canada to apply Lean methodology across the entire provincial health system as the mechanism to foster a culture of continuous improvement. The rigorous application of Lean methodology has established the infrastructure and processes to improve alignment of front-line provider activity with the strategic direction at the organization and system levels. The collaborative efforts have been instrumental in encouraging interaction, mutual learning and greater collective understanding of the issues. Similarly, the significant investment in training is developing a critical mass of stakeholders from across the system who have the knowledge and skill necessary to support continuous quality improvement.

Presently, involvement of physicians and surgeons in planning, Lean training and improvement activities, at both the systems and clinical levels, continues to be limited. The challenge to engage physicians is considerable and is crucial to the advancement of the Lean reform effort. Targeted policies are necessary to support greater physician participation.

**Implementing Patient- and Family-Centred Care:** Patient and family engagement is increasingly seen as a means of catalyzing change in the delivery of healthcare services. It is vital that patients and families are involved as core members of the healthcare team, on equal footing with healthcare professionals, administrators, planners and policy-makers. Through the development and implementation of organizational and system level policies, Saskatchewan has made some major gains in embedding the philosophy of patient- and family-centred care into strategic and operational processes.

“There are thousands of patients in Saskatchewan that want change... We want that change now—we want it sooner, safer and smarter.”

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**LAWRENCE LEMOAL,**
**SKSI PATIENT AND FAMILY ADVISOR**
**JANUARY 31, 2014**
The SkSI was the first system-wide initiative to include patient and family advisors in ongoing system-level governance structures, as well as to comprehensively involve them in core planning, implementation and care delivery improvement events. Involving patients in strategic initiatives and clinical process improvement activities fundamentally alters the group dynamic and facilitates downward accountability to health service users. Opportunity exists to more fully engage patients and families at all levels across the system. Decision-makers need to advocate for their inclusion, ensure that patient and family advisors feel welcomed and supported, and respect the input that is provided.

**Improved Designated (formal) Leadership:** Leadership has been identified as the single most important enabler of organizational and system-level innovation and performance. There is growing concern about the widening gap in leadership capacity and skill at all levels within the Canadian health system. Clinical leadership is critically important to achieving improvements in health system performance, as well as to overall patient experience and outcomes. Physicians are ideally placed to lead improvements. Considerable investment is required to develop leadership capacity, both administrative and clinical, at all levels of the system. Within the province, efforts are underway to develop managers and physician leaders to support health system performance, and ensure continuity through leadership succession planning.

Executive leaders and those in designated leadership positions must more meaningfully engage leaders at the clinical and front-line levels if complex issues, such as chronic lengthy wait times, are to be addressed successfully. Effective leadership is required to create the necessary conditions in which clinical and front-line providers take ownership and responsibility, and feel empowered to actively advocate for change.

**Better Distributed Leadership through Networks:** There is appreciation that a more “collective,” “shared” or “distributed” approach to leadership is required to realize major gains in health system performance. Through the SkSI, the government made concerted efforts to distribute leadership. The Saskatchewan government now relies more heavily on a networked style of governance and collective decision-making across many organizations within the health system. The shift has been helpful in modifying the process of engagement and building relationships among system stakeholders, as well as empowering more stakeholders to engage in the leadership process. Incorporating network principles to drive strategic initiatives requires strong leadership and has significant potential for advancing large-system change efforts.

> We cannot get back what has been lost, we cannot undo what has been done but... we can work together to make sure every patient is safe and every care experience is what the patient and family expect and deserve.

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**DONNA DAVIS,**
**SKSI PATIENT AND FAMILY ADVISOR**
**FEBRUARY 21, 2014**
INTRODUCTION

Over the last 10 to 20 years, increased pressure has been placed on healthcare systems to provide consistently safe, high quality care to citizens who need, want and deserve it. This demand has resulted largely from the growing complexity of science and technology, the increase in chronic conditions, a poorly organized delivery system and constraints on exploiting the revolution in information technology. Lately, the added importance of delivering healthcare in the most efficient manner and ensuring fiscal sustainability of the system has compounded the pressure.

Health leaders must rethink and fundamentally reshape existing structures, processes and relationships to realize improved health system performance and patient outcomes. Health systems must become more efficient, more responsive to patients’ needs and deliver higher quality care. According to Denis, “A transformation occurs when changes in the mindset of key actors occur in tandem with changes in the architecture of the system.”

Improved access to care is instrumental to achieving improved health, reduced health inequalities and enhanced health system responsiveness. Timely access to healthcare services, and more specifically, reducing lengthy wait times for non-urgent elective surgery (herein referred to as elective surgery) have consistently been established as one of the most important healthcare priorities for Canadians. Canada is not alone on this issue, as approximately half of all Organisation for Economic Co-operation and Development (OECD) countries consider timely access to be one of the most important health system issues.

While it is generally understood that waiting times are a result of a complex interaction between demand and supply, waits and delays are not considered inevitable features of healthcare systems. Lengthy waits for elective surgery generally tend to form in countries, such as Canada, which combine publicly funded healthcare (with zero or low cost sharing) with constraints on surgical capacity in an effort to balance equity and access. Based on the indications for surgery and hierarchies of need, treatment thresholds for surgery are established by the health system. As a result, emergency and urgent interventions are given higher priority when compared with non-urgent, elective procedures. Consequently, there is a constant struggle to ensure that emergent and urgent, often life-preserving treatment, is delivered while at the same time ensuring that elective surgery is performed without undue delay.

Lengthy waits for elective surgery generate considerable dissatisfaction and frustration for patients, the general public, healthcare providers and policy-makers alike. As a result, they are often the focus of intense media coverage and public debate. The impact of what may be perceived as prolonged waits for specialized and elective surgical care can pose considerable burden on patients, their families and communities. Waiting for required health services not only affects satisfaction with the services provided but excessive waits can be frustrating, frightening and stressful for patients. Undue delay can also compromise overall quality of life and impose unnecessary costs on the individual, community and society more broadly.

Over the past two decades, governments in many countries have tried to address lengthy wait times with varying degrees of success. There is general consensus that Canada’s healthcare systems, for the most part, have been too slow in reducing wait times. Significant empirical evidence exists to support what needs to be done to enable higher performance in this area. The challenge lies in designing and implementing the most effective approach while taking the local, regional and provincial context into account.
Objective
The primary objective of this single policy case study was to systematically explore change processes to better understand and identify factors that facilitate or inhibit large system transformation. This study examined the Saskatchewan Surgical Initiative, a provincial large system change effort currently being pursued by the Saskatchewan Ministry of Health.

The following question guided this research and the preparation of this report:

What are the critical factors that contribute toward and impede large health system transformation based on a case study of the Saskatchewan Surgical Initiative?

Research Partnership-Project Concept
This three year project is a result of a tri-party agreement among the Canadian Foundation for Healthcare Improvement (CFHI), the Saskatchewan Ministry of Health (MoH), and the Johnson-Shoyama Graduate School of Public Policy, University of Regina. The idea arose in March 2011 when senior leaders from CFHI and the MoH met to discuss potential opportunities to collaborate on a study that would explore the change process of two MoH-led initiatives—the Saskatchewan Surgical Initiative (SkSI) and Primary Health Care Redesign (PHCR).

The involvement of two PhD students as researchers (external to the MoH) enhanced the independence and objectivity of the research. Framed as *embedded researchers*, these independent researchers were positioned within the relevant branches where the two change initiatives were being carried out (i.e. one researcher embedded within SkSI and one researcher embedded within PHCR). The main goal for embedding researchers was to capture and report on how change is achieved in health system reform efforts from the viewpoint of those who are at the centre, *living and experiencing the change process*.

This arrangement was unusual in that independent researchers were invited to observe and document the internal workings of bureaucracies in order to get inside the *black box* of the policy implementation process to uncover the facilitators and barriers of major health system change in real time. In turn, the findings could then be used to support future reform initiatives.

The leadership of the MoH at the time, most notably former Deputy Minister Dan Florizone, recognized the potential value of this arrangement and showed willingness to assume any accompanying risks. Additional commentary and description of how the role of the embedded researchers played out throughout the project will be discussed more thoroughly in the research approach section and Appendix A of this report.

Research Approach-Longitudinal Case Study
The case study of the SkSI occurred from September 2011 to January 2014. The length of the study offered several benefits: first, it gave the researcher sufficient time to develop a sophisticated and nuanced understanding of the context of the initiative; second, it allowed the time to negotiate, build rapport and nurture trusting relationships between the researcher and expert-informants (i.e. gain access); and lastly, it enabled an examination of the critical factors that contribute to the process of change at various phases of the initiatives’ policy evolution.
Evidence for this study was drawn from multiple sources. The primary sources were participant observation and interviews with stakeholders from across the system. Secondary sources included public and privileged documentation. As is the case with any major provincial system-level initiative, many organizations and stakeholders play a role in implementation and influence the eventual outcomes. Using multiple data sources and varied data collection methods permitted the researcher greater breadth of coverage. When using participant observation, researchers are limited to a fairly restricted range of people, incidents and localities. Interviewing allowed the researcher to access a wider variety of people and situations. The multi-method approach facilitated the in-depth exploration of a wide range of issues that were simply not amenable to observation (i.e. leadership, personal experience/roles and responsibilities, personal perspectives on change).

Over the course of this study, two rounds of in-depth interviews were conducted. Individuals who had specific knowledge and expertise related to the SkSI were sought. In addition, perspectives were included from all levels of the system: macro (provincial: the MoH), meso (organizational: the regional health authorities (RHAs)) and micro (clinicians/front-line providers). The initial round of interviews was conducted with 10 expert-informants in April 2012. The subsequent round of interviews occurred from September 2 to October 29, 2013. Of the total 61 invitees, 46 (75%) were interviewed: MoH-12 (26% of total participant sample); RHAs-17 (37%); physicians-10 (22%); and other stakeholders from the Saskatchewan Health Quality Council, professional organizations and Patient Advisors-7 (15%).

It is important to note that while the timeline for the research was lengthy in duration it was shorter than the four year health system reform initiative which was launched in April 2010. The timeline and list of research and dissemination activities throughout the study’s period are illustrated in Figure 1.
Analysis of the study data was iterative, occurring at various points throughout the research period. A hybrid approach of both inductive and deductive qualitative methods was used for doing thematic analysis. Five major conceptual themes were identified and are discussed at length in section 6 of this report. The research approach and methods are presented in the appendices. The findings presented throughout this report are drawn from both observational and interview data. To protect the confidentiality of the expert-informants, quotations are used sparingly.
CONTEXT

Historical Context

The Saskatchewan government had been trying to address lengthy wait times for elective surgery and advanced diagnostics since this emerged as a major issue in the late 1990s. The initial response by the government of the day was to announce a $12 million wait-list initiative in the 1999/2000 budget. Essentially, this was a transfer of one-time funds to the larger health districts with the intent to buy increased surgical volumes. The decision was viewed by many as an attempt by the government to spend its way out of the wait-list problem.10

In 2002, the government established the Saskatchewan Surgical Care Network (SSCN), an attempt to achieve data consistency across communities and institutions within the province, as well as deepen collaboration in addressing wait times. The membership of the SSCN included researchers, surgeons, health regions, regulatory bodies and the MoH. The subsequent implementation of a centralized, mandatory surgical registry in 2003 allowed the government to overcome the ad hoc management of lists of patients waiting for surgical care that had plagued the province until then. The Saskatchewan Surgical Registry employs standardized priority assessment tools for non-urgent elective surgery and includes all procedures performed in hospital operating rooms. Wait times are calculated from the date that the health region receives the booking and patient consent forms from the surgeon until the date that the surgery is performed (this period is commonly referred to as “wait 2”). The wait times do not include the initial wait to see the surgeon (commonly referred to as “wait 1”). Presently, no systematic data is available on wait times to see a surgeon.

These advances, along with other strategies and substantial funding commitments, were further refined and developed over time.10 The consolidated and accurate information was crucial for the government to generate analytic reports, to set target time frames for all surgical procedures and, more importantly, to ensure fair and consistent province-wide prioritization based on patient need.11 Together these policy instruments were useful to improve transparency and accountability to the public through the reporting of expected wait times for elective surgery and they became the cornerstones for ensuring (or perhaps reinforcing) confidence in the overall performance of the system.

The development of the infrastructure to support the SSCN and the implementation of the Saskatchewan Surgical Registry gave a newly elected Saskatchewan Party government (2007) the confidence to make a wait time “pledge” in 2010, so “that by 2014, no Saskatchewan resident will wait more than three months for her or his Surgery.”12

Case Description: Saskatchewan Surgical Initiative

Impetus for the SkSI-Urgency for Change

While there had been some success in the actual reduction of wait times before 2010, there was general consensus among key actors that progress to date had been too slow. Concerted effort and focus was required to make the health system more responsive to evolving patient needs. In 2008, the newly elected government, convinced that it had inherited a “broken” health system, set out to remedy the situation. The government’s overall intent was to redesign a system to deliver healthcare that better matched the needs of patients. The vehicle for accomplishing the first phase was the Patient First Review, an independent commissioned inquiry into the patient experience of care and the management of the Saskatchewan health system.
The final report of this review, For Patients’ Sake\textsuperscript{13}, outlined (among other things) the necessity to embed “Patient First” as a core value in healthcare and stated that unacceptably long wait times for surgery were having a very negative impact on patients’ experience within the system. The commission recommended that the provincial government “take immediate action to improve Saskatchewan patients’ surgical experiences, from initial diagnosis through to recovery, through an aggressive, multi-year, system wide strategy that is reported to the public with clear targets and regular updates”\textsuperscript{13} (p.9) In light of the report’s recommendations, the government announced, in the 2009 Speech from the Throne, that it had “set a bold, new goal” with the intention to reduce surgical wait times in Saskatchewan to no longer than three months over the next four years.

