Alberta's Strategic Clinical Networks

Improving Health Outcomes

Retrospective | 2012-2018














people

innovation

research

value

impact

experience

Alberta Health Services

Inspiring solutions. Together.

Strategic Clinical Networks™

June 2019

Alberta's Strategic Clinical Networks

Improving Health Outcomes

Retrospective | 2012-2018

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SCN Retrospective Working Group

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Contents

The power of partnership

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Alberta's Strategic Clinical Networks are about connections. We connect patients and families to physicians, clinicians and frontline care providers and to leading researchers and operational decision makers. We also connect communities, care facilities, people and practitioners across the province. These connections enable diverse stakeholders to share their knowledge and experience and work together to achieve common goals.

Since the networks began, we've invested in building strong and trusting relationships. These relationships are the heart of the networks and essential to a high-performing health system. They benefit the people of Alberta because they enable collaboration, cooperation and health system improvement on a provincial scale.

Action, commitment and reach

The networks were created as a vehicle to truly tap the potential of a province-wide health system. We bring people together, but it's the actions and commitment of every person involved that have brought this vision to life. Our reach and impact are a product of this collaborative spirit and a direct result of every person who has contributed to this work and been willing to overcome barriers and take on new challenges. These efforts have enabled our successes to date and are what will continue to propel us forward toward greater integration and health system transformation.

Looking back on six years of collaboration

This report looks back at what we've accomplished together over the past six years and celebrates our shared achievements. We are tremendously grateful to everyone who has contributed to the networks and recognize that the scope of involvement and impact of this work extends far beyond what is written here.

We know that these actions have made a difference in the lives of individual Albertans, improved health outcomes and provided value to the people of Alberta. Every project, whether local or provincial in scope, has had champions and countless contributors who helped plan and implement it, who collected data or compiled results, and who invested time, energy and resources to make it happen.

Today we look back and celebrate the contributions of every person who has helped build those connections, contributed their unique strengths and expertise, and helped create strong and vibrant networks. Your commitment is making a difference, and your contributions can be seen across the continuum of care. We look forward to building on the legacy we've created together and continuing to work together to improve health and healthcare for every person in Alberta.

Achieving impact and value for all Albertans

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Dr. Francois Belanger
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In Alberta, we've worked hard to create a learning health system that seeks to continuously improve health outcomes, explore new ideas, and implement solutions that provide the greatest value and impact. Achieving this requires us to look beyond current practice, rigorously evaluate new practices, and align our efforts and resources.

Shared values and commitment

Over the last six years, the Strategic Clinical Networks (SCNs) have worked to improve the health of Albertans by bringing together people, research and innovation. This work is paying dividends across many areas of health. We're reducing variation by developing integrated, evidence-based care pathways, we're working to address the opioid crisis in our province, and we're building capacity for further health system research and innovation. These actions are guided by shared values and a shared commitment to provide high quality, patient-centered and sustainable healthcare to every Albertan.

Innovation is a process with many partners

Progress doesn't happen spontaneously. We need to work together to enable change, learning and continous improvement. In most cases, the path to progress is incremental. It begins with a problem, an idea, and a belief that we can do better. It requires vision, commitment, planning, and sustained effort. In our experience, change is most successful when it's led by teams. Not just teams of experts, but diverse teams who listen and learn from one another. Teams whose members each bring different—but equally valuable—skills, perspectives, knowledge and experience to the table.

The SCNs are this resource for the people of Alberta. Each network is a strong and diverse team of stakeholders and health partners who collectively serve as catalysts for change. Grounded in science and fueled by compassion, the networks provide a way for stakeholders to work together in ways that would not otherwise exist. Patients, families, clinicians, communities, academic and funding partners, operational leaders and frontline staff have been part of the networks from the very beginning, and these partnerships are the foundation that will continue to shape the future of healthcare in our province.

Building on the work we've done

This report highlights the many ways the networks are advancing care, improving patient experiences, and delivering value to Albertans. In six short years, their work has touched the lives of patients, families and people across Alberta, and we're extremely proud of what we've accomplished together. We hope you enjoy this look back on the good work that's been done and the partnerships that have enabled this success. Innovation is alive and well in our province and we have tremendous momentum we can build on. Let's keep moving forward and together, build a heathier future for all Albertans.

Strategic Clinical Networks Retrospective | 2012-2018 at a glance

Our mission

Improving the health of Albertans by bringing together people, research and innovation.

Alberta has 16 Strategic Clinical Networks, which are groups of clinicians, patients, operational leaders and other stakeholders, working together to solve health challenges

We connect people who are knowledgeable and passionate about specific areas of health and work as one team. Together, we're creating a high performing and sustainable health system – one that embeds research and innovation into daily practice and is equipped with the tools, processes, programs and people to address the challenges we face today and those to come.

We partner with patients and families to identify priorities that matter to the people of Alberta. And we work with operational leaders, care providers, communities and academic partners to find the right solutions. These connections enable us to respond to critical health needs and support continuous improvement—locally and across the province. We work across institutional and geographic boundaries to improve health outcomes, align our efforts, translate evidence into practice, and accelerate health system improvement.

What we've achieved

Alberta's Strategic Clinical Networks (SCNs™) work across the system to ensure high quality care and value for every Albertan. Together, we're improving quality, safety, effectiveness and standardization of care.

Alberta has become a leader in many areas of health, including stroke care, surgical care, and elder-friendly care. We're improving care pathways for pregnant women and patients with diabetes, cancer, asthma and kidney disease.

Collective impact – by the numbers

A comprehensive analysis of return on investment for the first nine SCN projects showed an estimated cumulative savings of:

43,000	+	$15.2	=	$43.2
bed days ($28 MILLION savings)		MILLION in direct cost savings		MILLION in total savings

*Cumulative savings continue to be tracked and will be updated in fall 2019.

How we've done it

- ☑ We've leveraged our resources and fully tapped the potential of Alberta's single, province-wide integrated health system.
- ☑ We've worked together as diverse and united teams to get evidence into practice and improve health outcomes for all Albertans.
- ☑ We've focused on…

SOLUTIONS

For **4.3 million** Albertans

That improve **health outcomes, care** and **wellness**

Using **measurement** to drive **practice change**

Balancing critical health needs and long-term goals

TEAMWORK

150+ patient and family advisors

10,000+ individuals have participated in the networks to date

Partnering across **all zones and provincial programs**

Early **engagement** and ongoing **communication**

INNOVATION

Linkages between primary and secondary care

Integrated care pathways and **best practices**

Early intervention, screening, **prevention**

Spreading and scaling successful innovations

OUTCOMES

A **learning, high-performing** health system

Better quality, safety and value for all Albertans

Improved **access, experience and equity**

Long-term **sustainability**

The Quadruple Aim – Improving health outcomes that matter to the people of Alberta

1 Improving patients' and families' experiences

Faster diagnosis of breast cancers

- Shorter wait times for confirmed diagnosis (from 19 to 6 days)
- Patient satisfaction now greater than 90%

Greater involvement of patients and families in care teams

- Safeguards to ensure critical information shared prior to surgery
- Improved patient safety; more than 10,000 medical errors avoided each year

Integrated care pathways and expanded support for

- people with opioid use disorder (virtual care, bup-nal initiation in emergency departments, community referrals)
- long-term care residents (improved screening for urgent transfers)
- people with chronic conditions such as osteoarthritis and diabetes

Improved access to health services for rural and First Nations communities

- Pre- and post-natal care, stroke care and rehabilitation services
- Indigenous patient navigators to address barriers and inequities

2 Improving patient and population health outcomes

Fewer complications, more consistent screening for delirium in intensive care patients

- 10% fewer days patients in intensive care units experience delirium

Improved stroke outcomes and access to best-in-class care

- Shorter door-to-needle times
- Rapid clinical evaluation and treatment and access to rehabilitation
- 28% fewer patients admitted to long-term care

High-quality, evidence-based care across all sites

- Reducing unwarranted variation and improved consistency through best practices, standard order sets, care and referral pathways, and quality indicators

Reduced risk of injury and chronic disease through

- improved screening and follow-up (e.g., diabetic foot ulcers, bone fractures)
- community-level supports (e.g., people with hip and knee osteoarthritis)
- online resources, partnerships (Alberta Community Health Dashboard)

3 Improving value and health system sustainability

Improved capacity and reduced length of stay

- Enhanced care before and after surgery shortens hospital stays by 1 to 2 days

▸▸▸▸ return on investment is $2.1 to $3.8 for every $1 invested

- Early treatment and better rehab reduces length of stay and long-term disabilities

▸▸▸▸ $3.3 million annual savings

- Nearly half (46%) of breast cancer surgeries are now performed as day surgeries (up from 5% in 2014/15)
- Reductions in ICU delirium and lower limb amputations (in zones implementing integrated care) reduces hospital stays

▸▸▸▸ combined savings of more than $5.5 million per year

Removal of low-value practices

- Use of best evidence to ensure patient safety, appropriate use of tests and treatments
- Discontinued use of fetal fibronectin laboratory test and replaced it with clinical assessment tools to assess risk of preterm births

▸▸▸▸ $12.5 million in cost savings

Preventative strategies that support long-term health sustainability

- Enhanced screening through Catch-a-Break is helping prevent hip fractures and other common fractures in patients with osteoporosis

4 Improving the experience and safety of our people

Improved efficiency and communication

- More efficient processes for referrals, imaging, reporting, and better communication between care providers (e.g., breast health, acute care, high risk foot teams)
- Better coordinated stroke services – from rapid evaluation and intervention to rehabilitation

Integrated, team-based care

- Improved access to specialist care (e.g., gastrointestinal, bone and joint, addiction and mental health services)
- Better access to information and resources increases provider confidence (e.g., diabetic foot screening)
- Improved morale through partnerships, engagement and multidisciplinary approaches (e.g., emergency staff better able to help patients access community supports)

Improving health outcomes across Alberta

Alberta is known as a place where people think big and act boldly. It's a place where people help their neighbours and support their communities. And it's a place where people are willing to think differently, challenge ideas and explore possibilities. We're people who persevere in tough situations and aren't afraid to lead the way forward. These qualities have shaped and influenced the Alberta we know today and are the same qualities that are helping us improve health and healthcare within our province. Together, we're inspiring solutions that are transforming health and care and supporting our shared vision of *Healthy Albertans. Healthy Communities. Together.*

Our province has experienced tremendous growth and change in recent years. Today, it's home to 4.3 million Albertans who expect and deserve the best possible healthcare—wherever they live. They expect health leaders, researchers, nurses and physicians to develop solutions and set priorities that reflect the patient voice and the best available evidence. And they expect stakeholders to work together to build a high-performing health system that provides consistent, high-quality care that is safe and accessible for all Albertans.

Achieving this requires us to consider new ways of doing things and to innovate, evaluate and implement solutions that make our health system more nimble, sustainable and responsive to the needs of Albertans. Alberta's Strategic Clinical Networks™ (SCNs) support these objectives and are agents of change for Alberta's health system. We bring together people who are passionate and knowledgeable about specific areas of health to address gaps in care, bring evidence into practice, and enable health system improvement.

Much has changed since the SCNs launched six years ago. This report looks back on their evolution and their impact on the lives of patients and care providers across the province and the continuum of care. It describes reasons SCNs were created and how they've evolved to become an integral part of Alberta's health system. It also shares what we've learned about working together as one team, including the importance of partnerships, clear communication, and early and ongoing engagement.

Together, we focus on…

SOLUTIONS

As a health system, we need to stay ahead of the curve and develop solutions that address increased demand for services and the pressures of an aging population and rising healthcare costs. These challenges are big, but not insurmountable. We need to take action and implement strategies and solutions that provide the greatest impact and benefit to the people of Alberta and ensure value for every health dollar spent.

The SCNs were created as a way to build this capability into our health system and get upstream of issues and challenges. Each network works collaboratively to drive innovation and quality improvement, improve outcomes and maximize value. We gather data and use the best available evidence to evaluate clinical practices, approaches and models of care. We rigorously pilot and test changes in practice, and then spread and scale proven solutions across the province.

TEAMWORK

Each network operates as a diverse and dynamic team, and it's the contributions of all members that enable our collective success. The networks provide a way for all stakeholders to participate and work alongside one another to align our efforts and priorities.

By supporting a culture of teamwork and collaboration, we're breaking down silos, responding to critical health needs, and helping achieve common goals. Together, we're creating an environment that supports integrated care, quality improvement and health innovation across the province.

INNOVATION

People often think of innovation as a product – a new tool or device – or an 'aha' moment that revolutionizes patient care. Innovation does involve something new, but it can be new thinking, a new idea, or a new way to solve an old problem. For healthcare organizations, innovation can involve new tests or treatments, new ways of delivering care, new programs or care pathways. It can also involve new partnerships and new ways of working together. What's common to all is a willingness to consider, test and implement change. Big or small, these changes help move us forward.

Alberta is leading the country in creating a learning and high-performing healthcare system that embeds clinical research and innovation into daily practice. The SCNs are helping achieve this vision by engaging diverse stakeholders, using data and evidence to inform decision making, and rigorously evaluating changes in practice. We're working together to ensure our health system is equipped with the tools, processes, programs and people to address the challenges we face now and those to come.

OUTCOMES

Albertans understand the importance of research and innovation in sustaining a thriving, high-performing health system. We all experience the benefits first-hand. This report highlights specific ways the networks have improved health outcomes and care across the province. Whether it's improvements in quality, safety or preventative care, reduced wait times, or patients' and families' experiences, we're making a difference in the lives of Albertans.

The networks are a unique resource for Alberta's health system—there is currently nothing like them anywhere else in Canada. Our value lies in our ability to work as one team to overcome challenges and to spread quality and innovation across the province. Seeing what we've achieved together is capturing the attention of other provinces, and many are looking to adopt similar structures and processes. By focusing on action that improves health outcomes, we're inspiring solutions, together.

Inspiring solutions. Together.

Alberta's Strategic Clinical Networks

The SCNs are multidisciplinary teams that work across the health system to ensure high quality care and value for every Albertan. The networks are embedded within Alberta's health system and have a mandate to identify gaps in care and improve health outcomes across the province and across the continuum of care. Having a single, province-wide health system is an asset that enables us to work together to maximize available health resources, assess current practices, implement health system improvements, and manage change on a provincial scale. By removing administrative barriers and creating opportunities for stakeholders to collaborate across zones, share ideas and work together to develop solutions, we're able to tackle pressing issues and achieve system-level change.

Together, we're improving access to health services, reducing unwarranted variation, and improving the quality and appropriateness of care. We're developing integrated care pathways, supporting local and system-wide improvements, and using evidence and measurement to improve quality of care, health outcomes, patient and family experiences, and health system sustainability.

The SCNs are a diverse family. Each network focuses on a specific area of health and partners with stakeholders across the health spectrum, including communities, Indigenous partners, clinics, industry and many others. But we are united by a common mission: to improve the health of Albertans by bringing together people, research and innovation.