Prior to the formal announcement, the wheels had already been set in motion. In May 2009, a Saskatchewan contingent had gone to the UK to learn from the National Health Service’s (NHS) experience of successfully transforming access to surgical care. The “Best of Britain” tour highlighted the approaches used by the NHS to achieve the 18 week target time frame from primary care referral to surgery. The group returned with concrete improvement ideas and evidence that patient, physician and front-line provider involvement was necessary to lead health system transformation. In response, the Executive Sponsorship Group and the Guiding Coalition were established. Analysis and forecasting, performed at the time, revealed that there was a narrow time frame (prior to 2015–16) to reduce the surgical backlog. After this period, anticipated demographic shifts and population increases would place additional pressures on the system that would make backlog reductions unachievable.

The problem had been clearly identified, the Saskatchewan Surgical Initiative was high on the political and policy agenda, and public opinion and political will closely aligned on the urgency of the issue. This met all the classic conditions of a policy window opening for innovative policy change.\textsuperscript{14}

**SkSI Governance-Networked Leaders**

The Executive Sponsorship Group (ESG) was comprised of 25 senior leaders from across the surgical care continuum from the MoH, Regional Health Authorities (RHAs), the Health Quality Council (HQC), board members, representatives from provider licensing and professional organizations, unions, patient advisors, and other health experts. The purpose of this group was “to provide strategic leadership over the surgical initiative and to champion the transformation of the patient’s surgical experience in Saskatchewan.” The group was supposed to “identify and knock down barriers that stood in the way” of achieving the SkSI goals.

The Guiding Coalition (GC) membership was an invited assembly which represented broad-ranging stakeholder interests, namely former surgical patients, surgeons, family physicians, nurses, therapists, healthcare administrators, and health sector organizations such as the Saskatchewan Health Quality Council (HQC), the Saskatchewan Registered Nurses Association (SRNA), Saskatchewan Union of Nurses (SUN), the College of Nursing, the Health Sciences Association of Saskatchewan (HSAS), the Saskatchewan Medical Association (SMA), and the College of Physicians and Surgeons (CPSS). The objective of having a large group of 65 was to ensure geographical representation from across the province and to foster commitment and collaboration amongst system stakeholders. The purpose of the group was “to provide advice, identify project aims and implementation strategies, and provide management and clinical expertise to the Saskatchewan Surgical Initiative.”
Both the ESG and the GC were guided by principles and behaviors made explicit through the terms of reference. Participants were expected to make decisions on the basis of consensus and be committed; guided by evidence-based practice; open and transparent; truthful, respectful and honest; innovative and creative; and influential across all levels of the surgical value stream. The MoH expected the groups to go back to their respective organizations and “rally the troops” to get behind the objectives and goals of the SkSI. The groups were both advisory in nature, with the GC reporting to the ESG, but together they were formally accountable to the Deputy Minister of Health and ultimately the Minister of Health. The groups were also considered to be accountable to the public and the health system through their advisory capacity and provision of leadership, advice and direction in the case of the ESG and provision of knowledge, advice and support by the GC. While the ESG and GC were influential in steering the decision-making, the final decisions were made by the MoH in concert with the Minister of Health.

At the outset, the MoH also introduced a Surgical Initiative Branch. The branch reported directly to the Deputy Minister of Health and was established temporarily to provide specific focus and support to the SkSI. The team was comprised of an Executive Director, Director, two senior policy analysts and administrative support. The branch was primarily responsible for coordinating the development and implementation of the strategy, managing the annual budget development and allocation, as well as supporting and monitoring the initiative’s progress over the period that it rolled out. Expert-informants identified the SkSI Branch as a core group which played a central role in facilitating communication and relationship building between the MoH, RHAs and physician stakeholders.

In addition, an internal MoH Steering Committee was formed. This committee consisted of representatives at the executive director level. According to senior officials within the MoH, communication of the SkSI vision and progress within the MoH was critical to challenge the fragmented and “entrenched siloed perspectives” in order to have all relevant branches pull in the same direction. Prior to the official launch of the SkSI initiative, the committee brought forward project ideas that would support the objectives, and then performed an enduring role in overseeing the project task teams responsible for the management and execution of the SkSI sub-strategies. Correspondingly, the committee provided “an internal safe space for frank conversations” and was used by the SkSI Branch to garner input and guidance into the decision-making and budgetary processes. Figure 2 presents the Governance Model for the SkSI.
The creation of the ESG and GC was an innovative, best practice change management approach used to garner support for the province-wide initiative. Initially, it was a useful mechanism to enlist the support of executive managers, create a support network, educate and reinforce the drivers of change and communicate the risks of not changing. The structure also facilitated an unprecedented level of collaboration with health system partners representing broad-ranging stakeholder interests. Over time, it was a useful enduring forum to provide progress updates, reward achievements, reinforce the key messages, educate on best practices in other jurisdictions, and maintain a degree of executive and system level engagement.

**Sooner, Safer, Smarter—The Plan to Transform the Surgical Patient Experience**

The initial planning for the SkSI drew heavily on two methodologies for change: Kotter’s 8-step Process for Leading Change, as well as the Institute for Healthcare Improvement’s (IHI) framework (Will-Ideas-Execution) for getting system-level results from strategic improvement work. The MoH closely adhered to the principles outlined by Kotter when they decided to create the ESG and GC; they assembled a group with substantive position power and varied expertise to lead the change effort. Similarly, there appeared to be acknowledgement by the MoH that achieving results at the system level would require commitment and will at all levels, especially the will of CEOs and Board Chairs from across the entire system, to make a new way of working attractive and the status quo uncomfortable.
In September 2009, the MoH convened the first combined meeting of the ESG and the GC. The broad group of stakeholders met to collectively set the context for the vision and the strategy; identify the key elements necessary for success in a “whole system transformation” for quality; and to identify both informal and formal assumptions that existed across the surgical care continuum. The group was tasked with: being bold; focused; recognizing that the solutions were within the collective; and finally to challenge the status quo by identifying new ideas to break the rules completely.

Early feedback obtained by the MoH following these initial meetings indicated that there was some skepticism amongst those that participated. Concerns expressed were related to the “bold goals” and ambitious nature of the proposal, the seeming vested interests of some, that the proposed plan would be perceived by the front-line as another frivolous idea, and the fear of failure as a result of economic uncertainty. One interviewee likened these initial sessions to “being at a revival.” Despite early reservations, it was evident through conversation, both formal and informal, that many were initially excited by the opportunity to be involved in a provincial collaborative—especially one that had the potential to actually make a difference and, if implemented as planned, to truly transform care for the people of Saskatchewan.

One of the first steps taken by the ESG and GC was to map the existing surgical value stream (also known as the surgical care continuum) to create a common understanding of current processes and support future improvement efforts. At the time, the Saskatchewan Health System was haphazardly dabbling in Lean. “Lean is an improvement approach that consists of eliminating waste (steps that do not add value to the customer/patient, e.g. interruptions, delays, mistakes...) to improve the flow of patients, information or goods.”18 (p.122) A Lean process analysis tool known as “value stream mapping” allowed the group to apply a standardized and rigorous approach to examining root problems, developing solutions, and identifying indicators to measure improvement over time.

Stakeholders from across the system, many of whom have countless years of experience working in surgical service planning and delivery, were well aware that there was no single solution or “magic bullet” to address the complex issue of reducing elective surgery wait times. The collective wisdom recognized that achieving the final goal of no one waiting greater than three months would require a variety of different approaches, all within the constraints of the publicly funded, publicly administered health system. Similarly, there was a clear desire—by those interviewed at least—that the SkSI needed to be inclusive of, and tackle, all aspects of the surgical value stream (from primary care through to rehabilitation) if it was going to even come close to transforming the patient care experience. It was through these deliberations and exchange of ideas, aided by Lean process improvement tools and the best available evidence and innovation in this area, that the group collaboratively refined a proposed action plan and the Saskatchewan Surgical Initiative came to life.

Prior to the formal public announcement made on March 29, 2010, Dr. Peter Barrett, a highly regarded surgeon with considerable health reform and ministry experience, accepted the position as physician lead of the initiative. Barrett, together with Saskatchewan’s Minister of Health (at the time) Don McMorris, and Dan Stroman, one of five former surgical patients serving as advisors to the SkSI, publicly released “Sooner, Safer, Smarter: A Plan to Transform the Surgical Patient Experience.”12

The influences of the IHI framework were evident in the setting of breakthrough performance goals for the system and the identification of primary and secondary “drivers” or means to accomplish these ends. This cascading definition of goals and drivers made explicit the logic, or theory, of how the SkSI results were to be achieved (see SkSI-Plan at a Glance19).
The strategy set out to achieve the following goals:

- improve the experience of Saskatchewan surgical patients;
- reduce surgical wait times to no more than three months within four years;
- ensure that short wait times can be sustained into the future; and
- make changes that result in better and safer care for surgical patients.

The start and end date of the Surgical initiative (April 1, 2010 to March 30, 2014) was meant to clear the surgical backlog. The initial plan stated that it was based on five measurable objectives. Three of these objectives were specific to surgical care and were framed as “transformations” in this plan. They include shorter waits for surgery; better patient experience; and safer, higher quality care. These objectives built on two “foundations” which apply to the health system as a whole—namely, support for good health and patient- and family-centred care.

In the early days of planning, it was deemed important to set “strategically staged, big bold targets” to achieve the wait time guarantee. The overarching target was “all patients offered an option to have surgery within three months by March 31, 2014.” Key milestone targets outlining sequential reduction of wait times (18 months in year 1, to 12 months in year 2, and six months in year 3) were also established. According to the information gleaned from both observation and key informants, annual targets were an effective mechanism to achieve the ambitious final goal.

The division of the seemingly insurmountable four year task into manageable pieces allowed RHAs to plan more effectively, set more frequent measurement intervals and, when necessary, perform course corrections in real time. Over the life of the initiative, many regions, with support from the MoH, have broken the volume targets down even further to weekly volume targets for both inpatient and outpatient cases, and in many circumstances by specialty area. In the words of one interviewee, “I always used to think of it as a weight loss program… if they weigh 400 pounds and you say to them ‘okay, you’ve got to lose two’ it’s a little bit different than if you say ‘you’ve got to lose 200’ right?… people generally say ‘go away then, take your measures and get out of here.’”

More detailed measurement became critical as the wait times became shorter and efficiency became a necessity. The annual targets also provided an opportunity for stakeholders to celebrate successes when targets were met or to “turn up the heat” when they were not. The performance targets for surgical wait times also provided an incentive for the key players in the healthcare system to work together toward a common objective.

Among the plan’s multiple sub-initiatives (or drivers), the main thrust was to expand surgical capacity, improve the efficiency of surgical care delivery and ultimately improve access for patients. Efforts were made to increase the supply of diagnostic imaging (primarily computerized tomography (CT) and magnetic resonance imaging (MRI) scans) and maximize rural surgical capacity. Operating rooms were enhanced and post-operative bed capacity was increased through renovation schemes. The province’s surgical capacity was markedly increased by contracting surgical care through third-party providers. While there was a strong emphasis placed on wait time reduction (from ‘decision to treat’ to ‘treatment’), as well as the achievement of the three month target time to receive surgery, the breadth of the initiative also gave priority to quality, safety, patient experience and sustainability. Considering every stage of the patient journey resulted in a comprehensive policy framework that targeted a “multifaceted attack” on both demand and supply side factors. This in turn encouraged a more balanced approach—to transform the patient surgical experience—than had been taken in previous efforts to address the wait time issue within the province.
The main policy instruments central to the reform efforts are highlighted in Table 1. Acknowledging the fact that the SkSI was designed to address patient access, safety and quality as strategic imperatives for the health system of Saskatchewan, the six dimensions of quality, as delineated in the Institute of Medicine's report *Crossing the Quality Chasm*, are used to organize and demonstrate the alignment of each policy tool (sub-initiative) in terms of supply and demand factors and individual dimension of quality.

**Table 1. SkSI Policy Instrument Alignment with Dimensions of Quality**

<table>
<thead>
<tr>
<th>SkSI Strategies</th>
<th>Supply</th>
<th>Demand</th>
<th>Safety</th>
<th>Timeliness</th>
<th>Effectiveness</th>
<th>Efficiency</th>
<th>Equity</th>
<th>Patient Centredness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expand Surgical Capacity</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR Nurse Training</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pooled Referrals</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved OR Allocation and Utilization</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Long Waiter Policy</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timely Transition from Acute Care to LTC</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wait 1 Initiative</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Surgical Site Infection Bundles</td>
<td>n/a</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Surgical Checklist</td>
<td>n/a</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Medication Reconciliation</td>
<td>n/a</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Falls Prevention</td>
<td>n/a</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Clinical Pathways</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Reduce Surgical Variation</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialist Directory</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Surgical Information System</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient Experience</td>
<td>n/a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>
Over time, it became apparent that there was synergy between certain projects (e.g. pathways, pooled referrals and variation and appropriateness work) which needed to be capitalized upon in order to coordinate effort and optimize outcomes. The interaction between sub-initiatives was not fully appreciated by senior level decision-makers until partway through the initiative. Some interviewees considered this a failure of leadership at both the MoH and RHA levels and a missed opportunity to move the “safer” and “smarter” agendas of the SkSI along further. The increased volume of services required to reduce the surgical backlog offered a powerful financial incentive to fee-for-service surgeons, and as some suggested, could have been more purposefully packaged with strategies, such as the implementation of the surgical checklist or clinical pathways. Recent research suggests that organizations will be more successful in achieving major change if they implement coordinated complementary changes and synchronous innovations.20

The autonomy that physicians assume, for the most part, enables them to voluntarily opt in—or out—of participating in government-led initiatives, such as the SkSI. The government relies heavily on the “cooperation of the willing,” within both the family physician and surgeon communities, to move such initiatives forward. Within the constraints of the current context, ‘soft’ strategies of inclusion and moral suasion are used to influence and encourage physician involvement. Physician autonomy has had a considerable impact on SkSI projects, such as ‘clinical pathways’ and addressing the ‘surgical variation and appropriateness’ work. Gaining traction on both of these sub-initiatives has proven challenging for the government from the outset. In contrast, considerable success was realized in advancing the ‘pooled referrals’ project. Factors that are likely to have contributed to this success are: small groups—strong physician leaders; face-to-face dialogue; high level of ongoing individual participation for short periods; third party to facilitate crucial conversations, foster trust and develop consensus; personal commitment to collaborating to achieve shared goals; small tests of change to build credibility for spread; and good quality data to support ongoing continuous improvement.