Our work is guided by patients and families, whose stories and experiences inform our approach and processes. We're also guided by data and the knowledge and expertise of leading researchers, operational leaders and frontline clinicians, industry partners, and others. Each network links grassroots knowledge and experience to the latest data and health system research and helps bridge gaps, drive health innovation and accelerate health system improvement.

Since the beginning, the networks have delivered on this mission by:

- engaging patients and families and prioritizing actions that matter to the people of Alberta
- gathering data and evidence and using it to identify gaps and opportunities
- responding to critical health and operational needs
- embedding research into practice
- sharing best practices
- translating evidence into practice and knowledge into action
- piloting and evaluating practices, tools and models of care
- spreading and scaling successful innovations across the province

SCN MISSION:

Improving the health of Albertans by bringing together people, research and innovation.

Objective

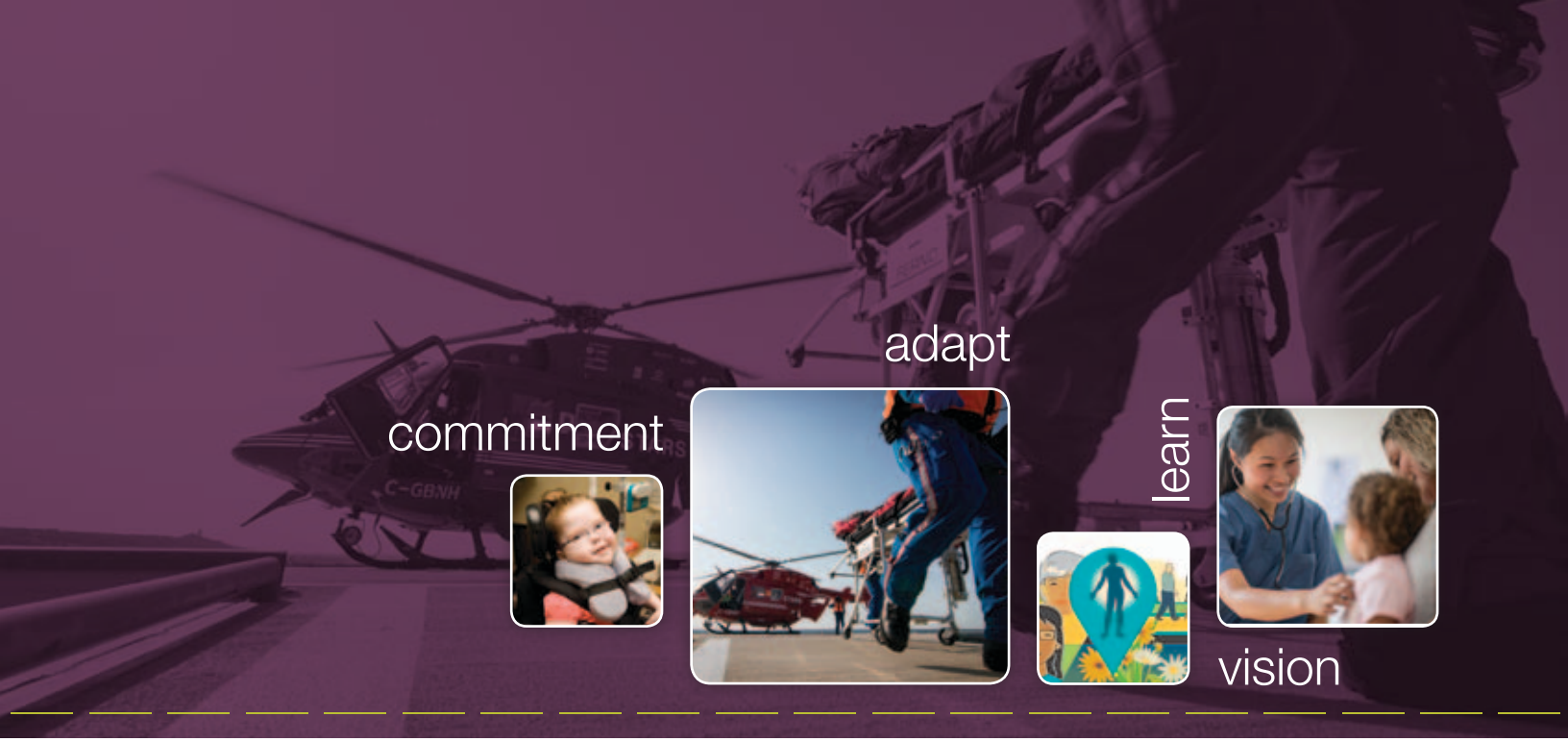
In early 2018, the SCNs were asked to create an action plan to guide their work over the next five years. To inform this work, we spoke to more than 200 network members and heard that we need to do more to report on the good work the networks are doing and its impact.

With six years' experience as part of Alberta's health system, the time was right to:

- look back on all that we've accomplished together
- consider the scope and collective impact of this work
- acknowledge the partnerships that have enabled these successes, as well as opportunities to address challenges
- reflect on the value the SCNs have provided to the people of Alberta, including return on investment
- consider and share lessons learned so we can maximize our impact

This report fulfills that promise. It looks back on our shared experience and tells the SCN story so far. It highlights specific ways we've improved health outcomes and patients' and families' experiences. And it recognizes the contributions of all partners and stakeholders who have fueled our journey to date and whose energy and expertise have kept us moving forward It also considers how the SCNs have evolved, what we've learned and where we're headed next.

The SCN Retrospective is the second report in a three-part series. *The SCN Roadmap, 2019–2024* looks ahead and outlines a five-year action plan for the networks. A third report, an SCN Best Practice Guide, will be released in 2020 and will focus on the resources, tools and processes that guide our approach and will help us align our efforts and maximize our reach.



Our journey toward a high-performing health system

Bold steps toward health system transformation

Alberta Health Services

1 province-wide health authority

Largest fully-integrated health system in Canada

Serving **4.3 million** Albertans

650 Facilities across the province

hospitals | clinics | cancer centres
mental health facilities
community health sites

110,000 employees

primary care | ambulance services
addictions and mental health
home care | long-term care
cancer care | laboratory services
Indigenous health | Health Link

2008

In May 2008, Alberta brought together 12 formerly separate health entities to create Canada's first and only province-wide, fully integrated health system. Considered by many to be a bold experiment at the time, this change marked a significant shift in how we structure and think about healthcare in this province. It was the first of many steps toward a more integrated health system.

After an adjustment period, people across the health system began to get excited about the opportunities this new structure created for collaboration and for health teams across the province to work together to reduce variation, leverage resources and affect change, and to spread and scale best practices across the province.

The launch of clinical networks in Alberta

Creating a province-wide health system provided the infrastructure needed to standardize care, bring evidence into practice, and reduce variation. To achieve these objectives, resources and mechanisms were needed to embed health research into daily practice and really drive health system improvement. This led to the creation of the SCNs, teams of clinical leaders and stakeholders who could roll out successful innovations on a provincial scale. The SCNs were based on system-wide clinical networks that had been implemented in other countries.

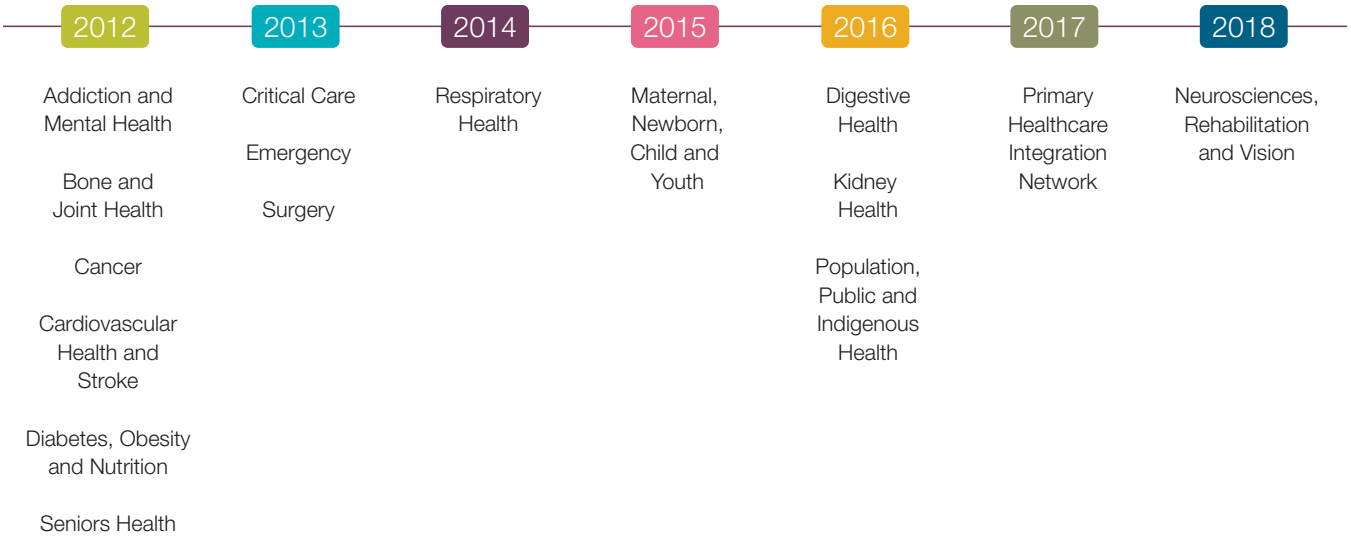
2012 Alberta launched its first SCNs in 2012 to support health research, innovation and improvement across the province. The first six SCNs were established in high-priority areas where their potential impact was significant, and where informal networks of individuals already existed.

In 2013, three more networks were launched in the areas of Critical Care, Emergency and Surgery. These networks focused on operational pressures and developing provincial standards and clinical best practices to improve patient safety, access and efficiency within acute care environments. Like the other SCNs, their goal was to identify and address gaps in care, respond to critical needs, and develop solutions that improved quality, care, outcomes and value.

Over the past six years, the networks have matured and evolved in scope and experience. As the networks gained traction, and as provincial capacity allowed, they've expanded to other areas of health. There are now 16 networks in Alberta. Most focus on a specific area of health; however, some cross multiple disease areas (e.g., emergency and surgery) or focus on vulnerable populations (e.g., maternal, newborn, child and youth). Others focus on high-cost, high-utilization areas, or are closely aligned with provincial programs (e.g., addictions and mental health).

All networks fulfill a critical role within the health system by bridging gaps, connecting stakeholders and enabling collaboration across institutional and geographic boundaries. The networks are embedded within Alberta's health system, and this enables us to support continuous improvement on a local and provincial scale, respond to critical health needs, and work together to address pressing health issues.

2018 In fall 2018, Alberta launched its sixteenth Strategic Clinical Network. In doing so, the Neurosciences, Rehabilitation and Vision SCN completed the set of networks that Alberta Health Services had envisioned and described in the original SCN Primer (2012).



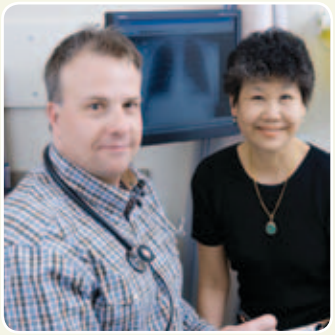
Why clinical networks?

Clinical networks are groups of clinicians, patients, operational leaders and other stakeholders, working together to solve health challenges. They have been part of the health landscape in some countries for nearly 20 years. The United Kingdom, Scotland, and Australia were the first to create clinical networks as a way to drive health system change and address challenges such as unwarranted variations in care, wait times, and health system sustainability.

Although the structure of these networks varies, their purpose has generally been to accelerate the process of getting evidence into practice, something that studies suggest takes more than 10 years for most health systems. This challenge was highlighted by the Federal Advisory Panel on Healthcare Innovation, who noted an urgent need for fundamental changes in how healthcare is organized, financed and delivered in Canada.[1] The report identifies some examples of health system innovations that had helped get evidence into practice and were successfully impacting health outcomes. But they also noted a general failure to scale and spread successful pilots provincially.

Clinical networks, embedded within a supportive health system, have been proposed and implemented in other jurisdictions as a way to address these challenges. Most networks use data and evidence to identify gaps in care, and work collaboratively with clinicians and operational leaders to design, implement and evaluate strategies to increase evidence-based practice.

Early evaluations suggest that clinical networks can improve health outcomes and care delivery, and under the right conditions, many have enabled system-wide change. Based on comprehensive reviews, researchers have identified critical success factors, which include effective leadership, partnerships and communication, particularly with operational partners. Successful networks are also embedded within the health system, have adequate resources and access to health data, and strategically align their work with others.



1. Government of Canada. (2015). *Unleashing Innovation: Excellent Healthcare for Canada: Report of the Advisory Panel on Healthcare Innovation*. June 2015. Ottawa, ON: Health Canada. Retrieved from http://healthycanadians.gc.ca/publications/health-system-systeme-sante/report-healthcare-innovation-rapport-soins/alt/report-healthcare-innovation-rapport-soins-eng.pdf. Accessed June 2019.

Moving forward, learning and adapting to change

One of the key features of a learning health system is being willing to change and adapt, using data and measurement to inform these decisions. As the SCNs have evolved, they've continued to evaluate their strategic priorities and engage network stakeholders to ensure these areas of focus align with local needs, system-wide priorities, and the issues that matter most to the people of Alberta.

Initially, each SCN identified a signature project based on evidence of unwarranted variation in clinical care, inequity, gaps, or areas of high impact and provincial reach. They also identified opportunities to reassess, and in some cases discontinue, clinical practices that did not provide value. These projects have generated significant return on investment—$43.2 million in total health system savings. Since then, each network has continued to define priorities that reflect areas of high need and opportunities to improve value and advance system-wide improvements.

Despite these successes, our journey has not been without some missteps, challenges and barriers. At times we've struggled to gain traction, engage stakeholders, and implement changes in practice. We've recognized the importance of rigorous evaluation and the need to be agile in our approach. And we've grown in our ability to support rapid learning and improvement (i.e., piloting projects and either failing fast or scaling up successful pilots). What has remained consistent is a willingness to learn from those experiences.

As the networks have gained momentum and experience, we've learned a lot about how to engage operational leaders, prioritize and align our efforts, and successfully spread and scale innovations across sites. We've also recognized opportunities to take on multidisciplinary challenges and work across SCNs. We now have the ability to develop strategies that span many areas of health, and we're working to coordinate our efforts to improve health for people with pain or complex chronic conditions such as diabetes, heart failure or chronic lung diseases. We're also working with primary health care and others to develop integrated care pathways that focus on the whole patient rather than single conditions or area of health.

Since launching the SCNs, Alberta's health ecosystem has also continued to change and evolve. New structures and supports have emerged that provide opportunities for further integration and improvement. For example, changes to the Primary Care Governance model have laid the groundwork to create integrated care pathways that better support patients transitioning between primary and specialist care. As well, the recently formed Quality, Safety Outcomes Committee is further accelerating implementation of proven health innovations across Alberta's health system and has endorsed many SCN efforts.

A made-in-Alberta model of health system improvement

Much has changed since the networks began six years ago, but the elements critical to their success have remained the same.

Working together as integrated, high-performing teams

Clinical networks work within specific areas of health, but all operate in partnership with others. As the networks have grown and matured, we've continued to build and expand our relationships with health, community, academic and industry partners. This collaborative spirit and partnership model is at the root of our success and is a key feature of clinical networks across the world and here in Alberta.

Since the beginning, Alberta's SCNs have functioned as a matrix, not a hierarchy. Our structure is team-based, and it's the contributions of all members that create a hub of activity and innovation that benefits all Albertans.

As with most teams, each team member brings different strengths and perspectives that reflect their experience and pressures. For example, researchers and content experts have the skills and resources to ask questions, analyze data and evaluate outcomes, but some work in research areas that don't align with pressing health issues, or they may be uncertain how to partner with operational leaders. Likewise, primary care physicians, clinicians

16 networks

150+ patient and family advisors

10,000+ network members and participants

50+ active projects underway

and operational leaders address issues of safety, effectiveness and capacity on a daily basis. They face constant, often overwhelming, demand for health services. Given the time and resource pressures that come with that, it can be extremely challenging to look beyond current practice, gather data and evaluate system performance. Patients and families bring yet another perspective based on their needs and healthcare experiences.

At times, these different perspectives on operational pressures and health system priorities are evident. This tension is healthy and it reinforces the need to work together to understand the experiences and challenges of our partners, to share data, information and strategies, and align our priorities so that we're addressing the problems that matter most.

By design, the networks are embedded within Alberta's health system. This structure facilitates collaboration with operational leaders, managers and frontline staff and supports alignment, coordination and implementation of new practices, pathways and guidelines on a provincial scale. Although the SCNs are part of Alberta Health Services (AHS), it's important that their connections extend beyond AHS and include primary health care, health foundations, and all health, research and community partners. Each of these partners is essential to enable greater health integration and improvement.

Leaders in patient engagement

When networks were first created in Alberta, there was a clear understanding that patients and families should be actively involved in all network activities. Their input and direction is essential to develop strategies and solutions that best serve patients and their families. For the SCNs, health research and innovation is not about trying out what's new or novel. It's about responding to gaps and problems that matter to the people of Alberta, and then working together to test, evaluate and implement solutions that improve health outcomes and provide the greatest value.

Alberta Health Services is leading the nation in patient engagement and has maintained a steady focus on patient experience. It's a foundational strategy for AHS, and there are many opportunities for the people of Alberta to get involved and have a say in decisions that affect health and healthcare in our province.

The SCNs have adopted this approach and prioritized patient engagement in all network activities. For example, each SCN includes patient and family advisors as key members and many networks have benefited from having patient and family advisors in leadership roles. Many SCNs are also guided by the work of the Patient Engagement Reference Group and patient and community engagement researchers (PaCERs), who conduct health research or quality improvement studies for the SCNs.

Patient advisors are the common thread through all our work – they help to quickly clarify or define for all of us what the real issues are. They provide that common denominator that make our discussions much more impactful and understandable.

– ***Petra O'Connell****, Senior Provincial Director, Diabetes, Obesity and Nutrition SCN and Neurosciences, Rehabilitation and Vision SCN*

The Strategic Clinical Networks are a great example of organizational learning. The system has become aware…that it needs to better understand how patients are experiencing it. And the SCNs are helping translate this learning into action. And it's working! AHS is doing it right.

– ***Mike Simoens****, Patient and Family Advisor, Kidney Health SCN*

Measuring our impact

Since their launch six years ago, the SCNs have played an important role in advancing health system improvement, sustainability and transformation. Alberta has become a leader in many areas of health, including stroke care, surgical care, and care of patients with breast and other invasive cancers. We've created care pathways for pregnant women and patients with diabetes, cancer, asthma and kidney disease – all with the goal of improving patient experience, outcomes and value for money. We've worked to streamline referrals between primary care physicians and specialists to improve access and continuity of care in some areas of health. And we're poised to spread these learnings across the system in partnership with primary care and other operational leaders. We've also piloted, evaluated and implemented new ways of delivering care at home and in the community that maximize appropriateness and support long-term health system sustainability.

These changes are making a difference in the lives and health of Albertans.[2]

- Albertans spend less time in hospital after surgery and experience fewer complications.
- The times between a concerning mammogram and a breast cancer diagnosis and referral to a breast program is now 6 days – less than a third of what it was three years ago (19 days in 2016).
- Alberta has the lowest rate of inappropriate antipsychotic drug use (17.5%) among seniors in long-term care than any other province.

2. Cited in: Veitch, D. (2018). One province, one healthcare system: A decade of healthcare transformation in Alberta. *Healthcare Management Forum*, 31(5), 167-171.

Ensuring value for every Albertan

Based a detailed review of the first nine SCN projects, Alberta Health Services estimates this work has resulted in cumulative savings of 43,000 bed days (a savings of $28 million) and direct cost savings of $15.2 million. Collectively, these first nine projects have resulted in $43.2 million of total costs savings while improving health and care. These savings continue to increase over time and as the networks take on other projects and health system improvements.

As networks, we recognize that these outcomes are a direct result of the passion, hard work and dedication of every patient, family, operational leader, researcher, care provider and stakeholder who has contributed to this work. We've achieved them by working together and supporting a shared vision for the future.

These results also reflect an organizational and province-wide commitment to excellence and a willingness to take action and create the structures, programs and processes needed to enable continuous health system improvement.

Collective impact – by the numbers

A comprehensive analysis of return on investment for the first nine SCN projects showed an estimated cumulative savings of:

43,000	+	$15.2	=	$43.2
bed days ($28 MILLION savings)		MILLION in direct cost savings		MILLION in total savings

*Cumulative savings continue to be tracked and will be updated in fall 2019.

Emerging leaders in health innovation and integration

At home and abroad, other health organizations are paying attention to what's happening here in Alberta and recognizing the strengths of an integrated health system. Operational leaders, managers and decision makers in other provinces and countries are looking at ways they too can spread and scale quality improvements and mobilize resources to achieve common goals. For example:

- The Government of Ontario recently announced its plans to consolidate provincial agencies and local health networks and move toward a province-wide health authority.
- British Columbia and New Brunswick are working on developing health innovation networks as part of their health systems, modelled to some degree on Alberta's SCNs.
- In October 2017, the federal Health Minister launched an external review of eight federally funded health organizations. The final report[3] specifically mentioned Alberta's SCNs as a model to watch:

  "The fragmented structure of Canada's health systems presents challenges to achieving effective learning health systems," the report states. *"The Strategic Clinical Networks of Alberta are an example of how one jurisdiction is tackling the challenge."*

- A report from the McMaster Health Forum (2018) looked at different health systems in Canada and identified assets and features that support rapid learning, quality improvement and collaboration among health partners. The report identifies Alberta's SCNs as an example of a patient-centered and evidence-informed approach that reflects competencies essential to rapid learning and health system transformation. Further, it suggests that rapid learning health systems offer the potential to motivate greater collaboration and enable greater impact and return on investment.[4]

Elsewhere in the world, health organizations are recognizing the benefits of greater health system integration and looking to Alberta and others as leaders in health innovation and integration. In May 2018, health leaders from more than 40 countries met in Utrecht, Netherlands to share best practices and learn from one another. At the International Congress on Integrated Care, AHS was recognized as one of the most integrated health systems in the world. It was ranked top five out of more than 200 entries, and during a real-time poll of delegates, AHS ranked second in the world—just behind the world leader, the Netherlands—as the health system from which the most could be learned.

We're proud of these achievements and know this is just the beginning. We have the structures, processes and expertise in place to achieve much more and to accelerate our path towards stronger, healthier communities and a truly integrated, sustainable and world-class health system here in Alberta.

3. Forest, Dr. P-G. and Dr. D. Martin. (2018). *Fit for Purpose: Findings and Recommendations of the External Review of the Pan-Canadian Health Organizations*. Health Canada, Ottawa, ON.

4. Lavis JN, Gauvin F-P, Mattison CA, Moat KA, Waddell K, Wilson MG, Reid RJ. (2018). *Rapid Synthesis: Creating Rapid-learning Health Systems in Canada*. Hamilton, ON, Canada: McMaster Health Forum, 10 December 2018.

Making a difference in the lives of Albertans

Much good work has been done since the SCNs became part of Alberta's health landscape, and these efforts are making a difference in the health, lives and experiences of patients and families across the province. We're excited to share some of these stories and highlight the many ways health partners have come together to advance care, enhance safety and improve health outcomes, value and sustainability across our health system.

These ten stories provide a glimpse of this work. They show the diversity of the SCNs and the partnerships that have enabled this work. It's important to recognize that these are just ten examples of the many projects underway, and these outcomes are just the beginning. Behind the scenes, there is much more happening every day in health centres, hospitals, clinics and care facilities across Alberta. Research and innovation is alive and well in our province and is helping our health system achieve new heights. Most importantly, it's making a difference to the people of Alberta.

For those interested in learning more about the SCNs and the impact of this work, we encourage you to visiting www.albertahealthsrvices.ca/scn/ or subscribe to news and updates via Twitter by following @ahs_scn.

PROFILES

- **Provincial Breast Health Initiative**
- **Stroke Care Alberta**
- **Enhanced Recovery After Surgery (ERAS)**
- **Diabetes Foot Care Pathway**
- **Provincial ICU Delirium Initiative**
- **Bup-nal (Suboxone®) Initiation in Emergency Departments**
- **Safe Surgery Checklist**
- **Evaluating Fetal Fibronectin Testing for Preterm Labour**
- **Catch-A-Break**
- **GLA:D Program**

Provincial Breast Health Initiative

Improving outcomes and the experience of patients fighting breast cancer — from diagnosis to surgery and beyond

Our challenge

1 in 8
women will develop breast cancer in their lifetime

Improve access, patient experience and value through best use of resources

Results to date

Wait time from suspicious imaging to surgical consult referral

↓ 60% ↓
(19 days → 6 days)

90%
patients satisfied with information they received[1]

Percentage of mastectomies performed as day surgeries

5% → 46%
(2014/15) (2018/19)

821
bed days per year released[2]

$802,000
estimated savings[2,3]

What was the issue?

Each year, more than 3,300 Albertans will be told they have breast cancer, and 1 in 8 women will develop invasive breast cancer during their lifetime.[4] For these patients and their families, it's a frightening diagnosis and a difficult, often overwhelming time.

Evidence shows that if detected early, breast cancer has one of the highest survival rates of any cancer. But delays in diagnosis or treatment can add further stress to a cancer diagnosis. Helping patients access the care and information they need, as soon as possible, can improve their experience and health outcomes.

What we did to address it

In 2016, the Cancer SCN brought together patients and health partners to evaluate and better coordinate processes for diagnosis and surgical care. Using Alberta data, best practices and input from breast cancer survivors, the team designed integrated care pathways to address gaps and improve breast cancer care.

Together, we streamlined processes for patient referrals, imaging, reporting and communication between care providers. We also improved surgical care to help women undergoing a mastectomy or seeking breast reconstruction. And we created educational resources to ensure patients and their families have access to reliable information about breast cancer, treatment and care.

How this work is making a difference

Since implementing these care pathways, the wait time between a suspicious test result and confirmed breast cancer diagnosis decreased by 60% (from 19 days in 2016 to 6 days in 2018).

Alberta now performs 46% of mastectomies as day surgeries with no increase in complications or readmission rates. This means that women can return home sooner, and hospital beds previously used for surgical recovery are open to other patients.

Diagnostic and surgical processes for breast cancer have been standardized across the province, so women receive the same care regardless of where they live or which provider they see.

By focusing on improving patients' experience, we've seen an increase in patient satisfaction. Ninety percent of patients report they are satisfied with the information they received before and after surgery, and 70% of patients surveyed report they are satisfied with diagnostic wait times.

What's next?

We're working to standardize and expand patient navigation supports and enable more integrated, multidisciplinary assessments before surgery. New work is also underway to improve access to genetic testing for hereditary cancers (ovarian and breast). And thanks to funding from a Health Innovation Implementation and Spread grant, the Cancer SCN is expanding this work to patients with lymphoma and colorectal cancer to reduce wait times for biopsies, referrals and diagnosis, and improve the patient experience for those facing other cancers.

Coming together to support breast health

Patients, clinicians and researchers across the province teamed up to better understand the patient experience throughout their cancer journey. The team used measurement and reporting tools to evaluate current practices, monitor outcomes and implement changes on a provincial scale.

This work is the result of successful partnerships between:

- patients and families
- clinical teams, administrators and
- operational leaders
- primary health care
- community radiology clinics and care
- providers
- Alberta Society of Radiologists
- CancerControl Alberta
- Cancer SCN and Surgery SCN

Patients' stories informed the work and challenged us to really think about big and small ways we could improve patients' and families' experiences throughout their care journey.

Clinicians and operational leads at each site ensured solutions considered local needs and operational differences.

Community radiology partners and primary care leaders came together to share data, plan and implement the care pathways.

To learn more, visit www.ahs.ca/cancerscn

Stroke Care Alberta

Advancing care, increasing access and improving outcomes for stroke patients across Alberta while lowering costs

Our challenge

Stroke affects

5,000 Albertans each year

1 in 6

stroke victims die and

90%

of survivors have a disability

$370 million

spent caring for stroke patients in Alberta in the first year alone

Results to date

Reduced door-to-needle times from

70 min to 39 min

in urban and rural sites[1]

Early treatment reduces death and disability.

Speed

is a critical factor.

Time is brain.

28% fewer patients

admitted to long-term care

Length of stay reduced from

6 days to 5 days

Estimated savings of

3,377 bed days = $3.3 million[2,3]

Better outcomes, value and healthcare sustainability

What was the issue?

Five thousand Albertans have a stroke each year. Stroke is the leading cause of adult disability and the third leading cause of death. Nearly 15% of people who have a stroke die, and 90% are left with disability, often severe enough to require long-term care.

Research shows that when strokes are treated quickly (with clot-busting drugs or by opening up the blocked blood vessel to the brain), and when patients receive the right rehabilitation and care following a stroke, they recover faster and have less disability and less need for ongoing care.

What we did to address it

The Cardiovascular Health and Stroke SCN has been working with health partners across the province to develop Stroke Care Alberta, an overarching strategy that aims to provide best-in-class stroke care. The strategy focuses on the full spectrum of stroke services—from emergency response and hospital care to in-home rehabilitation.

Foundational work was completed from 2005 to 2011 with the Alberta Provincial Stroke Strategy. When the SCN launched in 2012, we built on this work and continued to advance stroke care in Alberta. We engaged patients, clinicians and operational leaders and together developed a patient-focused, system-wide stroke program. The goal was to better coordinate stroke services so Albertans could readily access the care they needed no matter where they live.

The program focused on improving patient outcomes by providing rapid clinical evaluation and treatment, and ensuring all patients—including those in rural areas—had access to the same comprehensive stroke care and rehabilitation services. Initially, the team focused on improving care at 14 primary stroke centres located in towns and rural areas across Alberta.