Furthermore, according to expert-informants, the branding of the SkSI as “Sooner, Safer, Smarter” was an effective communications strategy. The slogan was featured extensively throughout discussion and was cited by actors at all levels of the system. Moreover, it was perceived by several expert-informants as a useful mechanism to create and increase awareness. It was considered a persistent reminder to system stakeholders that the SkSI was broader than access alone, ultimately “to transform the surgical patient experience through sooner, safer and smarter care.”

Given that the purpose of this research was to explore factors that influence the achievement of transformational change, it was worthwhile to ask expert-informants their perceptions of the scope of change as it related specifically to the SkSI. During the interviews, expert-informants were asked to provide ratings in two parts: first, they were asked to rate the intended policy framework; and second, they were asked for a rating based on the implementation of the policy framework, reflecting on the outcomes to date. For rating purposes, a 10 point scale was used where 1 was equal to “no change” and 10 was “transformational change achieved.” Table 2 presents the findings (reported as the median (and range—difference between highest and lowest scores)).
### Table 2. Expert-Informant Ratings of the Scope of Change

<table>
<thead>
<tr>
<th>Stakeholder Groups</th>
<th>n</th>
<th>Intended Plan</th>
<th>Implementation of the Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>MoH</td>
<td>12</td>
<td>8.0 (2)</td>
<td>6.5 (4)</td>
</tr>
<tr>
<td>RHAs</td>
<td>17</td>
<td>8.0 (4)</td>
<td>7.0 (4)</td>
</tr>
<tr>
<td>Physician</td>
<td>12</td>
<td>8.0 (3)</td>
<td>5.0 (8)</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>8.0 (1)</td>
<td>5.0 (3)</td>
</tr>
<tr>
<td><strong>46</strong></td>
<td></td>
<td><strong>8.0</strong></td>
<td><strong>5.8</strong></td>
</tr>
</tbody>
</table>

(The stakeholder group ‘Other’ is inclusive of patients and other health system stakeholders interviewed, not otherwise articulated)

All stakeholders provided a high rating of the intended policy framework, recognizing that the SkSI was an ambitious plan in both scope and pace of change. In contrast, the assessments of the actual implementation of the policy framework were decidedly lower. The findings reinforce that while there is general consensus on what needs to be done, the real challenge is how to advance implementation of strategy at a pace necessary to realize major gains.

The outcome data tell a more positive story than the ratings. As of March 31, 2014, the official end of the SkSI, there has been a 75% reduction in patients waiting greater than three months for elective surgery when compared to the start of the initiative nearly four years ago (15,997 (December 31, 2009) decreased to 3,885 (March 31, 2014)). That said, there are still 3,885 individuals waiting longer than the threshold three month waiting period. This represents 25.2% of the total population of those waiting for elective surgery within the province. Of the total individuals waiting greater than 3 months (3,885), 59.5% (2,312) had waited between three and six months, 32.3% (1,253) had waited between six and 12 months, 6.3% (244) had waited longer than 12 months but less than 18 months and 1.9% (76) had waited longer than 18 months. The purchasing of third party services for day surgeries has enabled the RHAs to focus on patients who have already waited for extended periods (“long waiters”), typically for more complex surgery requiring hospitalization. Of the 72,635 surgeries done year-to-date (January, 2014), 13.3% (9,693) were performed in third party facilities, generally by surgeons who also operate within the regional structure.

Despite the significant progress, the two larger regions which perform the lions’ share of the surgeries, did not meet the SkSI three month wait time goal within the designated time frame. Health system stakeholders, especially the employees of the MoH, have grave concerns about the ability of RHAs to reach the final goal, even within extended timeframes—especially once high level political and system focus and attention diminish. In the upcoming 2014–15 strategic plan, the emphasis on reducing surgical wait times will decrease as it moves from “breakthrough initiative” to more daily operational work. As a consequence, the MoH has gone to great lengths to ensure a representative, albeit much smaller, coalition remains at the helm and that adequate levels of oversight and monitoring continue. As is the case of any change initiative, the true test will be sustaining the gains into the future.
**SkSI Funding-Resourcing to Support Action**

Substantial resources, both human and financial, have been dedicated to support the achievement of the SkSI goals. There is a general consensus amongst interviewees that the dedicated resources allocated to the SkSI were a major facilitator in achieving the reductions in the surgical backlog. The SkSI went beyond just buying more surgeries and remunerating physicians for a higher volume of services. Investments were made in developing information systems and supporting system engagement and quality improvement initiatives. Table 3 below presents the distribution of funding. SkSI funding tops up health region based budget funding so that extra money can be invested in elective surgery. Only a small portion of the total amount of physician fees is included as those funds are administered by the Medical Services Branch and typically flow out of their budget. Given that fee-for-service is the predominant model of remuneration for surgeons within the province, increased and sometimes unanticipated fluctuations in the volume of services provided contributed to budget overruns. This in turn can have considerable implications for the total healthcare budget, as well as the resourcing of other programs.

**Table 3. SkSI Funding Allocation**

<table>
<thead>
<tr>
<th>Initiatives</th>
<th>Actual ($000s)</th>
<th>2010/11</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>SkSI Total</th>
<th>2014/15 (Outgoing Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospital Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g. salaries, supplies, and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>support services, electronic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bed management tool to improve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>patient flow)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>23,074</td>
<td>1,516</td>
<td>34,904</td>
<td>56,463</td>
<td>115,957</td>
<td>46,816</td>
</tr>
<tr>
<td><strong>Equipment and Renovations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g. renovations to operating</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>room and patient recovery wards;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>surgical equipment)</td>
<td></td>
<td>7,887</td>
<td>1,180</td>
<td>5,581</td>
<td>0</td>
<td>14,648</td>
<td>56</td>
</tr>
<tr>
<td><strong>Physician Services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Payments to surgeons/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>anesthesiologists)</td>
<td></td>
<td>180</td>
<td>4,660</td>
<td>4,933</td>
<td>0</td>
<td>9,773</td>
<td>0</td>
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<tr>
<td><strong>Post-Operative Rehabilitation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g. physical and occupational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>therapy, supplies, equipment)</td>
<td></td>
<td>1,700</td>
<td>0</td>
<td>3,824</td>
<td>3,903</td>
<td>9,427</td>
<td>4,065</td>
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<tr>
<td><strong>Home Care Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g. services delivered by</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nurses and home care aides,</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>equipment)</td>
<td></td>
<td>1,400</td>
<td>0</td>
<td>2,871</td>
<td>3,537</td>
<td>7,808</td>
<td>4,062</td>
</tr>
<tr>
<td>Initiatives</td>
<td>2010/11</td>
<td>2011/12</td>
<td>2012/13</td>
<td>2013/14</td>
<td>SkSI Total</td>
<td>2014/15 (Outgoing Years)</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>------------</td>
<td>--------------------------</td>
<td></td>
</tr>
<tr>
<td>Surgical Information System Expansion</td>
<td>2,890</td>
<td>2,200</td>
<td>1,251</td>
<td>0</td>
<td>6,341</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(electronic system to streamline surgical care in more hospitals)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Improvement, Safety and Engagement</td>
<td>1,010</td>
<td>651</td>
<td>3,270</td>
<td>1,199</td>
<td>6,130</td>
<td>2,543</td>
<td></td>
</tr>
<tr>
<td>(e.g. patient-centred care, Lean, partner engagement, initiatives to promote patient safety, clinical pathways and appropriate-standardized care)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved Assessment of Surgical Patients</td>
<td>938</td>
<td>0</td>
<td>867</td>
<td>1,272</td>
<td>3,077</td>
<td>2,508</td>
<td></td>
</tr>
<tr>
<td>(e.g. additional multidisciplinary clinics, development of new care “pathways” that streamline services)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff Training (e.g. operating room nurses, etc.)</td>
<td>810</td>
<td>230</td>
<td>1,580</td>
<td>228</td>
<td>2,848</td>
<td>450</td>
<td></td>
</tr>
<tr>
<td>Diagnostic Equipment and Lab Services</td>
<td>4,000</td>
<td>0</td>
<td>450</td>
<td>0</td>
<td>4,450</td>
<td>0</td>
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<tr>
<td>Communications</td>
<td>42</td>
<td>216</td>
<td>175</td>
<td>0</td>
<td>433</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Administrative Expenses (Operating)</td>
<td>44</td>
<td>45</td>
<td>80</td>
<td>51</td>
<td>220</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Offset</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>(5,124)</td>
<td>(5,124)</td>
<td>0</td>
<td></td>
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<tr>
<td>Total (actual SkSI Spend)</td>
<td>43,975</td>
<td>10,698</td>
<td>59,786</td>
<td>61,529</td>
<td>175,988</td>
<td>60,500</td>
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<tr>
<td>SkSI Budget*</td>
<td>44,400</td>
<td>10,500</td>
<td>60,500</td>
<td>70,500</td>
<td>185,900</td>
<td>60,500</td>
<td></td>
</tr>
<tr>
<td>Variance (actual vs. budgeted)</td>
<td>(425)</td>
<td>198</td>
<td>(714)</td>
<td>(8,971)</td>
<td>(9,912)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

*2010–11 includes extra $4M that was allocated to SkSI from elsewhere in the Ministry.
POLICY IMPLICATIONS

The policy implications from this single case study can be generalized to: 1) other regionalized systems in Canada facing similar acute care challenges; 2) well-resourced and politically driven quality improvement initiatives in other areas; and 3) distributed environments involving multiple organizational accountabilities and network-led governance.

The main results from this study show that achieving large system change, within the context of the Saskatchewan Surgical Initiative, requires a complex and interdependent set of strategies, processes and organizational arrangements designed to achieve system-wide vision and goals. Important lessons can be drawn from the SkSI experience to accelerate health system transformation for decision-makers, clinicians and patients alike.

Lessons for Decision-makers

- Effectively addressing elective surgery wait times requires a common vision and a comprehensive policy framework—inclusive of the entire surgical care continuum—that gives priority to improving access, quality, safety, patient experience, and ensuring sustainability.
- Governments and health system decision-makers need to be judicious when embarking on multiple major change initiatives in parallel, such as the SkSI and Lean, to enable the required attention and resourcing to implement effective policies.
- Achieving large system change requires dedicated resources focused on managing and supporting the change effort—facilitating communication and relationship building among health system stakeholders.
- A robust and comprehensive performance measurement system is essential for movement toward a more performance-based healthcare system.
- Considerable investments are needed to better integrate the current information systems and further develop the capacity and capabilities required to produce more accurate and timely intelligence to enhance decision-making at the clinical, organizational and systems levels.
- The adoption of Hoshin Kanri, an approach to strategic planning and deployment, together with rigorously applied daily visual management has: improved the alignment of front-line activity with the strategic direction at the organizational and system levels; supported the daily use of measurement to drive improvement efforts; and fostered a culture of continuous improvement.
- The significant investment in Lean training and rigorous application of Lean methodology—or process improvement methodology—has established standardized, consistent structures and processes which: facilitate interaction and transparent sharing of information; enable greater collective understanding of the issues; and encourage mutual learning among health system administrators and clinicians.
- Lean has been a useful mechanism to accelerate SkSI achievements—particularly those focused on improving access to surgical care. Through sustained government commitment to the Lean reform effort, the “patient first” “culture of improvement” may be realized.
- Both top-down and bottom-up approaches to change are required. Leaders from across the system, from the executive levels to the front-line providers, need to be engaged in the processes of collaboration, teamwork and collective decision-making to achieve large system change.
- Organizational and system level policies play a key role in embedding and integrating the philosophy of patient- and family-centred care in strategic and operational processes—effectively reshaping the organizational culture.
Within a predominantly hierarchical structure—where regions are accountable to the Minister of Health—the use of a strategic network is a useful mechanism to balance the tensions between ministerial accountability and the need to engage leaders at all levels (distribute leadership) in order to achieve large system change.

The key to effective distribution of leadership relies on two factors: 1) structures, such as the stakeholders involved and forums for interaction, which determine the space and scope for leadership; and 2) individuals’ capacity and ability to practice leadership.

Considerable investment is required to develop leadership capacity, both administrative and clinical, at all levels of the system.

**Lessons for Clinicians**

- Opportunity exists to more fully engage patients and families at all levels across the system. Clinicians need to advocate for patient and family inclusion, ensure that patient and family advisors feel welcomed and supported, and respect the input that is provided.
- Front-line providers—particularly physicians—need to seek opportunities to be directly engaged, share ownership and responsibility for system-level improvement initiatives.
- Front-line providers—particularly physicians—need to take the initiative to lead, seek opportunities to develop personal and strategic leadership capabilities and recognize experiential learning moments which allow for reflection on experiences, increasing self-awareness and personal growth.

**Lessons for Patients**

- It is vital that patients and families seek opportunities to be engaged as core members of the healthcare team and to advocate for health system improvement.
- Opportunities exist to be involved in ongoing system-level governance structures and core planning, implementation and care delivery improvement events.
FINDINGS FOR ACCELERATING HEALTH SYSTEM TRANSFORMATION
Using Performance Measurement More Comprehensively

Key Findings

- Realizing the unified vision for system-wide reduction of elective surgical wait times required the establishment of clear goals and strategically staged “big, bold” targets for achievement.

- Considering the surgical journey from a patient’s perspective, requires system level measurement and reporting of elective surgical wait times at both the wait 1 (initial wait to see the surgeon) and wait 2 (intention to treat-treatment) time periods.

- For several of the SkSI sub-initiatives—specifically related to safety and quality of care—progress was hampered by the lack of high quality intelligence available at the individual, organizational and system levels, to drive improvement efforts.

- The rigorous application of Lean methodology has established standardized routines and processes, enhanced accountability among stakeholders and supported the daily use of measurement to drive improvement efforts.

Main Messages for Accelerating Health System Transformation

- Performance measurement gives policy-makers a major opportunity to secure health system improvement and accountability.