"The Stroke Action Plan took some of the successes we had in large stroke centers and translated these to rural and small urban settings," explains Dr. Tom Jeerakathil, a stroke neurologist and one of the project leads. These centres increased their use of standard order sets so patients received consistent, high quality care. They also received rehabilitation sooner (88% within 48 hours, up from 74%) and access to in home rehabilitation services (e.g., physiotherapy, speech therapy, nurses, social workers) to help them regain their independence.

How this work is making a difference

This work has touched the lives of thousands of Albertans. Patients are returning home sooner following a stroke and receiving the same standard of care regardless of where they live. Door-to-needle times across Alberta have decreased from 70 to 39 minutes, which is helping reduce the risk of dying and disability after stroke.

Thanks to sustained effort and commitment by operational leaders, frontline staff, therapists and all health partners, Alberta has become an international leader in stroke care. This includes its use of endovascular therapy, which has been shown to save lives and dramatically reduce disability for large, disabling strokes. Since launching this program, overall endovascular therapy volumes have increased by 38%, and access to this therapy has more than doubled in non-urban zones.

These outcomes demonstrate the strength of the stroke community in Alberta. By collaborating and aligning our efforts, we've successfully implemented several quality improvement initiatives and scaled them across the province. More than 225 frontline professionals have contributed to these efforts and have helped improve stroke outcomes and care across Alberta.

What's next?

The SCN continues to work with patients, families and our network of passionate stroke partners to expand on this work. We're currently developing novel approaches for stroke rehabilitation that provide value across the entire system of care.

I have never in all my years felt this level of team cohesiveness before and it directly benefits the patient.

~ Sarah, care provider, Camrose

It's just an amazing program. They actually treat the whole person, not just the physical, but the emotional and mental. And not just the patient, but also the spouse.

~ Jane, caregiver, Grande Prairie

Receiving care in the home helps a lot. It really helps, because you're in your own environment and you're not so afraid... you're happy.

~ Edna, stroke patient, Camrose

To learn more, visit www.ahs.ca/cvhsscn

Enhanced Recovery After Surgery (ERAS)

Faster recovery, fewer complications and a better patient experience while lowering costs

Our challenge

Nearly

300,000

surgeries performed each year in Alberta

More than 55 sites[1]

across Alberta provide surgical care

Results to date

Improving quality of care, patient experience & health outcomes through clinical best practices

On average, ERAS care reduced patients' length of stay in hospital by

1 to 2 days

with no increase in readmissions[2]

In just **2 years**, the net health system savings[3,4] of ERAS implementation for colorectal surgeries alone is:

$2.3 million

Estimated return on investment:

$2.1 to $3.8 for every $1 invested

What was the issue?

Patients undergoing surgery want to know they're receiving the best care, and want to recover and return to their regular activities as quickly as possible. All Albertans benefit when surgical care is safe, efficient and sustainable.

Each year, nearly 300,000 surgeries are performed across Alberta. With more than 55 surgical sites, there can be wide variations in surgical practices and outcomes. Recognizing the opportunity to standardize practices and improve surgical care, and the potential benefits this would bring to patients and care providers, several SCNs took action to bring Enhanced Recovery after Surgery (ERAS) care to Alberta.

Patient-centered care, at every step

ERAS enables patients and families to be actively involved in their own care. "The program is based on great research and what works best for recovery. Most important, it involves the patient and family in understanding and taking part in their care to promote recovery," says Dr. Gregg Nelson, co-chair of the ERAS steering committee

- **Before surgery:** Patients are given information about what to expect and encouraged to eat well and be active.
- **During surgery:** Patients are kept warm and given medications to prevent complications.
- **After surgery:** Patients are encouraged to eat, drink and get up. The care team helps patients manage post-surgery pain and nausea with minimal medication and by removing tubes and drains. Patients are also equipped with information and supports to continue their recovery after going home.

"My recovery after the latest surgery was amazing," says Jeanne Place about her 2017 operation. "I ate the night before and then had supper after surgery. I felt really good; I was physically and mentally better."

"Night and day" – that's how Mary Anne Prosofsky describes the difference in her recovery time after having a second colorectal surgery with ERAS care. "I was surprised at how quickly I felt better after the second surgery. I had more energy and was up moving sooner…I didn't experience any nausea after the second surgery and I was in hospital three days less."

To learn more, visit www.ahs.ca/ERAS

What we did to address it

ERAS care is based on international guidelines that provide a consistent way of managing patient care before, during and after surgery. Drawing on best practices and evidence from around the world, implementation of ERAS has been shown to help patients stay strong physically and mentally, recover faster, spend less time in hospital, experience fewer complications, and have lower healthcare costs.

In 2013, four SCNs partnered with clinical care teams, operational leaders and patients to plan how to adapt and implement ERAS guidelines at local hospitals. Initially, the team piloted ERAS guidelines at six sites for patients undergoing colorectal surgeries.

Results from the first six sites were positive and showed that patients receiving ERAS care were able to go home sooner, with fewer complications and no increase in readmission rates.[5] Three years later, the team expanded the program to nine surgical sites and other elective surgeries (gynecological, pancreas, cystectomy, liver, breast reconstruction and major head/neck).

How this work is making a difference

Surgical care in Alberta is getting better and patients are going home sooner as a result of this innovative patient-centered approach. ERAS involves patients in preparing for their surgery and during their recovery. It helps patients stay strong, improves outcomes, reduces complications and creates a better patient experience.

Since ERAS care implementation began in Alberta in 2013, there have been significant clinical improvements and a positive return on investment for Alberta's healthcare system. Following surgery, colorectal patients at ERAS sites experience fewer surgical, lung, and heart problems. And in the first two years alone, data from the six ERAS pilot sites shows the program has contributed a net savings of $2.3 million ($1,768 per patient), a gain four times greater than the implementation investment.[5,6]

Similar outcomes exist for patients undergoing other types of surgeries, with ERAS patients experiencing shorter hospital stays (by 2 to 4 days), fewer complications, and cost savings of $956 per patient.[7]

What's next?

Over the next three years, the goal is to roll out ERAS care across most surgeries and hospitals in Alberta. With the spread of ERAS care, we expect to improve outcomes for surgical patients and Alberta's health system and enable the almost 300,000 Albertans having surgery each year experience a better surgical recovery.

Diabetes Foot Care Pathway

Preventing severe foot ulcers and amputations through improved screening, early intervention and integrated care

Our challenge

>1,000
lower limb amputations each year in Alberta[1]

70%
are due to diabetic foot ulcers

85%
of diabetes-related amputations
are preventable

Results to date

Total bed days for amputations[2]
reduced by 1/2
in zones implementing the pathway, and providing integrated care and limb-preserving approaches

In zones without bundled services, the amputation rate
increased
over the same period

Better screening and quality of care for at-risk Albertans

$4 million
estimated savings[3] based on bed days alone (2017)

Improved health outcomes, quality of life and value

What was the issue?

Diabetes involves much more than blood sugar. People with diabetes have a greater risk of foot problems, such as numbness, cramps, sores and foot ulcers. Foot ulcers are a serious condition and account for 70% of lower limb amputations in Alberta.

Research shows that up to 85% of diabetes-related amputations are preventable[4] and can be avoided through proper self-care, screening and treatment. Most foot problems can be detected with a thorough physical exam; however, a 2014 survey revealed that diabetic foot screening was inconsistent, and many health care providers were uncertain about how to assess patient risk.

What we did to address it

The Diabetes, Obesity and Nutrition SCN worked with stakeholders to develop a simple, standard approach to support foot screening in people with diabetes. Together, we created an integrated care pathway to prevent amputations through early detection and treatment. The team also worked with physician groups, surgeons and site leadership to better coordinate health services and improve communication between healthcare providers.

Recognizing a gap in current practice, the team developed a toolkit with easy-to-follow instructions on how to perform a thorough foot screen, assess patient risk, and refer patients for further care. The kit also includes information for patients about how to care for their feet and a list of foot care providers (e.g., nurses, podiatrists and footwear vendors).

Clinicians and operational leaders also led the work to set up High Risk Foot Teams in each zone. These teams provide specialized care for patients with, or at risk of developing, a foot ulcer.

Health partners across the province worked together to scale and spread the Diabetes Foot Care Pathway to every community and health region. Primary Care Networks were instrumental in supporting this work, and physicians, clinicians and AHS zone operations played a key role in the successful implementation and uptake of the pathway across the province.

How this work is making a difference

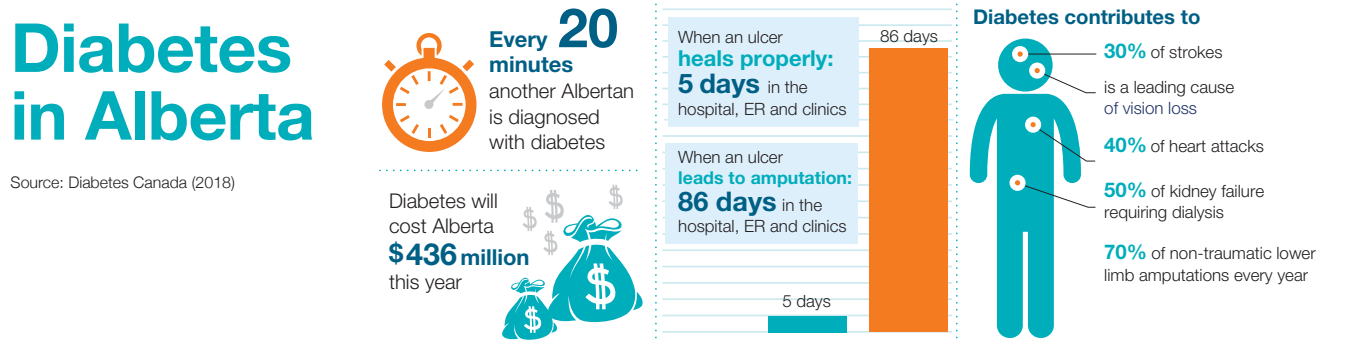
Since adding a foot screen as part of regular diabetes care, foot problems are being identified sooner and people are receiving treatment right away to prevent the problem from becoming more serious. This has led to a decrease in diabetic foot ulcers and lower limb amputations, and better health outcomes for people with diabetes. The High Risk Foot Teams have been a critical factor in this success and 86% of patients say they are extremely satisfied with their experience with the High Risk Foot Team.

The pathway has also reduced variation in practice and made it easier for patients to access the right care at the right time. Zones that have integrated services and have adopted limb-preserving approaches alongside the foot care pathway report a decrease in major amputations (lower limb) and higher rates of partial amputations (toe/lower foot). For patients, this means better mobility and quality of life. Fewer urgent cases and less-extensive surgeries also means cost savings for Alberta's health system.

Clinicians and frontline care providers are now more knowledgeable about diabetic foot screening and more confident in their ability to perform a thorough foot screen. This improves the quality of care they're able to provide to patients.

What's next?

This pathway provides a model that can be adapted to other diabetes-related complications, such as eye damage, kidney and cardiovascular disease. By taking a preventative approach and improving routine screening practices, we're able to identify and respond to early signs of illness and provide patients the care they need quickly and efficiently.



To learn more, visit www.ahs.ca/donscn

Provincial ICU Delirium Initiative

Improving recovery and quality of care for critically ill patients

Our challenge

12,800
patients per year[1] treated in Alberta intensive care units (ICUs)

2 out of 3
patients admitted to the ICU can develop delirium

Delirium increases complications and lengthens ICU stays

Results to date

All 21
Alberta ICUs now follow provincial standards and best practices

= more consistent screening

↓ 10% ↓
decrease
in number of days patients in ICU experience delirium

Fewer days in ICU and hospital lower risk of delirium

$750,000 per year
in estimated cost savings

Improved recovery, quality of care, patient and family experiences and value

What was the issue?

Each day, doctors and nurses provide life-saving interventions for critically ill adults and children across Alberta. Because of their severe illness and the need for life-support (e.g., breathing machines) and aggressive treatment, 2 out of 3 patients can develop confusion and agitation (called delirium). This often occurs within days of their ICU admission and can be very unsettling for patients and their families. Delirium also extends ICU stays and complicates treatment.[2] Although delirium is usually temporary, the effects can be debilitating and long-lasting.

What we did to address it

In 2015, the Critical Care SCN, along with operational leaders and frontline clinicians, identified delirium as a top priority to improve quality of care in ICUs. We brought practitioners from across the province together to share their knowledge and identify ways to prevent ICU delirium and improve health outcomes. Our goals were to develop provincial standards for managing pain, sedation and ICU care that would prevent or reduce delirium; help care providers identify and manage delirium; and reduce the risk of long-term impacts on patients' function and quality of life.

Frontline care providers teamed up with clinical and operational leaders to refine processes and develop solutions that reflected the best available evidence. They partnered with eCritical, the electronic medical record repository used in all Alberta ICUs, and developed a dashboard to better monitor patient agitation, sedation, mobility and delirium symptoms; track patient outcomes; and evaluate ICU performance.[3] Each unit also identified opportunities to build other quality improvement initiatives into this work that reflected local priorities.

Patients and families were important partners in this initiative. They shared their experiences with ICU delirium and created resources to support others recovering from the effects of ICU delirium. These resources are available through MyHealth.Alberta.ca.

How this work is making a difference

Since implementing these changes, the quality of delirium care has improved across the province. All patients admitted to an ICU now receive care that is consistent with delirium best practices[4] regardless of where they receive that care. And families and friends now have access to better information about ICU delirium and recovery.

Risks to patient safety have also decreased. Patients are spending fewer days on a breathing machine and being monitored more frequently.[4] There has also been a 10% decrease in the number of days patients experience ICU delirium. This is contributing to reduced lengths of stay in hospital, fewer complications and improved recovery.

To learn more, visit www.ahs.ca/ccscn

What's next?

Researchers and care providers are looking to extend this work to improve the prevention, early detection and management of delirium in other care settings where delirium is common. This commitment is part of the Alberta Dementia Strategy and Action Plan.

Long road to recovery: One patient's journey from the ICU to a healthier future

"Imagine this…type A, incredibly organized, mother of two, small business owner. Your days are incredibly structured and well organized. Work, volunteer, children's activities. You're the ultimate multi-tasker. Then one day you wake up with no idea where you are or how you got there."

After spending five weeks in intensive care — three of them in an induced coma — Nadine Foster knows first-hand the debilitating effects of delirium.

"After I was discharged I spent six months more or less bedridden," she says. "My previous sharp mental focus was gone and my attention span was very limited. I wasn't able to read or watch TV."

"My memory was also impacted. I would forget things that typically I wouldn't, ranging from something minor, like an item to pick up at the grocery store, to more important things, like people in my life."

It's been a long road back for Nadine who, aside from her cognitive challenges, weighed just 85 pounds and couldn't walk when she left hospital. She has no memory of her time in the ICU, but recalls vivid dreams or hallucinations, which are often associated with delirium.

Today, Nadine has made nearly a full recovery and she now shares her experiences as a Patient Advisor for the Critical Care SCN. She's helped create resources to support other patients and families, and one day hopes to return to the ICU as a registered nurse. "My goal now is to work with ICU patients, or recovering ICU patients. I understand the patient and family perspective and I think I have something to offer in terms of helping people come back — both physically and cognitively," Foster says.

Bup-nal (Suboxone®) Initiation in Emergency Departments

Responding to critical health needs: Evidence-based strategies to reduce opioid-related deaths

Our challenge

746 deaths
in Alberta in 2018 from apparent accidental opioid overdoses[1]

1 in 10 Albertans
who died from accidental opioid poisoning had visited an emergency room for substance use in the last 30 days

65% increase
in emergency department (ED) visits related to opioid use[2]

Results to date

Implementation of a province-wide strategy is underway

19
EDs and urgent care centers have adopted these practices[2]

+ 31
are in planning stages

Goal: Adopt at all 103 EDs and 6 urgent care centers in next 12 months

Patients in this difficult-to-engage population are getting help. Of those discharged on Suboxone®:

44%
attend their first community clinic appointment[3]

58%
continue to fill their prescriptions 30 days later[4]

Improving outcomes and access to community services

What was the issue?

Opioid use disorder is a major public health crisis affecting a growing number of Albertans. This chronic, life-threatening, and relapsing disease is strongly stigmatized. It affects people of any age, gender, ethnicity and socio-economic status. On average, these highly addictive substances, when used inappropriately, claim the lives of nearly two Albertans a day.[1] People who live with opioid use disorder experience intense cravings and withdrawal symptoms, and often feel powerless to stop using.

In the past five years, opioid-related visits to Alberta emergency departments (EDs) and urgent care centers have increased dramatically. However, until recently, no integrated or consistent approach existed to help patients coming to EDs or urgent care centers with opioid-related concerns.

What we did to address it

The Emergency SCN brought together a team of health partners and patient advocates to review the latest evidence regarding medication-assisted treatment for people with opioid use disorder. The group included addiction and mental health professionals, a patient with lived experience, AHS operations, emergency physicians, nurses and frontline staff, pharmacists, community agencies, Alberta Health and others.

Research from the Yale School of Medicine has shown positive results when prescribing buprenorphine/naloxone ('bup-nal'; trade name Suboxone®) in EDs to eligible patients with opioid use disorder and directly referring them to addiction treatment.[5,6,7] Bup-nal is the recommended first-line treatment for opioid use disorder by the Canadian Research Initiative in Substance Misuse.[7] Bup-nal assists in curbing cravings and reduces withdrawal symptoms. This helps people feel normal and use opioids less often and in smaller amounts. Once on a stable dose, some people will stop taking opioids altogether.

The SCN worked with health partners across the province to test and implement a province-wide strategy to: (i) appropriately screen patients for opioid use disorder in EDs; (ii) initiate treatment (bup-nal) for eligible patients while in the ED; and (iii) rapidly connect them to a community clinic, primary care provider, or outpatient addictions program for follow-up and ongoing care. The program began in May 2018 and is now available at 19 EDs and urgent care centers across Alberta.

How this work is making a difference

This program recognizes the unique opportunity that emergency physicians, nurses, and staff have to identify patients with opioid use disorder. By improving access to medication and community services, care providers are helping improve health outcomes, reduce stigma, and better support patients with opioid use disorder. As Dr. Marshall Ross, an emergency physician at one of the pilot sites in Calgary, explains, "We are now doing more than just treating the complications of opioid use disorder. This program is helping patients treat their underlying problem and get on the road to recovery."

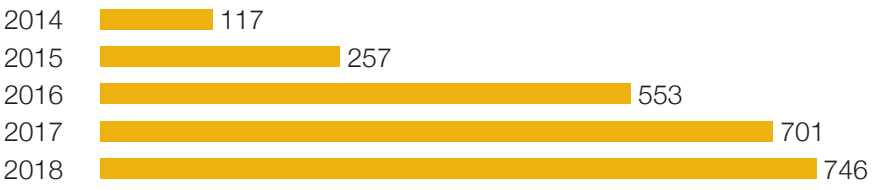
The project is ongoing, so long-term outcomes have not yet been evaluated. Early results are promising and the team is cautiously optimistic that the program will have an impact and improve outcomes for this complex group of patients. Patients value having access to compassionate, evidence-based treatment in the ED and assistance as they navigate their care journey. Being connected to a community clinic for ongoing care helps them feel supported, more hopeful and better able to regain control of their lives.

What's next?

Support for this work has been strong from EDs and urgent care centers across Alberta. Today, the SCN is working with 50 sites with that number expected to grow quickly. Our goal is to implement the program in all EDs and urgent care centers in the province over the next 12 months.

In rural areas, health partners are also working with virtual care and primary care physicians to adapt these approaches for regions with small EDs and fewer community treatment clinics. A pilot project is underway that provides virtual support and supervised consumption services via telehealth. Our hope is that this model of care will help prevent overdose deaths for people in rural and suburban areas.

Opioid deaths including fentanyl, in Alberta



To learn more, visit www.ahs.ca/escn

Safe Surgery Checklist

Preventing medical errors and improving quality of care and patient safety across Alberta

Our challenge

Nearly
300,000
surgeries performed each year in Alberta

More than 55 sites[1]
across Alberta provide surgical care

Results to date

Alberta
was the
first province
in Canada to implement a Safe Surgery Checklist in all operating rooms

Compliance rate has continued to improve
48% (2011) → **95%** (2018/19)

More than
10,000
medical errors avoided each year

- Improved patient safety
- Better communication
- Quality service

What was the issue?

Approximately 300,000 Albertans will undergo surgery in Alberta's hospitals this year. According to the World Health Organization, complications after inpatient operations occur in up to 25% of patients, and nearly 50% of all adverse events in hospitalized patients are related to surgical care. At least half of the cases in which surgery led to harm are considered preventable, highlighting an opportunity to reduce risks associated with surgical care.

Overcoming challenges through collaboration

The team encountered some challenges when implementing the Safe Surgery Checklist and recognized the need to adapt its plan to align with operations and specific local and procedural needs (e.g., caesarean sections and cataract surgeries). Broad engagement across zones and collaboration among all health partners enabled them to navigate these challenges successfully and develop lasting solutions.

- Patients and families, patient and community engagement researchers (PaCERs), physician leaders and clinical teams worked alongside administrators and operational leaders, data analysts and auditors to implement the checklist provincially.
- Sandra Zelinsky, a PaCER, discovered that surgical patients were feeling anxious when repeatedly asked the same questions, and they wanted to be part of the process. "Sandra was the patient voice that was instrumental in changing our policies on how to include patients in our processes," says Tracy Wasylak, Chief Program Officer for the SCNs.[2]
- Clinicians and operational leads ensured that solutions reflected site-specific needs and operations. As Sharon Bilanski, Perioperative/Inpatient Surgery and MDR Director for the Central Zone explains, "This collaboration identified challenges and barriers in meeting the checklist requirement for each step in the process…Through continuous discussion and sharing of information, data and results, the Safe Surgery Checklist has now become an expected and accepted part of our surgical procedures."

Alberta's leadership and success in implementing the Safe Surgery Checklist province-wide has led to a partnership with the Canadian Patient Safety Institute. This partnership will enable us to continue to improve patient safety and drive quality improvements.

To learn more, visit www.ahs.ca/surgeryscn

What we did to address it

In 2013, the Surgery SCN launched a province-wide effort to implement a standard Safe Surgery Checklist and use it in every operating room in Alberta. The checklist was modelled on one developed by the World Health Organization to improve patient safety around the world.

The network worked with patients, operational leaders, clinicians and physicians across the province to design a common tool that could be used to improve communication between all members of the care team. The goal was to improve patient safety by:

- preventing potential major surgical errors (e.g., completing a surgery on the wrong side or location)
- ensuring critical information is shared at three stages (before a patient receives anesthetic, before an incision is made, and before the patient leaves the operating room)
- reviewing and sharing important information about patient allergies and surgical supplies

As part of the implementation, teams developed a standard way of tracking use of the checklist and reporting on 'good catches.' This information is shared with operational leaders and frontline staff, and hospitals use the data to monitor performance and continuously improve the quality and safety of surgical care.

How this work is making a difference

Since implementing the Safe Surgery Checklist, surgical teams across Alberta communicate better, and performance data indicates that the checklist has helped prevent errors in about 4% of surgeries. This means that each year, more than 10,000 errors have been avoided in operating rooms across the province.

The project fully transitioned to operations in December 2014. Since then, compliance continues to climb across sites and latest figures show that the checklist is being used in 95% of surgeries in Alberta.

What's next?

Patient safety is a top priority for Alberta's health system, and the Surgery SCN continues to work collaboratively with zones and others to monitor use of the checklist and improve participation. In Alberta, compliance is based external observations, which are typically more accurate than self-audited processes.

Work is currently underway to adapt and improve the checklist. Alberta researchers are co-leading this study as part of an international team of 20 to 30 leaders in surgical safety and health system research. The Surgery SCN will update Alberta's Safe Surgery Checklist and processes based on their findings.

Evaluating Fetal Fibronectin Testing for Preterm Labour

Evidence-based decision-making ensures safety, appropriateness and value

Our challenge

56,329 births
in Alberta (2018)[1]

1 in 12
babies in Alberta is born preterm[2]

Alberta has the
highest rate[2]
of preterm births in Canada (8.7%)

Results to date

Study evaluated
9 years
of data (2010 to 2018)

Replacing laboratory point-of-care testing with clinical assessment has resulted in
no negative change in outcomes
for mothers and babies

High-quality, evidence-based care at lower cost

Estimated savings[3] of
$5 million per year
and more than
$12.5 million to date

Better value and healthcare sustainability

What was the issue?

Preterm babies are at greater risk of health problems, including issues with breathing, feeding, infection, and developmental delays. Alberta has the highest rate of preterm births in the country.

In 2006, fetal fibronectin testing was implemented across the province for women showing symptoms of preterm labour. This decision reflected the best evidence available at the time. The goal was to more accurately assess the risk of preterm labour and avoid preterm births, unnecessary hospital admissions and urgent transfers.

Fetal fibronectin testing involves collecting a sample from the mother and analyzing it using a laboratory device. However, results are not always reliable and 'false-positives' are common. This was frustrating for expectant mothers and medical teams as women were being transferred to hospitals with specialist services when no delivery was imminent.

In 2016, the Institute for Health Economics examined new evidence, which revealed that fetal fibronectin testing had made no difference in hospital admission patterns.[4] Although the test was convenient, there was no evidence that it reduced preterm births, improved outcomes or provided value. However, many physicians, especially those in rural areas were reluctant to stop using it, concerned the change might lead to an increase in preterm deliveries in rural hospitals.

Partnerships and dialogue critical to project success

Stakeholders came together at a series of town hall meetings. This provided an opportunity to engage partners from all zones, share information and address concerns.

Obstetricians, family physicians and midwives from rural and urban settings met with nurses, laboratory clinicians, operational leaders, researchers, and data analysts to review the evidence and consider local needs and resources. Together, we determined the most appropriate course of action and developed a plan to implement and monitor this change in practice.

Reassessing clinical practice to ensure high quality, high-value care is a key part of the SCN mandate. This project demonstrates how Alberta is using evidence to inform decision making, improve patient safety and clinical appropriateness, and maximize healthcare resources. It's an approach that benefits all Albertans.

To learn more, visit www.ahs.ca/mncyscn

What we did to address it

The Maternal, Newborn, Child and Youth SCN was asked to evaluate the practice and make an evidence-informed recommendation regarding the continued use of fetal fibronectin testing in Alberta. The network brought together a diverse team to:

- thoroughly review available research related to fetal fibronectin testing and its effectiveness in predicting preterm births, and
- evaluate current practices in rural and urban communities and identify opportunities for improvement

The team recommended that fetal fibronectin testing be discontinued in Alberta as up-to-date evidence showed no benefit to patient safety or outcomes for mothers and their babies.[5] Instead, they developed a guideline and decision aid to help clinicians assess the risk of preterm birth without the need for lab testing. In response to concerns from rural physicians, these tools were adapted for rural sites.

Testing devices were removed from all sites in 2016. To ensure there were no unintended consequences resulting from this change, practitioners continued to monitor preterm births.

How this work is making a difference

This work has resulted in significant savings for all Albertans. Since discontinuing fetal fibronectin testing, AHS estimates it has saved $5 million per year, and approximately $12.5 million to date.

Most importantly, there has been no change in maternal or newborn outcomes since discontinuing fetal fibronectin testing and shifting to a clinical approach. There has been no significant change in the rate of preterm deliveries in rural hospitals or referrals and urgent transfers of rural patients to urban hospitals.[6]

Expectant mothers and their families can be confident they are receiving quality, evidence-based care that makes appropriate use of health resources. And care providers can be confident they have the tools they need to make effective decisions and provide safe, high-value, patient-centred care.

What's next?

The network's Maternal and Fetal Standing Committee will continue to monitor how preterm labour is managed in rural hospitals to ensure the safety of mothers and babies. The network is also supporting other high-priority initiatives. For example, we're working with Indigenous communities to address issues such as homelessness among pregnant Indigenous mothers and to build capacity within the community to care for expectant mothers and their babies.

Catch-a-Break

Preventing fractures by helping at-risk Albertans improve bone health

Our challenge

1 in 3 women
and
1 in 5 men
will suffer an osteoporotic fracture in their lifetime

Osteoporosis causes
70% to 90%
of the
30,000
hip fractures each year in Canada[2]

Results to date

3,000 hip fractures
each year in Alberta

By 2030, the number of hip fractures is expected to
quadruple

28% of women
and **37% of men**
who suffer a hip fracture die within one year

For every 10,000 patients screened, the program is estimated to have helped
prevent 14 fractures
including
4 hip fractures

Each hip fracture represents nearly
$38,000
in health system costs avoided[1]

What was the issue?

Osteoporosis causes 70% to 90% of hip fractures in Canada, and hip fractures can be deadly for the frail and elderly. When someone breaks a bone because of osteoporosis, it's important they receive follow-up care to prevent another fracture. Improving bone health and reducing secondary fractures in those at highest risk—especially people who have experienced a recent fracture—is critical.

Until recently, less than 20% of Albertans treated for a fracture related to poor bone health received the follow-up osteoporosis care they needed to prevent a future fracture.

What we did to address it

The Catch-a-Break program began in 2014 as a way to address this gap in care and prevent hip fractures and other common fractures (e.g., wrist, arm, rib or pelvis) in at-risk patients. The program is designed to identify people who have experienced a fragility-related fracture and help them improve bone health and prevent future fractures, including hip fractures. The program started in Edmonton and expanded to the rest of Alberta after only six months.

Catch-a-Break focuses on improving communication between individuals and their family doctors about osteoporosis and available treatment options. It uses existing resources (such as Health Link) to initiate follow-up communication with patients and provides important information about bone health, osteoporosis, diet, calcium and vitamin D, and other beneficial supplements and medications.

Catch-a-Break is a partnership between the Bone and Joint Health SCN and Health Link. It's also supported by the STOP-Fracture research team and the Alberta Bone and Joint Health Institute.