- A robust and comprehensive performance measurement system is essential for movement toward a more performance-based healthcare system.

- Standardized, consistent structures and processes facilitate interaction and transparent sharing of information, enable greater collective understanding of the issues and encourage mutual learning among health system administrators and clinicians.

- Considerable investments are needed to better integrate the current information systems, and further develop the capacity and capabilities required to produce more accurate and timely intelligence to enhance decision-making at the clinical, organizational and systems levels.

Performance measurement gives policy-makers a major opportunity to achieve health system improvement and accountability. Its role is to improve the quality of decisions made by all actors within the health system, including patients, providers, managers, politicians and governments. There is growing recognition that having the capacity to evaluate and report on quality is a critical building block for system-wide improvement of healthcare delivery and patient outcomes. There is also a clear need to better integrate health services across the province in order to realize major performance gains at the system level. As a result, aligning performance measurement activities at the front-line with the strategic direction of the organization or system is vital.
Accurate measurement and reporting of performance in regard to elective surgical wait times has been instrumental in supporting health system stakeholders to work toward achieving the SkSI wait time targets. A complete repertoire of wait time related reports are distributed weekly by the MoH to a diverse stakeholder group. While this information is especially critical to those involved in daily surgical operations, many of those interviewed who participate on the periphery stated that they closely “keep watch on what’s going on.” The surgical system performance information, generated through the Saskatchewan Surgical Registry data warehouse, is also publicly shared via the government website. The public website is interactive, allowing users to drill down by region or specialty. At this point, no conclusive empirical evidence exists to adequately determine how the public interprets these data or if, and how, they are influenced by it.

Saskatchewan measures the wait times for elective procedures in two ways: 1) the wait times for patients in a treated period; and 2) the wait times for patients still on the surgery list at a point in time. Data is restricted to only those procedures done in operating rooms, excluding most endoscopic procedures and those performed in ambulatory care settings. All surgeries performed by third party providers are included. Information is available on the volumes of surgeries performed; percentage of surgeries performed within discrete time frames; total number of patients waiting; as well as the percentage waiting longer than the target time frame of three months. In addition, wait time trends are also reported for the purposes of monitoring the progress made in reducing surgical wait times by specific RHAs and within the province more broadly.

A significant deficiency of the current strategy is that the system only has the capability to calculate elective surgery wait times from the date the health region receives the booking form from the surgeon until the date that the surgery is performed (wait 2). The wait times do not include the initial wait to see the surgeon or account for any delay that may occur between when the patient is seen by the surgeon and the receipt of the surgery booking by the RHA. Presently, there is no systematic wait 1 data at the system level. Within the province, there has been concerted effort to develop a methodology to accurately determine this waiting period. It is well understood that, from a patient’s perspective, the wait for surgery starts when they first seek surgical care. Currently, the algorithm designed for this purpose is undergoing rigorous validation. It is expected that accurate data will be available by September 2014, encompass both medical and surgical specialties, and be included as part of the Specialist Directory. The Specialist Directory is presently a province-wide listing of all practicing surgeons and includes information related to procedures performed, wait times for surgery and number of cases waiting for surgery. Outcome data suggests that the directory is increasingly being used by providers and the public alike, with the latest data demonstrating close to 150 ‘hits’ on the website per day. The inclusion of wait 1 information will complement what already exists and further enhance patient and provider preference when it comes to choosing a surgeon that best suits their individual needs.

If and when these data come into mainstream use, Saskatchewan will be the first province within Canada to systematically measure the entire wait time continuum and will be in line with emerging trends of international best practice. Correspondingly, these data will facilitate a more balanced approach in designing strategies that consider the patient’s surgical journey in its entirety. It will also be useful to corroborate concerns expressed by surgeons who indicate that the increased focus on wait 2 comes at the expense of lengthening wait 1.
To date, considerable investment has been made to develop an environment conducive to the daily use of measurement to drive improvement efforts. At the system level, the provincial leadership team conducts quarterly assessments of the system’s progress to ensure a battery of targets are being met. At the organizational level, “wall walks” are conducted on a weekly basis, with “huddles” on the front-line occurring daily in most RHAs. Through these processes, transparency is being promoted and a mechanism exists whereby actors within the system can properly be held to account. If a target is not being met, a corrective action plan is necessary to demonstrate to other stakeholders that critical steps are being taken to get back on course.

In the initial phases, it was clear that a real shift in thinking and behaviour – to be more open with sharing information – was required for both the MoH and the RHAs. The transition to full implementation was obviously uncomfortable for many involved. Over the life of the initiative, the understanding of how to use performance data more proficiently in guiding decision-making was plain to see. More granular measurement became critical as the wait times became shorter and efficiency became a necessity. Frequent and timely measurement was important to facilitating course corrections in real-time.

Beyond the direct measurement of surgical wait times, there is a very real concern with the choice of measures and quality of data available, particularly relating to patient outcomes and improving clinical performance. Expert-informants suggest that, in many cases, measures are chosen simply for convenience rather than investing in capacity development to measure aspects of care that are more meaningful to stakeholders. The literature reinforces that the health system’s contribution to healthcare overall can be most reliably captured in terms of clinical outcomes for patients.21

There is widespread debate on whether measures should be based on existing available data or whether data should be captured specifically to measure achievement on previously set targets. These concerns are echoed within the literature. A dynamic tension exists between the need for locally meaningful and strategic measures, and the benefits of selecting and using standardized measures that enable meaningful comparison.23 Another confounding factor is the lack of intellectual and system capability and capacity to collect and interpret the data. An expert-informant stated precisely that, “we don’t have the human resource capacity, we don’t all have the knowledge capacity and we don’t have good data integration.” The very narrow use of information technology and consequent limited ability to collect and utilize comparative performance and quality information is a significant barrier to implementation.

For several of the SkSI sub-initiatives, the lack of high quality intelligence available – at the individual, organizational and system levels – considerably hampered progress to drive improvement efforts. The specialty groups involved in efforts to better understand surgical variation within the province were particularly challenged. In many cases, interested and highly engaged surgeons were initially involved in province-wide discussions facilitated by administrative data. Once faced with the profound gap in the availability of real-time clinical patient data necessary to achieve change, momentum was lost. Some committed groups have gone on to trial a paper-based collection system which is highly labour and time intensive. Surgeons have expressed a strong desire for electronic databases to collect patient-reported outcome measures and to partake in synoptic reporting.

“Similarly, another interviewee stated,

“We’re fixated a lot on the wait time numbers for example because that’s easy to measure, but I don’t know that we’ve assessed well enough the culture and whether we are changing the culture.”
Within the province, there appears to be an understanding that evidence is a key informational resource, and its availability and relevance is the cornerstone of performance improvement at all levels of the health system. It is critical to have a comprehensive set of performance measures that adequately determine what impact, if any, many of the implemented strategies (e.g. surgical checklist, surgical site infection bundles, clinical pathways) have had on patient care and outcomes. Despite this awareness, systematic outcome measurement of many strategies implemented as part of the surgical initiative, particularly those related to improving patient safety and effectiveness of care, is lacking. As a result, it is challenging to adequately evaluate the impact these strategies have had on overall patient health and wellbeing. Sound evaluation is necessary to ensure that the government is effectively fulfilling its stewardship role and that public money is being spent wisely. As one expert-informant so succinctly stated, “without objective evidence how will we know for sure that the quality of care is any better here than anywhere else, or that the system is any more efficient?”

Similarly, it is paramount to incentivize the right behaviour from healthcare providers. A shift from fee-for-service models to paying healthcare providers for health outcomes is central to ensuring both fiscal sustainability and improved system performance. “Rewarding health outcomes rather than health input use not only creates strong incentives for providers to exert effort, but it can also create incentives for providers to innovate in developing new, context-appropriate delivery strategies.” A robust and comprehensive performance measurement system is essential to support the move toward a more performance-based healthcare system focused on quality.
Continuous Quality Improvement Using Lean Methodology

**Key Findings**

- Saskatchewan Health has adopted ‘one improvement method’—Lean. The considerable investment in Lean training and certification is equipping a significant cohort of administrative and clinical leaders with in-depth knowledge and the capability to apply Lean principles and methods.

- Through application of Lean methodology, an environment has been created to: better align front-line provider activity with organizational and system level strategic direction; foster a culture of continuous improvement; and enable forums which allow for team engagement, knowledge sharing and mutual learning.

- The challenge to meaningfully engage physicians in both SkSI and Lean reform efforts is considerable and recognized as crucial for ongoing success.

- Lean has been a useful mechanism to accelerate SkSI achievements—many improvement activities were targeted toward optimizing efficient use of surgical resources and improving the quality of care for patients experiencing surgery.

**Main Messages for Accelerating Health System Transformation**

- Organizational learning or continuous quality improvement is the process of change that contributes to improved system performance and better patient outcomes.

- A “culture of improvement” can be fostered by modifying organizational arrangements and developing robust management processes.

- Rigorous application of Lean methodology and significant investment in training is required to fully develop the knowledge and skill necessary to support continuous improvement.

- Targeted policies are necessary to support physician participation in Lean training and encourage physician involvement in process improvement activities.

Learning through action is increasingly important for organizations as they struggle to cope with rapidly changing environments and more complex and interdependent sets of knowledge. Organizational learning is a process of increasing the capacity for effective organizational action through knowledge and understanding. In other words, learning or continuous quality improvement is the process of change. It is through the cyclical interaction of thinking and doing that improvements in patient care and system performance can be achieved. Within Saskatchewan, Lean was the instrument used to achieve this end. In 2011, Lean was formally adopted as a province-wide healthcare reform. Dubbed the “Saskatchewan Health Care Management System” (modeled on Toyota’s Global Production System), it is viewed as a key driver to realizing this vision.

Saskatchewan is the first jurisdiction in Canada to apply Lean methodology across the entire provincial health system. Although many provincial health departments have dabbled in Lean-inspired process reforms, no other provincial government in Canada has invested as heavily or focused as comprehensively on Lean. According to Marchildon, the provincial government is relying on three major factors to achieve the objectives of the reform: 1) extensive spread; 2) intensive training; and 3) long-term changes in behaviour.” In 2012, the government of Saskatchewan formally retained the services of an external Lean consulting firm to collectively build the internal capacity.
and infrastructure necessary to support a culture of improvement. This decision has not been without controversy. The four year contract will cost the province upwards of $35 million, causing some to question whether this is the wisest use of public resources.

One of the foundational pillars of the Saskatchewan Health Care Management System is Hoshin Kanri (HK), a new approach to strategic planning and deployment. The HK process operates at two levels: first, at the strategic planning level via “breakthrough strategies”; and second, at the daily management level on the more routine or fundamental aspects of operations. The approach draws heavily on new public management-type instruments which emphasize improved public sector efficiency and quality through comparative performance measurement, target setting with tight central monitoring, and the use of potent management incentives.

Through the “painstaking” and “uncompromising” application of this method, visibility walls have been established in all 18 participating organizations at the system, organizational and clinical levels. These walls display performance data and provide a permanent location to easily view the work of each organization, and in the case of the provincial wall at the MoH, the system as a whole. The intention is to align the information presented on the front-line provider visibility walls with the overarching organizational and health system plans. The cascade of information is an attempt to ensure that everyone within the system is aware of the targets and goals set by the provincial leadership team, as well as to improve understanding of how each individual's work contributes to the achievement of those goals.

One expert-informant described the purpose of the visibility walls in this way:

[It's about] creating a learning organisation, and that is about creating innovation using small tests of change—coming up with new solutions... [the walls weren't] so much about the data—it was about the very act of getting together as a team and rising above your silo. Once you could see [the whole] that makes the difference—a fundamental difference.

Another stated, “where it becomes really, really powerful and really, really effective is with making the work visible.” Many recognized that implementing Lean methodology and process has been a “steep learning curve... or more accurately a big hill to climb.” There was a general sense among those interviewed that it has been helpful in increasing awareness, facilitating “crucial conversations”, “shining a light on our weak areas” and coordinating action. Again, there is acknowledgment that “we've got a long way to go, we're not where we need to be... but we've got visibility walls that are visible that weren't there a few years ago.”

The “wall walks” initially were the domain of administrators at the most senior levels (board members, CEOs, VPs), though as implementation has gone deeper into the system, more front-line providers are directly involved. Daily “huddles” of teams, whereby managers meet with front-line staff around the visibility walls, are now an ingrained part of daily management within most regions. Observation and interview data both showed that “wall walks” and daily “huddles” primarily include management, nursing and allied professional staff. The challenge to engage physicians, beyond those in formal leadership or administrative roles, is considerable. Expert-informants noted some key reasons for this challenge: customarily, wall walks are done during clinic hours so most specialists are either in their office or in surgery; the visibility walls are intentionally in public spaces and this is not normally where physicians congregate; and there is a presently a general lack of awareness of Lean principles amongst the physician community.
Recognizing these shortfalls, the MoH and regions have employed policy tools designed to specifically target physicians to encourage participation in Lean leader training and process improvement activities. For instance, a shortened “special track” Lean training program is now being offered to better accommodate physician schedules. In addition, specific funds have been established to compensate physicians for time spent in training and on eligible regional improvement projects. Some regions have articulated participation in Lean quality improvement work as an expectation within preliminary physician compacts.

The considerable investment in rigorous Lean training and certification is equipping a substantial cohort of health system stakeholders, primarily senior and middle level administrators, with the knowledge and skill necessary to support continuous improvement. To date, 636 individuals have completed, or are in the process of completing, intensive Lean training. Forty-seven family physicians and specialists (7% of total cohort) are included in this tally. Part of the training requires that participants lead and partake, as part of a team, in actual improvement activities and workshops. The attempts to embed Lean philosophy across the system are supplemented by the mandatory basic training of approximately 9,000 point-of-care staff. The efforts to build individual capabilities are further bolstered and sustained through a specific networked structure of Lean offices—also known as Kaizen Promotion Offices—at the provincial and regional levels. These teams essentially promote, coordinate and support all improvement activities within the system.

The commitment to a single improvement methodology has contributed to the introduction of a new, but common, lexicon. The universal language has enabled stakeholders, from across and at all levels of the system, to better communicate.