How this work is making a difference

With Catch-a-Break, Albertans at highest risk of osteoporosis and poor bone health are proactively contacted by Health Link. The program equips people with information they can use to follow-up with their physician, improve their bone health and help prevent additional fractures. These actions can significantly improve patients' long-term health, mobility and quality of life.

Evaluations show that Catch-a-Break participants increase their daily use of calcium (to 68% from 47%) and vitamin D (to 78% from 63%), which are both essential nutrients for good bone health.

On a system-level, the program benefits all Albertans by offsetting the upstream impact of this condition. It is helping reduce emergency and urgent care visits, surgical wait times for fracture care, hospitalization and rehabilitation rates, and associated healthcare costs. In 2018, due to the cost-effectiveness and value of this preventative service, the Catch-a-Break program became a permanent service that's offered province-wide.

What's next?

Now that Catch-a-Break has been operationalized across the province, we expect to see an overall decline in the rates of fractures associated with poor bone health in Alberta, despite an aging population.

Partnering with Primary Care Networks, educating staff at cast clinics, and developing educational resources for patients, families and healthcare providers will all help raise awareness about bone health and fracture prevention. Catch-a-Break is an important component of the network's Bone Health Management Program. Other components include evidence-based best practices for fracture care, Fracture Liaison Services, and restorative care.

Catch-a-Break: How does it work?

- Patients who have had a fracture that could be associated with osteoporosis are identified, based on information from emergency departments and cast clinics.
- Patients who are 50 years of age and older who have had a recent bone fracture are mailed information about bone health and osteoporosis. If patients consent, a letter is also sent to their primary care doctor to inform them of Health Link's interaction with their patient.
- Health Link staff follow up with a phone call to encourage these patients to talk to their doctor about their bone health and determine if underlying bone weakness may have contributed to their fracture.
- Additional follow-up calls are scheduled at three and 12 months.

To learn more, visit www.ahs.ca/bjhscn

GLA:D™ program

Shifting the focus from illness to wellness. Innovative program helps people with osteoarthritis stay active and live well.

Our challenge

1 in 4
Albertans will live with osteoarthritis by 2040

Each year,
10,000
Albertans
need non-surgical supports to manage their osteoarthritis

Results to date

600+ patients
attended a GLA:D program[1] in 2017

90% patients feel they benefited from the program[1]

35% increased their daily activity[1]

71% use the information they learned daily[1]

GLA:D participants report a

28%
reduction in pain levels[1]

Improving health outcomes through preventative care in the community

What was the issue?

Osteoarthritis is the most common form of arthritis. Due to a growing and aging population, it's estimated that one in four Albertans will live with osteoarthritis by 2040 and have difficulty performing day-to-day tasks due to joint pain. Although many will seek a joint replacement, surgery is not the best option for about half the people entering the hip and knee surgical program. This is either because they are too early in their osteoarthritis disease progression, or because other medical conditions mean surgery can't be done safely. That leaves about 10,000 Albertans each year who need other, non-surgical supports to manage their osteoarthritis.

What we did to address it

In 2016, the Bone and Joint Health SCN decided to pilot the GLA:D program in Alberta as a way to support people with hip and knee osteoarthritis, help them manage their condition, and prevent it from worsening. GLA:D, which stands for Good Life with osteoArthritis: Denmark, provides advice and exercise support to help people stay active and live well. It teaches them how movement and exercise can help manage pain, and it supports patients who experience joint pain as they start to exercise. Patients report that once they understand why they're moving and exercising in certain ways, they're much more willing to continue with an exercise plan.

Partnerships have been key to the program's success. Bone and Joint Canada is leading the national implementation, and private physiotherapy clinics have been quick to adopt GLA:D. Today, more than 125 clinicians have trained in GLA:D, and the program is now offered in 27 communities across Alberta.

How this work is making a difference

GLA:D is helping improve quality of life for patients living with osteoarthritis. One year after completing the program, patients report improved quality of life, reduced pain levels, improved mobility, and reduced use of pain medications.[1] And because these improvements are making a difference in their lives, patient satisfaction with the program is high. Some participants are able to delay or avoid surgical interventions, and others report that even if they require surgery, they are better prepared for the recovery due to improved strength and pain management gained from exercise.

"Through the GLA:D program, people with osteoarthritis can learn to gain some control over their chronic condition," says Kira Ellis, provincial osteoarthritis practice lead with the Bone and Joint Health SCN. "They can improve their own functional mobility and take steps to reduce their pain through exercise and lifestyle choices."

To learn more, visit www.ahs.ca/glad

Results from Denmark suggest that GLA:D may help reduce knee replacement surgeries and delay surgery for some patients.[2] In Alberta, we're seeing growing demand and wait times for arthroplasty (surgical reconstruction and replacement of joints). Although GLA:D is still in the pilot stage in Alberta, we see potential to help patients manage pain, promote function in the interim, and recover faster after surgery.

What's next?

Uptake has been excellent across the province, and patients have begun calling local healthcare providers looking for ways they can participate. The program is now spreading to Primary Care Networks (PCNs), and as of February 2019, eight PCNs have trained clinicians and are offering GLA:D to local communities. Going forward, we anticipate further expansion into other healthcare settings and remote communities in northern Alberta. Expansion is also underway for other bone and joint conditions.[3] Results of the pilot study are expected in July 2019.

Participants glad to feel better

Kathryn Winkler started driving her 85-year-old mom Katharina to a GLA:D exercise class in Calgary for osteoarthritis. A short time later, she moved off the sidelines and began participating herself. "I thought, 'I'm here anyway, and I have a little bit of osteoarthritis developing in my hips, so it can't hurt, right?'" 56-year-old Winkler recalls.

She's glad she did. After completing the eight-week program, she reports less pain and better mobility. "This isn't just for seniors. It's great for everyone," Winkler says. "I think it's one of the first things to prescribe when someone has osteoarthritis."

In hour-long group exercise sessions, participants learn how to sit and stand properly; control movement; build muscular strength through functional exercises; and apply these exercises to everyday activities.

Paul Fitzpatrick, a 68-year-old Calgary man with severe arthritis in both knees, is an early proponent of the GLA:D program. He says he sees a surgeon once a year to determine if the time has come to look at knee replacement surgery. "The last time I saw him he said, 'Keep on doing whatever you're doing'," Fitzpatrick says. "I think it's definitely helped me. The longer I can postpone surgery, the better."

Laying the groundwork for a healthy future

Another important way in which Alberta's SCNs are adding value and advancing health and care in our province is through partnerships with academic institutions. The SCNs are grounded in science and committed to partnering with university researchers to find new and innovative ways of delivering care that provide better quality, better outcomes and better value for every Albertan.

We're fortunate to have a tremendous wealth of knowledge and expertise in our province. Alberta has a highly trained workforce and industry and academic partners who support health research and innovation. These partnerships are helping create new knowledge and build a culture of continuous improvement and innovation across the province.

Building research capacity and a pipeline of health innovation

In the past, researchers have often worked in silos and had limited interaction with patients and the healthcare system. Healthcare funders have embraced the importance of partnerships in health research—with patients and families as well as policy makers who understand issues critical to most important to health systems. Through the SCNs, researchers now benefit from working with clinicians, patients and families, and operational leaders to co-design rigorous research that addresses pressing health needs, gaps and priorities. The SCNs are helping bring together critical resources and connect partners so we can better align our efforts, share data, and support a learning health system.

Together, we're building a pipeline of health research, funding and support that provides opportunities to advance knowledge, bring evidence into practice, and build capacity for future learning and innovation. This pipeline enables us to evaluate the impact of changes in clinical practice and either fail fast, adapt and move on, or advance successful pilot projects to the next stage and ultimately spread and scale them across the province or to other areas of health.

Critical partnerships and collaborations

Partnerships with universities, research institutes, industry and others are helping focus health research efforts in priority areas and accelerate our progress as a learning health system.

Academic partners and research institutes

Since launching in 2012, the networks have worked closely with the academic community and research institutes to identify and address important health system priorities. Faculty, university leaders and researchers from across Alberta actively contribute to the networks and many are represented in the networks' leadership, scientific office, core committees, and working groups. Academic partners have contributed their expertise on many projects, often leading or supporting the project planning, research design, data collection and analysis. This includes major involvement in some of the projects profiled earlier, including Stroke Care Alberta and the provincial ICU delirium initiative. Many academic partners have published their work in peer-reviewed journals, and these publications are helping inform other health systems across Canada and internationally.

Patient partners

Patient engagement is one of the cornerstones of the networks and this commitment extends to all aspects of health research. Across Alberta, patients and families are coming together with researchers, healthcare providers and operational leaders to co-design innovative ways of improving health and healthcare. For example, AHS trains and engages Patient and Community Engagement Researchers (PaCERs) who bring their personal health experiences together with research training. PaCERs undertake research and quality improvement studies in all areas of health, and this work is contributing to health system improvement across the province.

Funding partners

Although the networks are funded by AHS, their projects are funded from a variety of sources. These include AHS, government agencies (federal and provincial), industry partners, health foundations and others. Networks compete for research funding and projects must be rigorously designed, meet funding criteria and align with the strategic priorities of the funding source. In all cases, project teams must demonstrate how the work will improve health, impact care and add value.

Investing in the health and care of all Albertans

Currently, several PRIHS projects are underway that focus on addiction and mental health, Indigenous health and seniors care. The networks are active partners in this work. For example:

Addiction and mental health

- **Providing virtual care and supervised consumption services to rural and suburban communities.** The opioid crisis is affecting every community in Alberta. Most (83%) overdose deaths occur in suburban and rural populations, where there is limited access to harm reduction services such as supervised consumption sites. By providing virtual support (telemedicine), monitoring and emergency medical services when needed, this project aims to remove barriers to treatment, including stigma, geographic distance and community resistance to supervised consumption sites. This work demonstrates how research teams are using technology and evidence-informed approaches to prevent unintended overdoses, extend services beyond the walls of hospitals and health clinics, and improve access to health services for all Albertans.
- **Providing wrap-around services and support to patients with substance use disorders.** The Addiction Recovery and Community Health team consists of physicians, nurse practitioners, social workers, peer support workers, and addiction counsellors who operate an in-hospital consultation service for patients experiencing alcohol or other drug problems, as well as poverty, unstable or unsafe housing, and other challenges. The program provides integrated, patient-centered care after patients are discharged from hospital. It focuses on meeting a wide spectrum of needs ranging from pain and withdrawal management, harm reduction, as well as income, housing, and other social supports. Results to date indicate this innovative program is helping patients get their life back on track, access and navigate community-based care and social services, and feel more supported. The program was piloted in Edmonton at the Royal Alexandra Hospital and is now spreading to Calgary.

Indigenous health

- **Using patient navigators to improve Indigenous health and better support Indigenous people as they move through the health system.** This project builds on feedback from Indigenous patients and families in the South Zone that revealed that many Indigenous people were frustrated with the health system, unaware or overwhelmed by the range of services offered, and unsure how to access those services. It focuses on providing culturally competent care, improving patient experiences, and addressing barriers, gaps and inequities experienced by Indigenous people. The work is being co-led with Indigenous stakeholders and Elders from the Kainai and Piikani First Nations and the urban Indigenous population, as well as operational leaders in the South Zone and the Population, Public and Indigenous Health SCN.

Seniors care

- **Improving acute care pathways for long-term care residents.** This project focuses on appropriateness and ensuring patients receive the care they need, safely and efficiently. Each year, more than 10,000 patients are transferred from long-term care facilities to emergency departments. Although many transfers are appropriate, 30% are non-urgent and 14% of patients could be treated on-site with antibotics. Transferring patients involves risk (e.g., exposure to infections, falls, delirium, stress), creates bottlenecks in emergency rooms and results in higher costs. The project team is developing a referral pathway to rapidly identify cases that are suitable to be treated within the long-term care facility and improve communication with patients, families and care providers.

Each funding partner plays an important role within the health research pipeline. Some provide grants for testing and evaluating clinical innovations (pilot projects). These grants enable teams to either fail fast or build on early successes. Once there is solid evidence to support a change in practice, other partners provide funds to support implementation provincially or to other areas of health. This balance and progression helps ensure rigorous evaluation and evidence-informed decision making at all stages from the initial pilot to full-scale implementation of health system improvements.

Many funding partners have supported SCN projects and are helping improve health and care for the people of Alberta. These partners are highlighted below with examples of the innovative work they are supporting and that is currently underway in our province.

Alberta Innovates

Alberta Innovates and AHS have created the Partnership for Research and Innovation in the Health System (PRIHS), which funds high impact, evidence-informed research that addresses gaps in care, appropriate access, resource use, and healthcare sustainability.

Alberta Innovates invests in research and innovation that drives provincial economic growth and diversity and contributes to health improvement. PRIHS funding supports health research that focuses on key health system issues identified by SCNs, Alberta Health, and Alberta Health Services. To date, the SCNs have received significant support through PRIHS grants. Many of the projects that have received PRIHS funding have focused on evaluating innovative models of care and use of clinical pathways, processes and practices that improve health outcomes, patient experiences and the quality of patient care while also reducing costs and ensuring value for Alberta's health system.

Alberta Health

The networks have partnered with Alberta Health in a variety of high priority areas such as seniors health, addiction and mental health, and opioid use disorder. For example, the Seniors Health SCN worked collaborated with Alberta Health and others to develop the Alberta Dementia Strategy and Action Plan. We've also worked together to establish the Health Innovation Implementation and Spread (HIIS) Fund, which focuses on getting evidence into practice. It's a partnership between Alberta Health and AHS that supports

Cancer care

The networks have helped expedite the diagnosis of breast and lung cancer in Alberta. These changes have improved the experience for cancer patients and enabled them to receive treatment more quickly. The Cancer SCN is working to expand these innovations to support patients suspected of having lymphoma and colorectal cancer. People with these cancers are often diagnosed at late stages after urgent admission to hospital. Earlier diagnosis will improve health outcomes, patients' and families' experiences, and may save money.

Maternal and newborn care

The Family Integrated Care program will be spreading to all Alberta neonatal intensive care units. This program, shown to reduce length-of-stay and improve families' experiences, empowers parents with the knowledge, skill and confidence to be able to take their newborns home sooner.

Digestive health

The Digestive Health network has partnered with Primary Care Networks across the province to improve access to gastrointestinal specialists and reduce wait times for patients needing specialist services, including endoscopy.

Partnership and collaboration key to understanding quality of care for First Nations people

The Emergency SCN is currently working on a research project with First Nations partners that has received more than $550,000 in federal research funding from the Canadian Institutes for Health Research (CIHR). This made-in-Alberta project addresses quality of care and is co-led with the Alberta First Nations Information Governance Centre (AFNIGC). First Nation partners include the Organization of Treaty 8 First Nations of Alberta, Yellowhead Tribal Council, Siksika Health Services, Stoney Nakoda Tsuut'ina Tribal Council and Maskwacis Health Services. Other partners include Alberta Health, the University of Alberta, the University of Calgary, AHS Indigenous Health, and the Population, Public and Indigenous Health SCN.

Over the next three years, this project will explore differences in the experience and care of First Nations people in emergency departments (EDs) in Alberta. The goal is to better understand these differences, define quality of care from First Nations' perspectives, and ultimately improve quality of care and the patient experience of First Nations people in EDs.

The Issue

In Alberta, First Nations members visit EDs at almost double the rate of non-First Nations persons.[1] However, research shows that many First Nations members' decisions about when or even whether to seek emergency care are impacted by concerns about stereotyping and experiences of marginalization.[2,3] There are also differences in ED measures requiring further exploration, including higher rates of First Nations patients leaving the ED without being seen by a physician[4,5] and high rates of return to EDs for First Nations youth following a mental health presentation.[6]

The Canadian Journal of Emergency Medicine recently published a call to provide "culturally competent" care for Indigenous patients in EDs.[7] However, there is limited information about what constitutes 'culturally competent' care in EDs.

How we're tackling it

Working collaboratively with First Nations partners, the project will document differences in First Nations ED patient data and work to understand these differences through First Nations narratives of their ED experiences and discussions with emergency clinicians.

What sets this work apart?

The study is the first large, mixed-methods study addressing emergency care for First Nations patients in Canada. It's unique because it brings together First Nations, academic and health services partners to address gaps in care in a way that none of these groups would be able to do alone. The research would not be ethical or informed without First Nations partners, and would not be feasible or impactful without health system involvement. Academic partners are providing oversight to ensure rigour in research methods, and Elder Advisors are working with researchers to ensure representation of First Nations perspectives.

provincial implementation of innovations that have been shown to improve patient care, health outcomes and operational performance. These funds are vital to bridge the gap between a successful pilot project (e.g., supported by PRIHS) and full-scale implementation.

Because HIIS focuses on proven innovations, research teams must have solid evidence of improved health outcomes and a proven return on investment (e.g., savings, cost avoidance). Projects are rigorously reviewed by a panel of health leaders, entrepreneurs and patient representatives. And teams that receive HIIS funding are required to show an improvement in operational performance within 12 to 24 months once implemented at full-scale.

These are all projects that have been successfully piloted on a smaller scale and have demonstrated significant contributions in improving patient care and health outcomes. Great ideas like these deserve to grow and spread throughout the province to benefit as many Albertans as possible – and that's where the HIIS fund comes in.

***Dr. Kathryn Todd**, AHS Vice President, System Innovations and Programs*

Thanks to HIIS funding, several research-tested innovations will soon be spreading across Alberta. These innovations are expected to improve patient and family experiences by reducing wait times and expanding supports to enable earlier discharge from hospital.

The Canadian Institutes for Health Research (CIHR)

Canada's federal agency for health research supports research that addresses pressing health issues in areas that align with its strategic priorities. One of these priority areas is improving Indigenous health.

Industry Partners and Health Foundations

Industry partners and health foundations are important partners in advancing health and care in our province. Both make significant contributions to healthcare and delivery by funding vital needs, programs, research and education. They also bring a wealth of experience, knowledge and tools that support health innovation and health system improvement. To date, these partnerships have helped advance clinical research in many areas of health, such as stroke care and pediatric, neonatal and obstetrical research.

Funding to support treatment-resistant depression

More than 50,000 Albertans live with treatment-resistant depression. It's a condition that's associated with lost productivity at work, poor health outcomes, and a high risk of suicide. Repetitive transcranial magnetic stimulation (rTMS) is used to treat depression that is otherwise unresponsive to medications and psychotherapy.

The Addictions and Mental Health SCN has been leading efforts to bring rTMS to Alberta and has partnered with several community organizations and health foundations. The Mental Health Foundation and Calgary Health Trust have provided $690,000 to purchase rTMS machines for the first four clinics (two in Edmonton, two in Calgary). This investment leverages our efforts to better understand the needs of people with treatment-resistant depression, work that is supported by the University Hospital Foundation's Johnson & Johnson Alberta Health Innovation Partnership. The Alberta Children's Hospital Foundation is also currently fundraising to support the application of rTMS in youth with depression.

Improving pre- and post-natal care

In 2016, the Maternal, Newborn, Child and Youth SCN received a $1 million grant from pharmaceutical giant Merck Canada Inc. as part of its Merck for Mothers program. The network partnered with Alberta Innovates, the Population, Public and Indigenous Health SCN, and the AHS Aboriginal Health Program to improve pre- and post-natal care in Edmonton, Maskwacis and Little Red River Cree Nation. The goal was to improve access to prenatal care and support in the weeks before and after birth. By providing mothers in Indigenous communities high quality care closer to home, the work is helping improve maternal and child health.

Community partners

Another way in which the SCNs are advancing health research and innovation across the province is by building partnerships and supporting community-led health initiatives. The SCNs are committed to strengthening these relationships, building on the work done to date, and developing strategies to improve public and population health.

Online resources to support health and well-being

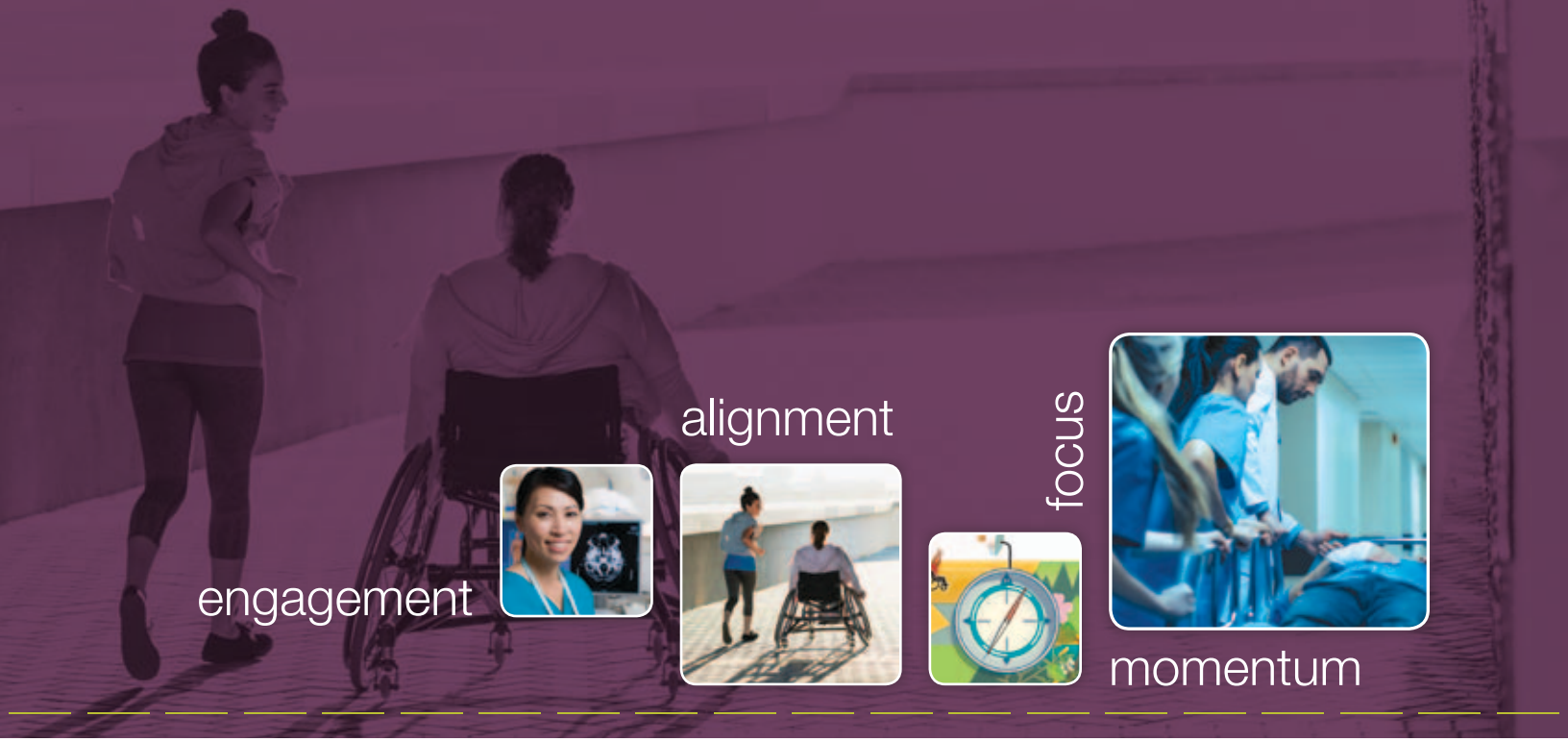
The Population, Public and Indigenous Health SCN has partnered with the Alberta Cancer Prevention Legacy Fund, Alberta Healthy Living Program, other SCNs and other health partners and stakeholders across the province to develop Healthier Together, an online resource that includes the Alberta Community Health Dashboard. The resource is linked to MyHealth.Alberta.ca and provides locally relevant data and up-to-date information to help communities understand local health needs and use this data to set priorities, make decisions and plan community services that support healthy living and help prevent chronic disease and disability.

Supporting policy change and implementation

Alberta's SCNs are also supporting change within the health system by advocating and supporting provincial policy changes, where appropriate, on issues that matter. This work is typically done in partnership with Alberta Health and AHS. Although much of this work happens behind the scenes, it provides real value to the people of Alberta. An important example is the networks' involvement in helping implement policy recommendations in the Truth and Reconciliation Committee report relating to health and healthcare delivery. The scope of this work is broad and involves many stakeholders; however, the networks have been an active participant in the work done to date and will continue to support these efforts going forward.

Truth and reconciliation

In keeping with the Calls to Action of the Truth and Reconciliation Commission and the United Nations Declaration of the Rights of Indigenous Peoples, all networks are committed to working with First Nation, Métis and Inuit communities as sovereign nations to improve access, patient experiences, and delivery of health services and address health equity. The Emergency SCN and the Population, Public and Indigenous Health SCN are currently working with AHS partners, the Indigenous Health Program, and Alberta Cancer Control to develop signage that acknowledges the homelands of First Nations, Métis and Inuit people. The signage will be displayed in waiting rooms, hospital entrances, and cancer centres to improve the experience and feeling of belonging for Indigenous people in AHS facilities.



6 year recap – looking back, and ahead

As we look back on the past six years, we're incredibly proud of what we've accomplished together. The SCNs have become an important resource for Alberta's health system and helped mobilize teams of knowledgeable and committed people to take on challenges, enable change and advance health and care in every part of our province. Our track record shows the potential these partnerships have and the impact we can achieve through integrated, evidence-based approaches.

Our journey has not been without challenges, but we've succeeded because we've persevered and navigated these obstacles together. We've learned a lot—about communication, working together and managing change within our health system.

As the SCNs have matured and gained experience, we've come to understand:

- the importance of early and ongoing **engagement** across the system
- the value of **partnerships** and importance of **leadership** and strong relationships with patients, families, frontline staff, clinicians, operational leaders, and academic and community partners
- the need for clear priority-setting and **focus**

- the benefits and challenges of working together, and the need to **communicate** efficiently and effectively, and listen to all stakeholders
- the need to **balance** provincial goals and priorities with local needs
- that rigorous **evaluation** and reporting is critical to our work, and we need to commit to use data to drive changes in practice
- the need for **agile** environments that allow teams to mobilize the resources they need to innovate, fail fast, adapt and move on, or spread and scale successful initiatives provincially
- the importance of **joint planning** with operational leaders, managers and staff on how to implement projects and health system improvements, and the need to align our efforts and resources
- what works (and doesn't) when it comes to **spreading and scaling** successful innovations and **sustaining** them over time, and how we can best enable and support these goals

As we look ahead, we know there is much work to do to address the challenges we face. But we firmly believe in the people, structure and processes we've created to support these goals. We're inspired by the opportunities before us and by the commitment and support we've seen to date. We know we can provide even greater value moving forward by continuing to honour this model of collaboration and connection, by building on the work we've done, and by taking on new challenges.

Together, we've developed an action plan to guide the work each network is doing to improve health and advance care in our province. The *SCN Roadmap, 2019-2024* clarifies and communicates the networks' mission and role within Alberta's health system, and identifies seven areas of focus that will enable even greater change and improvement. We invite you to be part of that work and build on the momentum we've created together.

What's next ...

This Roadmap builds on where we've come from and provides strategic direction to guide the SCNs over the next five years.

To learn more, visit www.ahs.ca/scn

Together, we will continue to focus on supporting the Quadruple Aim of improving:

- ☑ patient and family experiences
- ☑ patient and population health outcomes
- ☑ value and health system sustainability
- ☑ the experience and safety of our people

Your voice and insight

The networks bring together many voices to co-design solutions, share knowledge, champion and lead change across our health system. These voices embody the true spirit of a network is and what we can achieve when we work as one team. It seems fitting that this look back on the past six years include your thoughts and perspectives.

innovative

We are working to make a more efficient system that produces better outcomes for our patients and we know we can't achieve that by keeping things as they are. SCNs are how we will make change happen.

– ***Cy Frank****, Co-founder of Alberta's SCNs*

We've made a lot of strides over the years to truly become one health system. One specific thing I can point to is the development of the Strategic Clinical Networks. They make it so much easier to share best practices across the province, and ensure we're all on the same page when it comes to providing quality care.

– ***Gillian Brown****, Manager, ICU/CCU/Respiratory, Red Deer Regional Hospital, Alberta Health Services, Central Zone*

collaborative

SCNs in Alberta – show me a better example in Canadian health systems where ideas beget planning, that develops into actions, from which come attributable, provincially scaled outcomes and value.

– ***Tom Noseworthy****, Co-founder of Alberta's SCNs and BC Academic Health Science Network Chief Executive Officer*

The real strength of the SCNs is that they bring people together… instead of them working in silos as they tend to. The SCNs recognize who should be connected, and are able to provide that function to really move projects along.

– ***Chandra Thomas****, Clinical Associate Professor, University of Calgary*

evidence-based

The Diabetes, Obesity and Nutrition SCN has been instrumental in identifying care gaps and then bringing multiple stakeholders together from across the province to drive positive change, based on good evidence and best practice. I am impressed by how much work has already been done and proud to be part of this organization.

– ***Julie McKeen**, Endocrinologist, SCN Committee Member and Medical Lead of the Provincial Diabetes Inpatient Management Initiative*

patient-focused

SCNs and Operations are successful together when choosing initiatives that everyone agrees are important and having the right people involved, and ensuring that the Department Heads are involved and/or represented.

– ***Sid Viner**, Zone Medical Director, Alberta Health Services, Calgary Zone*

I am encouraged by the SCN leaders and their focus on improving experiences for both our patients and providers. I look forward to participating and having my team participate in the initiatives that will move us forward into the future.

– ***Stacy Greening**, Senior Operating Officer, QEII Regional Hospital & Area 9 Clinical Operations, Zone Wide Addiction and Mental Health, North Zone*

connected

The Strategic Clinical Networks represent a critical mechanism for the diffusion of innovation into the health system. The SCN approach is unique in Canada and features an increasingly valued mechanism to accelerate innovation, adoption, scale and spread to achieve health impact.