The fundamental change to the architecture of the system and related management processes has had significant implications for the SkSI. Given that the goal to achieve drastic reductions in wait times was high on the agenda, the surgical service line was bestowed privileged status in relation to the focus of improvement efforts. Within regions, many of the improvement activities were targeted at realizing efficiencies and improving the quality of care for patients experiencing surgery.

While it is far too early to assess the impact of Lean in Saskatchewan, the implementation of the Saskatchewan Health Care Management System is creating forums for team engagement and sharing knowledge. Presently, however, involvement of physicians and surgeons in processes at both the system and clinical levels continues to be limited. The direct engagement of organized medicine is crucial to the advancement of this reform effort. The collaborative efforts around the SkSI and the concerted action taken at the regional level to create consistent structures and processes that encourage interaction, mutual learning and greater collective understanding of the issues have been important. Opportunities for organizational learning are taking shape within RHAs and across the health system more broadly. While this poses a positive outlook for the future, it is important to note that merely increasing bureaucratic controls and mandating the use of learning mechanisms does not guarantee that learning will occur or that change in behaviour and performance will result. It takes strong leadership, both designated and emergent, to guide the process and build commitment for the broad based participation necessary for action. Only by constantly seeking innovative solutions and measuring comparative performance will organizational learning, the culture of continuous quality improvement and improved system performance be realized.

It has “improved our conversations,” enabled us to “collectively ask the ‘whys’” [to get to the root cause of the problem] and furthermore, it has “enhanced the depth of understanding of the issues” and “afforded opportunities to learn together.”

(PARTICIPANT OBSERVATION – FIELD NOTES)
Implementing Patient- and Family-Centred Care

Key Findings

- Saskatchewan has effectively operationalized what patient-and family-centred care means for the province.
- The SkSI was the first system-wide initiative to include patient and family advisors in ongoing system level governance structures and to comprehensively involve them in core planning, implementation and care delivery improvement events.
- Patient and Family Advisors, administrators and clinicians alike, value meaningful engagement and partnering with patients and families.
- Health system stakeholders must be willing and open to hosting diverse ideas and learning, and adapting as a result of patient and family input.

Main Messages for Accelerating Health System Transformation

- It is vital that patients and families are involved as core members of the healthcare team, on equal footing with healthcare professionals, administrators, planners and policy-makers.
- Organizational and system level policies play a key role in embedding and integrating the philosophy of patient- and family-centred care in strategic and operational processes—effectively reshaping the organizational culture.
- Involving patients in strategic initiatives and clinical process improvement activities fundamentally alters the group dynamic and facilitates downward accountability to health service users.
- Opportunity exists to more fully engage patients and families at all levels across the system. Decision-makers need to advocate for their inclusion and respect the input that is provided.

Patient and family advisors said they felt “privileged to be invited to participate,” and “definitely listened to.” They also felt that their “contribution was huge.”

Patient and family engagement is increasingly seen as a means of catalyzing change in the delivery of healthcare services. Recent evidence highlights the importance of including patients and family members in “a partnership and shared leadership” in the co-design of healthcare services. It is vital that patients and families are involved as “core members of the healthcare team,” on equal footing with healthcare professionals, administrators, planners and policy-makers. Therefore, the leadership challenge for decision-makers and providers alike is to stimulate patient engagement and create opportunities that draw on the very distinct knowledge held only by patients and their families.

Improving patients’ experience is an inherently complex and demanding undertaking for the system as a whole. The evidence base to guide the choice of interventions to improve patients’ experience is patchy, fragmented, and mostly descriptive. This is due primarily to the paucity of rigorous evaluation appraising micro-level approaches to patient- and family-centred care (PFCC), and even less research informed from a
systems perspective. A recent review of strategies for involving patients in service improvement emphasizes that the central tenet of any PFCC endeavour is the consistent focus on, and appreciation of, the multiple dimensions of patients’ experience of care. In addition, the authors of this review suggest that organizational and system level policies play a key role in producing and sustaining change in this regard.

Movement away from the system-centric model of healthcare that privileges provider perspectives has historically been a challenging task for policymakers in Saskatchewan. The most recent effort made by the province, for all intents and purposes, is an attempt to reshape the organizational culture by redefining the relationships within healthcare and encouraging partnerships with patients at many levels. Organizational culture is widely considered to be one of the most significant factors in bringing about organizational change and revolutionizing public administration and service delivery. Embedding the philosophy of PFCC in all organizations (i.e. MoH, RHAs and physician practices) is considered paramount to achieving major improvements within the Saskatchewan health system. To date, the health system has made considerable efforts to integrate and operationalize the principles of PFCC.

In 2011, the health system, in the broadest sense, collaboratively developed and adopted a PFCC policy framework. Saskatchewan has created a shared understanding of what PFCC is for the province and what it means for regions to fully integrate the philosophy into their daily work. Accordingly, the four core concepts of PFCC (Respect & Dignity, Information Sharing, Participation and Collaboration) have been incorporated in the major health system initiatives (i.e. SkSI, Lean Management System, Primary Healthcare Redesign) and also underpin policy and program development, implementation and continuous improvement activities. Patient experience of acute and primary healthcare – measured as a percentage of patients rating their experience as 10 out of 10 – is reported at the macro-level and monitored by the provincial leadership team. While measuring and reporting patient experience demonstrates executive leadership commitment, it is unclear as to whether these data meaningfully influence strategic decision-making or has an impact on micro-level improvement efforts at this stage.

The SkSI was the first system-wide initiative to include patient and family advisors (PFAs) in ongoing system level governance structures and to comprehensively involve them in core planning, implementation and care delivery improvement events. The SkSI went beyond measuring patient experience within acute care. The SkSI mapped 12 patients’ surgical journeys in real time. The PFAs’ stories were included at Executive Sponsorship Group and Guiding Coalition meetings. Wait time and performance information were publicly shared. The PFAs were also involved as equal members on committees that led some of the sub-initiatives. There is a clear expectation now that PFAs will be included in all MoH and regional continuous improvement activities and that their contributions will influence decision-making.

One of the first initiatives that actually really engaged patients. It really took the patient first to heart. I will never forget the patient stories... I will never forget that when he got up and spoke. It was very powerful. You know what? I think that was a lynchpin. I think that’s what actually brought folks better together and why we got better engagement out of a lot of people when they actually heard from patients themselves about some of the trials and tribulations...
On the whole, the PFAs commended the government and the system more broadly for being progressive, open to including patients, and transparent with the sharing of information.

Expert-informants suggested that having PFAs involved from the beginning was “really important” and “one of the most successful things we’ve done.” It was viewed as pivotal to “getting into the hearts” of those involved, capturing their attention and inspiring commitment to the overarching goals of the SkSI.

Since success of any major health reform is contingent on changing the mindset and behaviour of key actors within system, involving PFAs considerably altered the group dynamic. “It truly does change the conversations” and facilitates downward accountability to health service users through transparent information-sharing and the encouragement of meaningful and inclusive participation. Despite good intentions, many reiterated that Saskatchewan is in the “early phase of a longer journey” of cultural change and there is a general consensus that there wasn’t “the strongest representation [of the patient voice] all of the time.” Fear was a factor behind some of the observed reticence to include patients. One expert-informant candidly stated that “one of the things that gets in our way is it’s a little frightening… [Having patients involved]... threatens your status quo thinking, and you have to kind of be prepared to bear your soul a little in terms of here’s the situation with all its warts and everything.” Decision-makers need to advocate for the process, rather than any specific interest or outcome, and respect the input that is provided by all participants.

The findings from this study support the value of meaningful engagement and partnering with patients and families in the design and improvement of healthcare. This study concurs with Denis et al., recognizing that deliberate strategies designed to stimulate and support patient engagement are crucial to accelerating health system transformation. However, the prospects for health system redesign are promising only if managers and clinicians, as well as health system stewards, have the will and courage to fully integrate the PFCC philosophy, and are open to hosting diverse ideas and learning and adapting as a result of this input. Increased patient and family involvement has the potential to challenge the decision-making monopolies and dominant logic of the system. It can drastically shift the prevailing power distribution that has prompted the need for change.
Improved Designated (formal) Leadership

Key Findings

- The quality and effectiveness of leadership demonstrated by stakeholders central to the SkSI varied across stakeholder groups.
- Despite unprecedented levels of front-line engagement, the SkSI was perceived by stakeholders at all levels to be a top-down change initiative.
- A missed opportunity was to include more front-line providers—particularly physicians—to empower and directly engage them in shared ownership and responsibility of the initiative.
- There is a general perception of “change fatigue” throughout the system.

Main Messages for Accelerating Health System Transformation

- Leadership is the single most important enabler of organizational and system level innovation and performance.
- There is growing concern about lack of leadership capacity and skill at all levels within the Canadian health system.
- Considerable investment in developing leadership capacity, both administrative and clinical, at all levels of the system is paramount.
- Medical leadership is at the core of health reform. Physician engagement is important if significant gains in health system performance are to be realized.
- Executive leaders and those in designated leadership positions must more meaningfully engage leaders at the clinical and front-line levels to collectively tackle the major leadership and change management challenges facing the health system.

The Health Council of Canada’s recently released report, *Better Health, Better Care, Better Value for All*, identified leadership as the single most important enabler of organizational and system-level innovation and performance. "Leaders recognize and manage change, define roles, encourage collaboration, build consensus, provide vision, align goals and activities, and measure performance." According to Dickson and Tholl, Canada won’t realize transformation in healthcare until we have leaders who think and act systemically:

  “for most administrators, providers, politicians and citizens, the leadership challenge is to convert a fragmented set of activities into a well-functioning whole… a mindset [is required] that has every individual leading in his or her area of responsibility from the perspective of shaping the whole.”

A paradigm shift—a movement from one primary worldview and way of operating to a radically different one—is fundamental to redesigning the distribution of power, influence and privilege. In the contemporary volatile and rapidly shifting environment where new and unprecedented issues abound and change is unavoidable, nothing is certain. Strong and effective leadership is needed.
In an effort to ascertain the quality and effectiveness of leadership demonstrated by stakeholders central to the SkSI, expert-informants were asked during the interviews to rate the effectiveness of leadership during the SkSI. With the exception of patients, stakeholders involved in the SkSI held formal positions of leadership within the system. For rating purposes, a 10 point scale was used where 1 was equal to “not effective at all” and 10 was “extremely effective.” Table 4 presents the findings (reported as the median (and range—difference between highest and lowest scores)).

**Table 4. Expert-informant Ratings of SkSI Leadership Effectiveness**

<table>
<thead>
<tr>
<th>Stakeholder Groups</th>
<th>Political MoH-DMO</th>
<th>MoH SkSI Branch</th>
<th>Executive Sponsorship Group</th>
<th>RHAs – VP/Senior Leadership Team</th>
<th>RHAs – Director/Management Team</th>
<th>SMA</th>
<th>HQC</th>
<th>Physicians/Surgeons</th>
<th>Patients</th>
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<tr>
<td>MoH</td>
<td>12</td>
<td>9.5 (2)</td>
<td>9.5 (4)</td>
<td>10.0 (3)</td>
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<tr>
<td>RHAs</td>
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<td>8.0 (5)</td>
<td>8.0 (4)</td>
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<td>6.9</td>
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</tbody>
</table>

(MoH-DMO = Deputy Ministers Office, RHA = Regional Health Authority, SMA = Saskatchewan Medical Association, HQC = Saskatchewan Health Quality Council, Patients = those involved in the ESG, GC and sub-initiative working groups.
In the stakeholder groups, “Other” is inclusive of patients and other health system stakeholders interviewed)

As it relates to the SkSI, overall, the quality of leadership was rated high (>8) at the political and senior ministerial levels. Similarly, the leadership demonstrated by the SkSI Branch and Executive Sponsorship Group were perceived to be effective. The remainder of the findings, except the leadership exhibited by the several patients involved, point to a possible leadership gap within the regions and amongst stakeholders external to the MoH/RHA organizational structure. These findings are consistent with emerging evidence that indicates a dearth of leadership capacity and skill within the Canadian health system.40

There is growing concern that past cost-cutting and recent emphasis on efficiency has caused a loss of skilled middle management. As a result, present day middle managers have been left with unwieldy and unsustainable spans of control.41 A recent study examining perceptions of healthcare management competencies within the Canadian context reported that chief executive officers and senior vice-presidents have significant concerns about their own competencies in steering the healthcare system.42 In particular, those working in the largest RHAs conveyed unease about their capacity in terms of providing strategic direction, redesigning health delivery processes, leading quality improvement initiatives and communicating within their expansive organizations.

This is further compounded by the rapid turnover among senior government officials. The average tenure of current senior leaders in the health sector was reported as less than two years in 2005, a sharp decline from previous decades.43 Frequent leadership “churn” is disruptive. It can jeopardize corporate history and cause loss of momentum. Each leadership change can also come with a host of new policies and priorities. Together, these trends have serious implications for future health system performance. It is recognized that investing in leadership capacity development is more and more important.40, 41
By the same token, there is a need to optimize leadership potential across the healthcare professions. Clinical leadership is critically important to achieving improvements in the delivery of services, as well as to overall patient experience and outcomes. As the custodians of the processes and micro-systems of healthcare, physicians are ideally placed to lead improvements.\(^{44}\) In fact, medical leadership is now often perceived to be at the core of health reforms in a number of different countries that view quality, patient safety and value as dependent on the active engagement of physicians.\(^{44}\) Physician engagement is important if significant gains in health system performance are to be realized. Therefore, executive leaders must more meaningfully engage leaders at the clinical and front-line provider levels to collectively tackle the major leadership and change management challenges facing the health system.\(^{40}\)

Within Saskatchewan, efforts are underway to support the development of leadership capacity. As recently as January of this year, the first Saskatchewan Leadership Program was launched. This program draws on the \textit{LEADS in a Caring Environment} capabilities framework as the common model for program development across the province.\(^{39}\) The program is designed to support health system performance, develop managers and physician leaders, and ensure continuity through leadership succession planning. A core component of developing leadership capability is based on the principles of experiential learning.\(^{31,39}\) It is increasingly being recognized that leadership cannot be learned in a single training seminar or through an individual event, but rather developing leadership is a lifelong process whereby leadership is learned through reflection on personal experiences while interacting with others, and through increased self-awareness and personal growth. Leadership is not a function of the power of position but the power inherent in an individual’s ability to effectively influence others.\(^{39}\) It is a “quality that can be found [and developed] in anyone who exercises responsibility to rise to a challenge, and who uses his or her skills to engage others in solving that problem.”\(^{39}\) (p.13)

Accordingly, there is appreciation that a more “collective”, “shared” or “distributed” approach to leadership is required. New models of leadership recognize that effectiveness in knowledge-based environments, such as healthcare, depend less on heroic actions of a few individuals at the top and more on collaborative leadership practices distributed throughout an organization. While no definitive definition of leadership exists, Dickson and Tholl define leadership as “the collective capacity of an individual or group to influence people to work together to achieve a common constructive purpose: the health and wellness of the population we serve.”\(^{39}\) This definition is particularly useful for this study as it has been endorsed by the healthcare community and is consistent with the perspective of leadership as a process, not a position. Perspectives on distributed leadership are varied and diverse. The notion of distributed leadership generally considers leadership as a quality of the whole organization, network or system. It often “involves peer (lateral) influence and at other times involves upward or downward hierarchical influence.”\(^{45}\) (p.1)

The SkSI has a considerable cohort of physicians and surgeons who have provided leadership at varying stages over the life of the initiative. According to interviewees the role played by “opinion leaders” or “champions for change” was invaluable to moving the initiative forward. Change champions were in some cases identified and invited to participate more formally, while others emerged more spontaneously. A number of clinical leaders “really stepped up”, “walked the talk”, and actively and enthusiastically promoted innovation and change. It was clear that these individuals were instrumental in influencing physician organizations and partners to engage in the initiatives’ strategies to improve surgical patient care.

Despite the optimism, a dominant sub-theme that consistently emerged throughout this study was that the involvement of physicians and surgeons primarily occurs on an ad hoc basis—“generally we shoulder-tap”—and involvement is constrained to the few “usual suspects.” It was evident that, on occasion, physicians identified by the MoH as “change champions” were unaware of how they had been identified or that they had even been designated this informal status. Given that the MoH
devolves delivery of care to the RHAs, they rely heavily on effective leadership at the regional level to engage surgeons in collective action. Even with a direct relationship to the bulk of the physician community via remuneration arrangements, the MoH appears limited in its ability to communicate and build relationships with front-line providers.

On the other hand, some clinicians expressed frustration at not being able to participate more purposively. Several clinicians suggested that, over the life of the initiative, they had offered some recommendations for improvement but hadn’t received any response or feedback from the administrators involved. Physician leadership is vital to achieving system transformation and there is a necessity to “engage early and often”, and at times and in ways that meet the needs of physicians. There is also an apparent need for a formal mechanism that enables physicians, especially those interested, to express their willingness to partake in provincial level initiatives. The evidence shows that presently, there is insufficient involvement of physicians in decision-making at both the regional and system levels. Although there were different perspectives on the reasons for this, it was mostly attributed to a deep-seated undercurrent of lack of trust and respect between physicians and administrators. These results echo similar conclusions drawn from a recent survey conducted in one of the largest regional health authorities within the province. The fact that both the administrative and clinical sectors continue to voice dissatisfaction with the current state of affairs speaks to the urgent need for effort—and leadership—from both sides to improve the situation.

Considering leadership more broadly, there continues to be a gap in the linkage of the overarching vision with actions at the front-line. In spite of having “unprecedented levels of front-line engagement” and considerable energy devoted toward directing the system to be more collaborative and inclusive of diverse ideas, the SkSI continues to be perceived by stakeholders at all levels as a top-down change initiative. This is evident in the very politicised nature of the initiative, as well as the language used by expert-informants, such as, “when the government fixes this…”, “when it was handed to us”, and “the government’s initiative.” This was particularly poignant at the “grassroots level” where commitment and ownership of the change by front-line providers is especially critical for the initiative’s success. One senior administrator, acknowledging that the SkSI was an intentional strategy to “push” the system, conceded that there may have been some negative implications: “we burned some bridges: we got compliance, but we didn’t get commitment.”

Partway through the initiative, decision-makers became more cognizant of the integral role played by front-line staff as the wait time targets became shorter and efficiency became more crucial. Strategies to communicate the goals and objectives, and empower front-line administrators and healthcare professionals took on higher priority. More recently, real efforts to distribute leadership to front-line providers is being realized through the system-wide implementation of Lean methodology and the focus on developing a “culture of continuous improvement.” However, expert-informants across all levels report “change fatigue” throughout the system: “despite considerable effort the system is still running too hot.” Expert-informants suggested that several factors influence this perception: the sheer number of changes being experienced; the near constant shifting of priorities; the time constraints and perceived pressure to achieve the challenging targets of the SkSI. This is further compounded by a very ambitious political agenda. Point-of-care providers felt that the space to innovate and the will to “try new things” are limited.

Leadership is critical for improved health system performance and is the “foundation for other key enablers because it supports and provides momentum to move actions towards attaining health system goals.” Those in designated leadership positions must better engage leaders at the clinical and front-line provider levels if complex issues, such as the chronic lengthy wait times, are to be addressed successfully. In particular, physician leadership is paramount. Effective leadership is required, at all levels within the system, to create the necessary conditions in which clinical and front-line providers take ownership and responsibility, and feel empowered to actively advocate for change.
Better Distributed Leadership through Networks

Key Findings

- Consensus exists among health system partners that through the necessity to work together to achieve the common goals of the SkSI relationships have been strengthened. A culture that values collaboration, teamwork and learning is being fostered.

- Within the predominantly hierarchical structure, the network strategically established for the SkSI, involved a broad and diverse group of stakeholders—including patients and family advisors—in a collective decision-making process.

- The strategic network accommodated the two-way flow of communication and multilateral negotiation necessary for collaboration. The structure facilitated the distribution of leadership across levels and among diverse organizations within the system.

- Further distribution of leadership requires the development of leadership capacity at all levels—developed through increased self-awareness, personal growth and experiential learning opportunities.

Main Messages for Accelerating Health System Transformation

- There is growing appreciation for more “collective”, “shared” or “distributed” approaches to leadership, which are required to realize improved system performance and quality of care.

- Leaders from across the system, from the executive levels to the front-line providers, need to be engaged in the processes of collaboration, teamwork and collective decision-making.

- Incorporating network principles to drive strategic initiatives requires strong leadership and has significant potential for advancing large-system change efforts.

- The key to effective distribution of leadership relies on two factors: 1) structures, such as the stakeholders involved and forums for interaction, which determine the space and scope for leadership; and 2) individuals’ capacity and ability to practice leadership.

Fundamentally, leadership can be conceptualized as a relational process, a shared or distributed activity. Distributed leadership occurs where the leadership function is stretched over the work of a number of individuals and the task is accomplished through the interaction of multiple leaders. Distributed leadership highlights leadership as an emergent property of a group or a network of interacting individuals. Distributed or shared leadership is increasingly seen as crucial to developing and implementing effective solutions within the complex healthcare environment. In systems where leadership is distributed, diversity of expertise and opinion are embraced. More often than not, great ideas are born in spaces of collective creative tension where “incredibly talented people bump up against each other… working together they polish each other and they polish their ideas.”

Mechanisms for distributed leadership, or shared leadership more broadly, generally privilege structural factors in determining the space and scope for leadership. These structural factors include the nature of the issue to be addressed, the selection of people to be involved, and the forums that foster engagement and participation. For a more complete understanding of distributed leadership, the significance of individuals’ own agency and behaviour in the practice of leadership must also be considered. Leadership practice is the product of what individuals know, believe and do within a certain context or situation. Based on observation of the SkSI, the Saskatchewan health system has made considerable gains in striking a workable balance between designated or formal leadership and more emergent, distributed or collective efforts.
Examples of distributed leadership can be seen throughout the SkSI. The creation and central role of the Executive Sponsorship Group and Guiding Coalition illustrate the distribution of leadership across levels and among diverse organizations; notably, this included patient leadership. The establishment of the SkSI Branch and the internal MoH Steering Committee also stand as examples of shared leadership. These examples demonstrate how leadership has been structurally distributed both internally and externally to the MoH.

Similarly, the Saskatchewan government now relies more heavily on a networked style of governance and collective decision-making across many organizations within the health system (e.g. RHAs, eHealth Saskatchewan, 3sHealth, the Saskatchewan Cancer Agency, not-for-profit affiliates, MoH and HQC). The shift has been helpful in modifying the process of engagement and building relationships among system stakeholders, as well as empowering many more “than the familiar faces” to engage in the leadership process.

In an effort to inspire all stakeholder organizations to achieve shared provincial goals, system actors mutually agreed to “Think and Act as One.” The policy instrument which has had the most profound impact on altering the governance model has been the province-wide adoption of Hoshin Kanri (HK), otherwise known as strategic planning or policy deployment. HK is a management process grounded in Lean methodology, which has assisted the provincial leadership team and other system stakeholder executives to focus and align their organizations around provincial priorities. HK adopts a systems approach and provides an iterative step-by-step planning, implementation and review process for managed change and continuous improvement.33

In HK planning, the role of senior leadership is to identify priorities that support a vision—i.e. to identify the what—but it is the rest of the organization that must collaboratively translate those goals into specific plans, targets and actions—i.e. to outline the how. Throughout the HK cycle, goals and plans are cascaded down and up in each organization—from senior leadership to middle management to front-line staff and back up again—for repeated review, input, action and revision. Underlying this methodology is the basic premise that each person is an expert in his or her own job. Therefore, they are the best ones to offer insights and suggest the most realistic and effective solutions. The purpose of the process is to encourage participation (i.e. to distribute leadership) and use the collective thinking power of every stakeholder, patients and families included, to improve the performance of the system as a whole.

While officially launched two years prior to the implementation of HK, the SkSI has “taken centre stage” and is a prime illustration of HK in action. Driven by the political imperative to achieve the three month wait time guarantee, the SkSI was viewed by senior leaders as a “must do, can’t fail” breakthrough initiative. As a result, the SkSI remained high on the agenda and received “a lot more front of the room attention”, focus and resources to accomplish its ends. In addition, within some regions, significant reorganizations were undertaken to strategically align collective responsibility across surgical departments and executive groups. In effect, these tactics have created cross-functional teams which successively generated shared ownership and responsibility for achieving the SkSI goals and objectives at the executive level. As one interviewee put it, “I think this model has served us really well… it is easier for people to say, “how does my portfolio that I’m operationally responsible for feed into meeting this health system objective?”

The clear consensus from expert-informants is that over the course of the four year initiative, the aforementioned modifications made to organizational arrangements, along with the specific governance approach taken to steer the SkSI, have strengthened relationships among system stakeholders.
Though, in the same breath, many acknowledged that they should probably do it more often. Commitment to strong working relationships is pivotal to the success of large-system change where key players must recognize that negotiating in good faith for mutual gains is the best way to achieve desirable policy outcomes. While the above examples alone do not prove that flawless collaborative relationships abound within the province, they do indicate that, for the most part, stakeholders support a platform for improved cooperation and collective decision-making.

We can conclude that, in the case of the SkSI, the Saskatchewan government has engaged in a networked form of governance to tackle the wait times issue and improve the quality of care provided. The governance arrangement for the SkSI can be characterized as a form of collaborative governance. Collaborative governance is defined as:

a governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets. (p. 544)

Collaborative governance, or the use of network-based principles (rather than hierarchy or markets), is increasingly being viewed as an effective policy response to so-called “wicked problems.” The concept of wicked problems can be readily applied to the issue of elective surgery wait times as it refers to a problematic social situation where: 1) there is no obvious solution; 2) many individuals and organizations are necessarily involved; 3) there is disagreement among stakeholders; and 4) where desired behaviour changes are part of the solution.

The current governance configuration can be described more precisely as being a hybrid form, rather than a full paradigm shift to network governance as a strong hierarchical structure continues to exist in tandem with the new networks. In effect, the network is symbiotic and complementary to the hierarchy which is essential to preserve democratic and governmental accountability. According to Kotter’s most recent work which highlights the idea of “two systems, one organization”, the strategic network is the dynamic portion of the structure which involves many change agents. It allows for the flexibility, inspired action, collaboration and timely problem-solving which often get bogged down in more bureaucratic forms of organization. The strategic network is inseparable from the hierarchy, with a constant flow of information and activity between them, and all participants working within both structures.

Incorporating network principles to drive strategic initiatives requires strong designated leadership and has significant potential for advancing transformational change efforts. If true to its intent and well supported by robust management processes, a strategic network is a mechanism which can overcome the inherently risk-averse, change-resistant nature of traditional hierarchies and effectively distribute leadership more broadly. Throughout the period of study, there were many witnessed instances in which, depending on the demands of the moment, individuals—both in formal and informal positions—took the opportunity to exhibit leadership. Expert-informants also described how their leadership roles changed over the course of the initiative. At times, it was important to lead; at other times, it was important to step back and allow others to lead.

The necessity to work together to achieve a common goal has fostered a culture that places value on collaboration, teamwork and learning. Many expressed that now they wouldn’t hesitate to bridge perceived boundaries and contact a colleague in another region or organization to seek advice or to learn from others’ experiences.
The SkSI governance model had many elements of the idealized type of strategic network described, which in turn facilitated the distribution of leadership across levels and among diverse organizations within the system. According to the literature, collaboration implies that “non-state stakeholders will have real responsibility for policy outcomes… and while ultimate authority may lie with the public agency [i.e. the Minister of Health in this case], stakeholders must directly participate in the decision-making process.”51 (p.546) The formal design and iterative efforts to periodically bring the groups together accommodated the two-way flow of communication and multilateral negotiation necessary for collaboration. Alliances that all partners deem successful involve collaboration (creating new value together), rather than mere exchange (getting something back for what you put in). Hence, it is necessary that partners value the skills each bring to the network.56

Despite the “textbook” conditions, it was evident through observation and informal conversations that behaviour and action were constrained by existing institutional legacies. Expert-informants noted that one reason for this may be that in the past, the MoH has typically operated in an “autocratic… hard top-down” manner and as a consequence, many were skeptical of the government’s attempts to break away from this mold. Many involved in the Guiding Coalition felt that the advisory capacity of the group essentially undermined its change management potential and reinforced the historical top-down power of policy-making and implementation within the province.

Another important factor to consider, within such collaborative environments, is the leadership capacity and skill.40 While the quality of leadership (as rated by expert-informants) varied across stakeholder groups (see Table 4), it was difficult to ascertain whether all those involved were fully empowered to own and lead the change, or if they were equipped with the necessary breadth and depth of skill to effectively do so. Another confounding factor to further distributing leadership is the common understanding that within the health system, the pool of physician leaders is small. There is recognition by many stakeholders that physician leadership capacity needs to be further developed. Nevertheless, it was unmistakable that the Executive Sponsorship Group and the Guiding Coalition were directly engaged in a constructive collective process, albeit limited by context and time. It was clearly evident that the group deliberations and the advice offered had a tangible and persuasive influence on government decision-making outcomes.

Collaboration is best understood as an iterative cycle where past experiences can shape future collaborations.51 In the context of the SkSI, newly established organizational arrangements and processes have gone beyond the rhetoric of collaboration. According to expert-informants, these changes have had a very real and positive effect. While such arrangements do not eliminate the traditional sources of tension between the government and stakeholders or amongst stakeholders themselves, more amicable relationships generally allow for more face-to-face dialogue, opportunities for trust building and the direct (and very necessary) involvement of stakeholders in various government reform agendas. The actors involved in the SkSI felt that the initiative, which is the first of many improvement initiatives planned by the government, has laid a solid foundation and proven the credibility for system-wide change.
FURTHER RESEARCH

This study contributes to the growing body of knowledge on large-system transformation by identifying critical factors that facilitate and inhibit major health system change. While the single case study of the SkSI offers important insights for consideration, it also sheds light on areas requiring further study.

In-depth examination and evaluation of the individual sub-initiatives of the SkSI was out of the scope of this study and well beyond the lone researcher’s capacity. Further research is required to explore the actual organization of care processes, and to identify mechanisms and contextual factors specific to each organizational or clinical setting.

❖ It is critical to evaluate the impact of strategies (such as clinical pathways, surgical checklist and surgical site infection bundles, for example) on outcomes in varying contexts in order to realize their full potential. Unless programs have a demonstrable impact, it is difficult to defend their implementation and continuation. The following paragraph suggests a tool and evaluation methodologies that may prove useful in future efforts:

❖ Clinical Pathways (which includes Surgical Site Infection Bundles of Care) Care Process Self Evaluation Tool (CPSET). Based on the context-mechanism-outcome configuration of the Realist Evaluation framework, it is an empirically tested and validated tool for assessing the organization of the process of care. For further information, see the website https://perswww.kuleuven.be/~u0035350/phd-study-on-clinical-pathways/the-cpset/; see also de Souza, 201357 and Pawson and Tilley, 199758 for further details.

❖ The independent evaluation of Lean, especially the impact it has on building relationships, teamwork and physician engagement, is particularly important. In light of the scope of the province-wide reform effort, research in this area would be of particular interest to many. Presently, there is limited information outlining how Lean is being used across organizational boundaries and what impact this has is having on patient experience and outcomes. Employing three levels of analysis—micro, meso, and macro—may provide a useful framework to evaluate the outcomes of Lean healthcare implementation.18
REFERENCES


ACCELERATING HEALTH SYSTEM TRANSFORMATION IN SASKATCHEWAN


APPENDIX A: RESEARCH APPROACH

Longitudinal Ethnographic Approach

As briefly outlined previously, the Saskatchewan Surgical Initiative (SkSI) study adopted an exploratory qualitative research approach, more specifically a longitudinal ethnographic single case study.59, 60, 61 The use of an ethnographic approach, while limited within health policy research, has become pervasive across a wide range of academic disciplines. It has become a popular approach in social science and health research generally.62 The choice of design was motivated by its flexibility, the capacity to gain a deeper understanding of the world view from the perspective of those who experience it, as well as the enhanced ability to explore the process of change. Ethnographic research remains firmly rooted in the first-hand exploration of the research setting. It is the sense of social exploration and protracted investigation that gives ethnography its abiding nature.66

Ethnography is based on the assumption that every social group is distinctive in its own right and, in order to explore this distinction, personal engagement with participants is the key to facilitating profound understanding.67 Ethnography is of particular value for researchers seeking to understand complex social settings and interactions, especially those which are not made explicit, thus making it an appealing approach for this longitudinal research. The ethnographic design allowed the researchers to make observations about the interactions among actors, organizational structures and processes—contextual settings inherent in large system initiatives that were otherwise too subtle or complex to be captured by conventional research designs.

The Role of the Embedded Researcher

Framed as embedded researchers, two independent researchers were positioned within the relevant MoH branches in which the two change initiatives were being carried out—one researcher within the Saskatchewan Surgical Initiative (SkSI) and one researcher within the Primary Health Care Redesign (PHCR).

The embedded researcher role was defined by two principal characteristics: the research approach that it employed and its independence. In terms of the former, the role was broadly conceptualized at the beginning of the study by the ethnographic research approach and observational methods that it would use. From a research design perspective, the embedded researchers served as the principal mechanism for the study’s data collection. In terms of the latter, the project contract, among other things, outlined the independent nature of the relationship between the embedded researcher and funding partners. In particular, it expressed that the partnership would not create the relationship of employer and employee between the embedded researchers and either of the two funding partners. This statement was included for the purposes of upholding a level of objectivity to the study that would potentially not be otherwise achievable.68 While this contractual term gave the embedded researcher a great deal of autonomy throughout the study, all partners were provided an opportunity to review and comment on any documentation or presentations prior to their public dissemination, including this report. All partners informally agreed that any significant differences that may potentially arise as to the content within these releases were to be resolved collectively.

At the outset of the study, the embedded researcher was physically positioned within the SkSI Branch, provided with a cubicle, including a computer and phone, and was given access to the Branch’s electronic filing system. The researcher was introduced to the five Branch members and provided with a high level overview of the initiative. A relationship was established with the Director of the SkSI. This person acted as the main contact for the researcher and was instrumental in maintaining ongoing collaboration among
the funding partners. The SkSI Branch members, particularly the Executive Director and Director, played a key role in smoothing the transition into the organizational setting and were critical in facilitating access to the field.

Initially, the researcher was invited to participate in internal and external meetings that occurred at the senior and branch levels relevant to the initiative. In the early stages, at the beginning of each meeting the researcher attended, a brief introduction to the embedded researcher was provided and there was an opportunity for the researcher to outline the objectives of the study. This approach ensured that the people attending the meetings were fully informed and aware that they were being observed. The formal introductions set the stage for the researcher to independently create relationships with expert-informants from across many organizations in the future. As can be expected, studies which examine organizations over a long duration must cope with the challenge of staff turnover. This study was no different. In fact, a high degree of turnover occurred not only among the research partnership but also more broadly within the MoH and certain RHAs. As a result, gaining and maintaining access was a continuous process which required considerable effort, with relationships often being negotiated and re-negotiated over the study period.

In this type of qualitative research it is important for the researcher to maintain an objective lens and a critical perspective. Reflexivity—a constant awareness, assessment and reassessment by the researcher of the researcher’s own contribution—was considered an integral part of the research process. In the interests of openness and transparency, it should be stated that the researcher has a background as a registered nurse, a Masters in Health Administration and prior to undertaking a PhD, was a past employee of the Regina Qu’Appelle Health Region.

Over the course of the study the researcher made multiple formal presentations: to the Senior Leadership Team within the MoH (December 2011—Research Protocol); to the research partnership steering committee (April 2012—Research Protocol); to the Management Committee within the MoH (October 2012—Embedded Researchers to Support Health System Transformation); and at the Canadian Association for Health Services and Policy Research (CAHSPR) Annual Conferences (May 2012—Embedded Researchers to Support Health System Transformation; May 2013—Performance Measurement: Accelerating Health System Transformation in Saskatchewan?). These formal forums allowed the researcher an opportunity to increase the awareness of the study, to clarify the role, to reflect on preliminary insights and to focus the inquiry. The formal forums also complemented more informal mechanisms in the dissemination of ongoing findings. To date, the findings have been used by the MoH to inform two recent improvement activities related to planning and implementation of large-system reform efforts.

**Data Sources and Methods**

Data for this study were gathered from multiple sources. The primary sources were participant observation and interviews with expert-informants from across the system. This data was supported with both public and privileged (internal to the MoH) documentary evidence (e.g. administrative documents such as the Initial SkSI Plan, annual progress reports, project charters, data outputs, budgets and other internal records; letters, email correspondence; agendas, minutes of meetings, reports; media releases, newspaper articles, Hansard). Use of multiple data sources and research methods facilitated triangulation and resulted in a more complete, holistic and contextual portrayal of the case study. In addition, the two embedded researchers also met on a regular basis to share and critically reflect on their respective observations.
Participant Observation

Participant observation is a core activity in ethnographic fieldwork. It can provide rich descriptive accounts of people, scenes and dialogue, as well as personal experiences and reactions. Participant observation involves establishing a place in some natural setting on a relatively long-term basis in order to investigate, experience and represent the social life and social processes that occur in that setting. The main method for recording observations is through field notes.

Over the duration of the study, the time spent in the field at the MoH was periodic and occurred at irregular intervals. The longest continuous period in the field occurred during the first 10 months of the study (i.e. September 2011 to July 2012) when the researcher spent at minimum three days per week within the MoH. This early period was predominantly marked by efforts to make sense of the SkSI and all of its moving parts, as well as to become familiar with the organizational setting. This included conversations with various MoH employees, participation in various internal and external meetings pertinent to the initiative, a review of internal policy documents, and a systematic search of the relevant academic and grey literature.

During this initial period, a biweekly one hour meeting occurred between the researcher and the SkSI Director tasked with coordinating the study on behalf of the MoH. These meetings served two noteworthy purposes. First, they gave the opportunity to draw on this director’s intimate knowledge of the initiative and the broader Saskatchewan surgical services environment (i.e. historical context, names and contacts of potential expert-informants). Second, these meetings served as a sounding board for the researcher’s ongoing reflections and observations.

It was evident in the beginning that the presence of the embedded researcher was unsettling and uncomfortable for some of the expert-informants. This was most apparent at the very initial stages of the research and typically by those most directly involved in the design and implementation of the initiative. The researcher found that people usually became accustomed to her presence and began to behave more naturally the longer she was around.

Following the intense period of immersion, the researcher became more selective in the meetings attended and the settings she chose to observe. This enabled more focused fieldwork and the prospect of gathering relevant data to fill gaps identified during the ongoing analysis. The researcher also capitalized on a breadth of experiences, such as observing board governance training; annual health system planning exercises; and participating in regional settings where planning and implementation occur. These wide-ranging opportunities afforded the researcher exposure to, and interaction with, a diverse array of stakeholders from varying perspectives within the health system. It was also important to include regular exits from the field to avoid the risk of becoming too immersed and losing the objective lens as an outsider. The researcher spent these periods outside of the field on other aspects of the study (i.e. preparing field notes, data analysis) and on completing PhD program requirements.

Interviews

Interview Guide Development

Prior to conducting the final round of comprehensive interviews with expert-informants, a semi-structured interview guide (see Appendix B) was collaboratively developed by the researchers. This was done to ensure that a framework of themes was explored across both case studies (Saskatchewan Surgical Initiative and Primary Health Care Redesign). A semi-structured approach was chosen and the questions purposefully designed to ensure flexibility and relevance to all expert-informants interviewed, irrespective of their level within the system (i.e. MoH, RHA, direct healthcare provider).
The interview questions were drawn from an extensive review of relevant academic and grey literature and findings from the researchers’ participant observations to date (September 2011 to July 2013). The major topics for discussion included: policy problem identification, goals and objectives; informant roles and responsibilities; scope and pace of change of the initiative; leadership; accountability; and measurement. Prior to initiating the interviews, comments and feedback on the interview guide were elicited from the research partners (MoH, CFHI and PhD supervisor) and incorporated in the initial version. The researchers, in collaboration, revised and focused the interview guide based on interview experiences and preliminary analyses.

The semi-structured format, desirable for this type of exploratory research, allowed the researchers to ask complicated and detailed questions. It also enabled probing for more full responses and interpretations of ambiguities. The interviews facilitated the attainment of comprehensive, in-depth information and provided an opportunity for the researchers to clarify inconsistencies and misinterpretations revealed through participant observation and to build on information garnered through previous interviews.60,73

**Interviews**

Over the course of this study, two rounds of in-depth interviews were conducted. In both circumstances, a purposive sampling plan was used. Individuals who had specific knowledge and expertise related to the SkSI were sought. The initial round of interviews was conducted with 10 expert-informants in April 2012. The interview duration was 45 minutes. The purpose of these interviews was to explore the impact of Hoshin Kanri (Lean approach to system-wide strategic planning and deployment) on health system transformation efforts and to seek early perspectives on the SkSI.

The subsequent round of interviews occurred from September 2 to October 29, 2013. The lengthy period between rounds of interviews was intentional. Within ethnographic research, it is recommended to commence with informal interviews and conversations as they allow the researcher to more readily fulfill the role of participant observer. Thus, the more formal interviews were left to the latter phase of the research process to enable the formal interviews to be more focused and effective.60,74 Similarly, conducting interviews at two different points in time allowed for the examination of change in perceptions over the life of the initiative and offered insights on the temporal nature of change more generally. In the second round of interviews the purposive sampling plan was extended to seek out perspectives of healthcare professionals and administrators not directly involved in the initiative to explore alternative perspectives. In addition, attempts were made to incorporate perspectives from all levels of the system: macro (provincial: MoH), meso (organizational: RHAs) and micro (clinicians/front-line providers). These interviews ranged between 60 and 90 minutes in length and every effort was made to conduct interviews face-to-face when feasible. All interviews were recorded with participants’ permission and transcribed verbatim. If requested, participants were sent the transcript following the interview, to allow them to make any edits or deletions prior to its inclusion in the analysis.

Prior to both rounds of interviews, participants were initially sent an email inviting them to participate, which briefly outlined the research partnership and the principle objective of the study. Participants were free to participate or not and were provided with a consent form with more detailed procedural information related to the study, such as risks and benefits, confidentiality, data storage and management, as well as dissemination of the findings. This was done to build trust and ensure a common understanding of the study’s intent amongst participants. In the second round, 61 expert-informants were invited to participate and 46 chose to do so; therefore, the response rate was 75% (see Table 1 in Appendix A below for specific details). The high response rate was indicative of the interest in this research, the engagement of those involved, and the investment made by the researchers to forge relationships whilst embedded.
Table 1 (Appendix A): SkSI Interviews Round 2: Sample and Participants

<table>
<thead>
<tr>
<th>Invited to participate: 61</th>
<th>Participated: 46</th>
</tr>
</thead>
<tbody>
<tr>
<td>MoH = 13</td>
<td>MoH = 12 (92%)</td>
</tr>
<tr>
<td>RHA = 21</td>
<td>RHA = 17 (80%)</td>
</tr>
<tr>
<td>Physicians = 19</td>
<td>Physicians = 10 (53%)</td>
</tr>
<tr>
<td>Other stakeholders: HQC, SRNA, SMA, Patient Advisors = 8</td>
<td>Other stakeholders = 7 (87%)</td>
</tr>
</tbody>
</table>

Data Analysis

Data analysis occurred iteratively over the course of the case study. Being immersed in data analysis during data collection provided a sense of direction which focused the fieldwork and promoted greater sensitivity to data, which in turn allowed the researchers to become aware of themes as they emerged and to direct inquiry as the study progressed. A case study database and interview log was developed and maintained to organize and categorize case study notes, interview transcripts and documents. This facilitated retrieval and markedly increased the reliability of the case study. Similarly, analytic memos were developed whilst in the field and throughout the coding process. Keeping memos was a useful tool for the researchers to be reflexive and think critically about what they were observing, challenge their own assumptions, reflect on ideas and make connections with extant theory. Both researchers found significant value in this process. The content of these memos guided the analysis process and have become substantive portions of this final report.

The method of analysis chosen for this study was a hybrid approach of qualitative thematic analysis methods. Thematic analysis, which occurs through a process called “coding”, is a way of seeing and making sense out of seemingly unrelated material; it is essentially a way of analyzing qualitative information and systematically observing the person, event or organization (as is the case in these studies). This study incorporated both a data-driven inductive approach and the deductive application of a provisional list of codes developed a priori. A hybrid approach was chosen to permit fluidity throughout the analysis process—to be open to the possibility of discovering new unanticipated insights, but at the same time adding focused structure to effectively manage the large volume of data that was generated through the development of field notes and interviews.

For the purposes of this report, an abbreviated description of the analytic strategy will be provided. The description will be limited to the final stages of the study which include the analysis of interview data and the writing of the report. ATLAS.ti7 (version 7.1.8) computer assisted qualitative data analysis software was used for the analysis. The coding process involved recognizing (seeing) an important moment and encoding it (seeing it as something) prior to a process of interpretation. Encoding the information organizes the data to identify and develop themes; the theme is therefore an outcome of coding and analytic interpretation. Boyatzis defines a theme as “a pattern in the information that at minimum describes and organizes the possible observations or at the maximum interprets aspects of the phenomenon.” Otherwise stated, a theme is an abstract entity that
brings meaning to a recurrent [patterned] experience and its variant manifestations, thus unifying the nature of the experience into a meaningful whole.80 Throughout this research, themes were identified through direct observation of visible or apparent content (manifest analysis), as well as considering the issues underlying the phenomenon and uncovering implicit meanings (latent analysis).74, 78 Both the manifest and latent levels of analysis yielded interesting insights and ensured the richness of the raw data was fully explored.

Although presented here in linear fashion, as outlined previously, data analysis was recursive in nature. The first stage of the final analysis required the researchers to become intimately familiar with the data. This has aptly been described as “swimming in the data.” This involved close, repeated listening to recordings and reading of interview transcripts and making comparisons to field notes and other data sources. Listening and reading was done simultaneously for three reasons: to check the quality of the transcripts and make corrections as required; it enabled the researchers to identify their strengths and weaknesses as interviewers and prepare for subsequent interviews; and it allowed the researchers to pick up on the nuances in the language and meanings. On occasions where interviews were conducted together (two researchers with the same expert-informant (n=6)), the researchers debriefed and prepared a summary of findings. Post-interview reflection, whether done independently or in collaboration, in turn influenced further iterations of the interview guide and focused succeeding interviews.

Subsequent to data familiarization, an inductive approach to coding was pursued. The primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant or significant concepts inherent in raw data without the restraints imposed by structured methodologies.79 This entailed detailed line-by-line open coding of the six interviews conducted together. Working together provided the benefit of developing codes and memos in concert, as well as making important decisions about single phenomena worthy of coding, when to use an existing code or build a new code, and how to formulate/construct the coding hierarchy (code families). The joint effort ensured that coding and concept definitions became more precise over time and were applied carefully and consistently to the remaining data coded independently. In an effort to address the issue of inter-coder reliability, following periods of independent parallel coding, at periodic intervals, the researchers compared segments of coded text.77, 79 In situations of disagreement between coders, discussions ensued and code definitions were either refined or a compromise was made on how to handle such segments in the future. If new codes emerged, the coding frame was changed and, through the process of constant comparison, the transcripts were reanalyzed according to the new structure.71

In addition to the inductive approach, a deductive approach was also used. For this study, the preliminary “start list” of provisional codes—or template—was based on two sources of information: 1) an extensive review of the relevant academic and grey literature; and 2) emerging themes derived from field work. “The template organizing style of interpretation immerses the researcher in the often massive and confusing jungle of text, with the set purpose of identifying “chunks” of text so as to facilitate future data retrieval and analysis.”81 (p.166) In other words, the template was applied as a means of organizing text for subsequent interpretation. Adopting a hybrid approach that included both inductive and deductive methods of analysis permitted the researchers to compare and test whether the empirically based data were consistent with prior assumptions and to develop a complex understanding of the change initiatives from the perspectives of those experiencing the change.
In the early stages, the researchers found that codes were numerous and varied. Some of these “lower level” codes were subsequently combined into “higher level” categories—or themes—as the coding hierarchy was constructed. At this point, the analytic emphasis was on constructing concepts from the data—the researchers’ interpretation and understanding of what is being described in the experiences, spoken words, actions, interactions, problems and issues expressed by participants. The final stage was characterized by further building and clustering the themes that were previously identified from the coded text. Furthermore, a thorough examination of the data was undertaken to search for evidence that was either consistent with or disconfirmed, the identified themes.

It became evident to both researchers, whilst conducting the last few interviews, that saturation had been achieved; that is, no new or significant insights emerged. Returning to the original intent of this study—to explore, better understand and identify those factors contributing to and/or inhibiting large scale health system transformation within its real-life context—data analysis continued until a summary of major conceptual themes were identified (see section 6 of the main report).
APPENDIX B: INTERVIEW GUIDE
Expert Informant Interview (Round 2)

Introduction: Thank you for agreeing to meet and participate in this interview. The intent of this interview is to seek your perspectives on the main factors that facilitate or impede the achievement of change within the context of the Saskatchewan Surgical Initiative/Primary Health Care Initiative. At this point I would like to remind you that any identifiable information that you may share during the interview will be kept strictly confidential. Furthermore, your name will not be used, mentioned or linked to any responses within any ensuing reports summarizing the findings of our study. I would also like to ask your permission to record this interview? Would you like to review the transcript to make any edits or deletions prior to its inclusion in the study’s analysis?

1 In your opinion, what is the problem (the issues) that this initiative is trying to address? [This question gets at clear problem identification, solutions- clarity of goals and objectives, and touches on mechanisms for communication]

   Probing Questions:
   - How would you define the goals and objectives of this initiative?
   - Would you say that there is a clear understanding of these goals and objectives?
   - What have been some of the issues around establishing clarity of goals and objectives of this initiative?
   - What are some of the mechanisms used for effective communication? How could the goals and objectives have been better established/communicated?

2 What is your role/roles as (state position—i.e. Executive Director)… in achieving the objectives of this initiative? [This question encourages participants to reflect on their individual roles and responsibilities in the achievement of the initiative and their perceptions the roles and responsibilities other individuals/organizations play, as well as the impact they and other key actors have in achieving change. Consider whether there is clarity of roles and responsibilities and whether participants describe collaboration/co-operation—Complex policy challenging to implement without cooperation]

   Probing Questions:
   - Do you have more than one role in the change effort?
   - Has your role changed over the course of the reform?
   - Based on the role that you have identified within the initiative, what are the greatest challenges that you face in fulfilling your role?
   - Based on the role that you have identified within the initiative, what are factors that facilitate the fulfillment of that role?
   - Who are the most important actors or organizational stakeholders who are pivotal in achieving the objectives of the initiative? (i.e. SMA, MoH, RHA, physicians/surgeons etc.)
   - What are their roles? In your opinion, have these roles been successfully fulfilled.
Do you feel that the people that you collaborate with—in order to achieve the initiatives objectives—are equipped with the capabilities necessary to initiate and implement health system change?

Was there anyone that wasn’t included at a particular stage that should have been?

What levers do you have within your control to influence change?

**Introduction to Change:** Change is commonly described using a spectrum ranging from incremental, meaning small change at the margins, to revolutionary or otherwise known as transformational change. [These questions probe the changes made as a result of the reform efforts and the pace of change—objective rating to enable comparison]

3 Would you describe what has been proposed (the policy framework/the plan) for this initiative as being transformational in nature?

**Probing questions:**

- Can you elaborate on your answer?
- Why is it/or isn’t it transformational?
- How is it/or isn’t it transformational?

3a Could you please, using the following 10 point scale—where 1 is equal to no change and 10 is transformational change—how would you rate the intended plan of the initiative?

Participant rated at ____

4 In terms of the implementation of the policy framework/plan—to date, would you describe the outcomes thus far, resulting from implementation of the policy framework/plan, as being transformational?

**Probing questions:**

- What are some of the factors that facilitate implementation of the plan?
- What are some of the factors that impede implementation of the plan?
- Can you provide any examples of where you have observed transformational change?

4a Could you please, using the following 10 point scale—where 1 is equal to no change and 10 is transformational change—how would you rate the execution of the plan?

Participant rated at ____

5 How is the current initiative different from past failed efforts made to address this problem? [Participants may be more likely to be critical when comparing to past efforts]

**Probing questions:**

- What gives you that impression?
- In your opinion, will these differences impact the overall outcomes of the reform effort? In what ways? Why?
Introduction to Leadership: Recognizing that both top-down leadership, that is committed to change, as well as distributed leadership and engagement of personnel at all levels and sectors of the system is crucial to achieving large-scale health system reform… [This question gets at leadership effectiveness/behaviors amongst key actors, factors that enable and impede exercising of leadership, distribution of decision-making authority/power, informal vs. formal positions]

6) Could you please, using the following 10 point scale—where 1 is equal to ‘not effective at all’ and 10 is equal to ‘extremely effective’—how would you rate the effectiveness of leadership by the following stakeholder groups?

- Political
- MoH – DMO
- MoH – Branch
- Stewardship Group/Executive Sponsorship Group
- RHAs – VP/Senior Leadership Team
- RHAs – Director/Management Team
- SMA
- HQC
- Physician/Surgeons
- Patients

Participant rated at ___

Probing questions:
- Have you observed any individuals emerge as leaders of the initiative?
- How can you tell? Can you provide some specific examples?
- Can you please provide some examples of strategies the leaders you identified use…
- In your opinion, are there conditions that enable the effective exercising of leadership?
- In your opinion, are there conditions that impede the effective exercising of leadership?

Introduction to Accountability: Appreciating the importance of accountability and responsibility in healthcare and the necessity for health systems, governments, managers, providers—policy makers in general—to be accountable and responsible for their decisions and actions…

7 What are some of the structures and processes within the system being used to uphold accountability amongst the actors/stakeholder organizations identified?

Probing questions:
- Can you provide some specific examples?
- Do you believe that there is adequate accountability amongst the actors/stakeholder organizations in which you have identified as pivotal in achieving the initiative?
In your opinion, has the level of accountability (required to achieve the goals of the initiative) changed? What leads you to believe this?

From my observations, as an embedded researcher, it would seem that accountability is an important discussion point, with an emphasis on it being improved. I wonder what the consequences are, and for whom, if the targets aren't met…

Do you believe there are ways to further improve the level of accountability in the system? Can you be more specific?

In what way are you being held accountable for achieving this goal?

How has the current governance structure of the initiative impacted reform efforts? (i.e. SkSI-ESG and GC, PHSI – Stewardship group)

Do you think that being held accountable for something that you have no influence over is appropriate? If not why not?

**Introduction to Measurement:** In light of the previous discussion related to accountability and the evidence that supports the notion that careful identification of measures and strategic reporting of those measures is critical in realizing and sustaining ambitious health system reform efforts… [These questions probe participants to describe how measures are selected, purposes for which performance measurement is used, reporting processes, identify barriers to using measurement to enhance decision-making]

8 Can you describe how you personally use performance measurement in your daily work?

**Probing questions:**

- Can you comment on whether having data has enhanced the quality of your decision-making? How can you tell? Can you provide some specific examples? [This question gets at personal experience with measurement]

- Being that the core component of any performance measurement system is data can you, drawing on your own experiences, comment on whether the organization has the capability and resources sufficient to collect and monitor performance data? [This question gets at the capacity to measure]

- I notice in the 2013–14 plan that a large portion of the measures are process measures—is there an underlying assumption that if you monitor process diligently you will end with improved outcomes? Can you comment further on this? [Leading vs. lagging measures, Short-term vs. long term perspective, measures chosen due to convenience rather than appropriate measures developed to drive behavior]