– ***Tim Murphy**, Vice President, Health Innovations, Alberta Innovates*

Appendix A:

References, details and assumptions used in the project profiles

Information presented in the project profiles is based on the best available data at the time of publication. These projects have been operationalized and are ongoing. As such, the analysis presented here represents a snapshot of savings and outcomes within a defined time interval. For clarity and transparency, we have clarified this interval and included key references and assumptions used in analyzing savings and outcomes.

PROVINCIAL BREAST HEALTH INITIATIVE

Contact: Ms. Barbara O'Neill, Senior Provincial Director, Cancer SCN

1 Based on electronic patient experience survey administered by email through RedCap to patients that received major breast cancer surgery in Edmonton or Calgary. Patients surveyed one week after their surgery.

2 Based on 821 actual bed days released for 2018/19 through delivery of same-day mastectomies across the province.

3 Estimates of cost savings are based on the average incremental cost per surgery bed day ($977) in Calgary and Edmonton (2018-19), excluding cost of surgery and recovery room. Savings are based on 2018-2019 data (821 bed days released) compared to 2011-12.

4 Alberta Health Services (AHS) Breast Cancer Datamart. (2017). Clinical Data Integration Project.

STROKE CARE ALBERTA

Contact: Ms. Shelley Valaire, Senior Provincial Director, Cardiovascular Health and Stroke SCN

1 Kamal et al. (2019). Improved patient outcomes through the pan-Alberta door-to-needle improvement initiative. Canadian Stroke Congress Abstract, 2019.

2 Bed days, long-term care and length-of-stay data is over the course of the Stroke Action Plan project. Bed day savings were calculated for the duration of the project (approximately 18 months; however, during that time there was a phased start-up with sites). Estimated cost savings are based on total savings of 3,377 bed days and the average incremental cost per surgery bed day ($977) in Calgary and Edmonton (2018-19), excluding cost of surgery and recovery room.

3 *Stroke Action Plan Final Evaluation Report*, Cardiovascular Health and Stroke SCN, April 2017.

ENHANCED RECOVERY AFTER SURGERY (ERAS)

Contacts: Dr. Johnathan White, Senior Medical Director, Surgery SCN; Ms. Alison Nelson, Provincial Manager, ERAS Alberta

1 Includes AHS and Covenant Health sites across the province, two surgical areas. Savings are reported for the first 6 to 22 months.

2 Bisch, S.P., Wells, T., Gramlich, L., Faris, P., Wang, X., Tran, D.T., Thanh, NX, Glaze, S., Chu, P., Ghatage, P, Nation, J, Capstick, V., Steed, H, Sabourin, J. and Nelson, G. (2018). Enhanced Recovery After Surgery (ERAS) in gynecologic oncology: System-wide implementation and audit leads to improved value and patient outcomes. *Gynecologic Oncology*, 151(1): 117-123.

3 Nelson, G., Kiyang, L., Crumley, E. T., Chuck, A., Nguyen, T., Faris, P, Wasylak, T, Basualdo-Hammond, C., McKay, S., Ljunggvist, O., and Gramlich, L. (2016). Implementation of Enhanced Recovery After Surgery (ERAS®) across a provincial healthcare system: The ERAS Alberta colorectal surgery experience. *World Journal of Surgery*, 40(5): 1092-1103. https://doi.org/10.1007/s00268-016-3472-7.

Thanh, N., Chuck, A., Wasylak, T., Lawrence, J., Faris, P., Ljungqvist, O., Nelson, G, and Gramlich, L. (2016). An economic evaluation of the Enhanced Recovery After Surgery (ERAS®) multisite implementation program for colorectal surgery in Alberta. Canadian Journal of Surgery, 59(6): 415-421. https://doi.org/10.1503%2Fcjs.006716.

4 Estimate is conservative and based exclusively on colorectal surgeries between 2013 and 2015.

5 Estimate is based on colorectal and gynecological surgery patients.

Nelson, G., Kiyang, L., Crumley, E. T., Chuck, A., Nguyen, T., Faris, P, Wasylak, T, Basualdo-Hammond, C., McKay, S., Ljunggvist, O., and Gramlich, L. (2016). Implementation of Enhanced Recovery After Surgery (ERAS®) across a provincial healthcare system: The ERAS Alberta colorectal surgery experience. *World Journal of Surgery*, 40(5): 1092-1103. https://doi.org/10.1007/s00268-016-3472-7.

6 Nelson, G., Kiyang, L., Crumley, E. T., Chuck, A., Nguyen, T., Faris, P, Wasylak, T, Basualdo-Hammond, C., McKay, S., Ljunggvist, O., and Gramlich, L. (2016). Implementation of Enhanced Recovery After Surgery (ERAS®) across a provincial healthcare system: The ERAS Alberta colorectal surgery experience. *World Journal of Surgery*, 40(5): 1092-1103. https://doi.org/10.1007/s00268-016-3472-7.

Thanh, N., Chuck, A., Wasylak, T., Lawrence, J., Faris, P., Ljungqvist, O., Nelson, G, and Gramlich, L. (2016). An economic evaluation of the Enhanced Recovery After Surgery (ERAS®) multisite implementation program for colorectal surgery in Alberta. *Canadian Journal of Surgery*, 59(6): 415-421. https://doi.org/10.1503%2Fcjs.006716.

7 Complications prior to discharge decreased from 53.3% to 36.2% post-ERAS.

Bisch, S.P., Wells, T., Gramlich, L., Faris, P., Wang, X., Tran, D.T., Thanh, NX, Glaze, S., Chu, P., Ghatage, P, Nation, J, Capstick, V., Steed, H, Sabourin, J. and Nelson, G. (2018). Enhanced Recovery After Surgery (ERAS) in gynecologic oncology: System-wide implementation and audit leads to improved value and patient outcomes. *Gynecologic Oncology*, 151(1): 117-123.

DIABETES FOOT CARE PATHWAY

Contact: Ms. Petra O'Connell, Senior Provincial Director, Diabetes, Obesity and Nutrition SCN

1 Based on data for 2017-2018 fiscal year. Number reflects the number of procedures. This data reflects 816 unique patients.

2 Assessment compares 2013 (pre-pathway, pre-limb-preserving service model) to 2017 (post-implementation of these approaches). Reductions range from 45% to 56% across zones.

3 Estimates of cost savings are based on $1458.70 per inpatient amputation bed day and estimated number of inpatient days for lower limb amputations avoided in 2017. Actual savings exceed these estimates given that toe and lower foot amputations allow avoidance of operating theatres, general anesthetic, and lengthy rehabilitation when compared to above- and below-knee amputations. The Canadian Association of Wound Care, for example, estimates that "the direct system cost of a diabetic foot amputation is $70,000 per patient." [see note 4]

4 As cited in "Diabetes and Foot Care: The Problem and Solutions. (2016). *Wound Care Canada* 14(1): 16. Spring 2016.

PROVINCIAL ICU DELIRIUM INITIATIVE

Contact: Ms. Nancy Fraser, Senior Provincial Director, Critical Care SCN

1 Assessment as of Q3 2018-2019 fiscal year (September-December 2018).

2 Ely, E.W., Shintani, A., Truman, B., Speroff, T., Gordon, S.M., Harrell, F.E. Jr., Inouye, S.K., Bernard, G.R., and Dittus, R.S. (2004). Delirium as a predictor of mortality in mechanically ventilated patients in the intensive care unit. JAMA 291: 1753-1762.

Frontline care providers experienced one of the most significant impacts from this initiative: the emergence of a collaborative practice culture in Alberta ICUs. Province-wide, frontline staff are engaged in reviewing of their own unit's data, performance and patient outcomes.

3 As a result of this initiative, Alberta now has a standardized provincial approach to detection, prevention and management of delirium that is founded in best practice and includes standardized adult and pediatric screening tools; standardized metrics for mobility and readiness for mobility, and adoption of a provincial tool to assess agitation and sedation in critically ill pediatric patients.

4 With the adoption of provincial standards, Alberta has seen more consistent screening for adult and pediatric ICU patients. Approximately half of all critically ill pediatric ICU patients are being assessed for delirium symptoms at every shift (every 12 hours), and agitation and sedation are being assessed every 4 hours (80% compliance). We've also seen compliance of 70% for daily readiness for mobility assessments.

BUP-NAL (SUBOXONE®) INITIATION IN EMERGENCY DEPARTMENTS

Contact: Mr. Scott Fielding, Senior Provincial Director, Emergency SCN

1 Alberta Health. (2019). *Opioids and substances of misuse:* Alberta report, 2018 Q4, March 2019.

2 Includes all large EDs and urgent care centers in Calgary and Edmonton zones, plus Lethbridge and Red Deer.

3 Based on data from 160 referrals received at participating community clinics from May 2018 to February 2019.

4 Based on data from 133 patients discharged after receiving bup-nal at participating ED sites from May 2018 to February 2019.

5 D'Onofrio G., O'Connor, P.G., Pantalon, M.V., Chawarski, M.C., Busch, S.H., Owens, P.H., Bernstein, S.L., and Fiellin, D.A. (2015). Emergency department-initiated buprenorphine/naloxone treatment for opioid dependence: a randomized clinical trial. *JAMA* 2015 04/28; 313(16): 1636-1644.

6 D'Onofrio G., Chawarski, M.C., O'Connor, P.G., Pantalon, M.V., Busch, S.H., Owens, P.H., Hawk K., Bernstein, S.L., and Fiellin, D.A. (2017). Emergency department-initiated buprenorphine for opioid dependence with continuation in primary care: Outcomes during and after intervention. *J Gen Intern Med.* 32(6): 660-6.

Direct referral to a clinic from ED with the intervention of starting the medication in ED resulted in far better patient outcomes than directly referring patients from ED to a clinic without the medication initiation.

7 Bruneau, J., K. Ahamad, M-È Goyer, G. Poulin, P. Selby, B Fischer, T.C. Wild and E. Wood. (2018). On behalf of the CIHR Canadian Research Initiative in Substance Misuse. *CMAJ.* 2018 190(9): E247-E257.

SAFE SURGERY CHECKLIST

Contacts: Ms. Jill Robert, Senior Provincial Director, Surgery SCN; Ms. Stacey Litvinchuk, Executive Director, Surgery SCN

1 Includes AHS and Covenant Health sites across the province.

2 CPSI (Canadian Patient Safety Institute). (2014). Sandra Zelinsky's patient engagement study helps to facilitate patient safety for surgery. Retrieved from: https://www.patientsafetyinstitute.ca/en/NewsAlerts/News/pages/sandra-zelinskys-patient-engagement-study-helps-to-facilitate-patient-safety-for-surgery.aspx. November 4, 2014.

EVALUATING FETAL FIBRONECTIN TESTING FOR PRETERM LABOUR

Contacts: Dr. David Johnson, Senior Medical Director, Maternal, Newborn, Child and Youth SCN; Dr. Doug Wilson, Professor and Department Head, Department of Obstetrics & Gynecology, Foothills Medical Centre, Calgary

1 Based on 2018 data from Statistics Canada. Retrieved from: https://www.statista.com/statistics/443299/births-in-canada-by-province/. April 2019.

2 As reported by Dr. Karen Benzies of the University of Calgary and Family and Integrated Care (FICare) Program. Retrieved

from: https://www.ucalgary.ca/ficare/ and http://www.cihr-irsc.gc.ca/e/49819.html. Rate of preterm births is based 2016-2017 data and babies delivered before 37 weeks gestation.

3 Based on savings in point-of-care fetal fibronectin testing across Alberta.

4 Chuck, A.W., Thanh, N.X., Chari, R.S., Wilson, R.D., Janes-Kelley, S. and Wesenberg, J.C. (2016). Post-policy implementation review of rapid fetal fibronectin (fFN) testing for preterm labour in Alberta. *Journal of Obstetrics and Gynecology Canada*, Volume 38(7): 659-666, e.6.

5 Berghella, V. and G. Saccone. (2016). Fetal fibronectin testing for prevention of preterm birth in singleton pregnancies with threatened pretermlabor: a systematic review and metaanalysis of randomized controlled trials. *American Journal of Obstetrics and Gynecology*, Oct: 215(4): 431-438.

6 Based on quality indicators that included (i) the proportion of women who delivered a premature infant less than 35 weeks gestation in a rural hospital within seven days of presenting to the same hospital with premature labour; and (ii) the proportion of pregnant women presenting with preterm labour before 35 weeks gestation who were not referred to a regional or urban hospital.

CATCH-A-BREAK

Contact: Ms. Jill Robert, Senior Provincial Director, Bone and Joint SCN

1 Estimated costs includes hospital costs, emergency medical services, rehabilitation and long-term care costs. Economic evaluation based on:

Majumdar, S.R., Lier, D.A., Hanley, D.A., Juby, A.G., and Beaupre, L.A. for the STOP-Fracture PRIHS Team. Economic evaluation of a population-based osteoporosis intervention for outpatients with nontraumatic fractures: the "Catch a Break"1i (type C) FLS *Osteoporosi* Int (2017) 28: 1965-1977.

2 Other data is based on that provided by Osteoporosis Canada (https://osteoporosis.ca) and the following publications and reports:

Majumdar, S.R., Lier, D.A., Hanley, D.A., Juby, A.G., and Beaupre, L.A. for the STOP-Fracture PRIHS Team. Economic evaluation of a population-based osteoporosis intervention for outpatients with nontraumatic fractures: the "Catch a Break"1i (type C) FLS *Osteoporosi* Int (2017) 28: 1965-1977.

Harasym, P., Hanson, H.M., Beaupre, L.A., Juby, A.G., and Majumdar, S.R. for the STOP- Fracture PRIHS Team. Health risk assessment survey participant accounts: Identifying organizational and institutional barriers to participation and adoption of secondary fracture prevention information (analyses completed; manuscript in development).

Harasym, P., Hanson, H.M., Beaupre, L.A., Juby, A.G., and Majumdar, S.R. for the STOP-Fracture PRIHS Team. The social construction of health risk identification: example of osteoporosis and fractures assessed via survey administration (analyses completed; manuscript in development).

Beaupre, L.A., Hanley, D.A., Juby, A.G., and Majumdar, S.R. for the STOP-Fracture PRIHS Team. Time series analysis of 'Catch a Break' (CAB) provincial program for secondary fracture prevention (analyses completed; manuscript in development).

GLA:D PROGRAM

Contact: Ms. Jill Robert, Senior Provincial Director, Bone and Joint SCN

1 Based on national data for 2017 reported by GLA:D Canada in the 2017 GLA:D™ *Canada: Implementation and Outcomes* report. Retrieved from: https://gladcanada.ca/wp-content/uploads/2018/06/2017-GLAD-Canada-Report-FInal.pdf.

2 Skou, Søren T., Ewa M. Roos, Mogens B. Laursen, Michael S. Rathleff, Lars Arendt-Nielsen, Ole Simonsen, and Sten Rasmussen. (2015). A randomized, controlled trial of total knee replacement. *The New England Journal of Medicine* 373(17): 1597-1606.

3 A University of Alberta pilot project is underway for the GLA:D® Back program, which is similar to the GLA:D® Hip and Knee program. Education, supported exercise in a group, and customization of the program to meet each participant's needs are key elements of the program, which is aims to help people with persistent low back pain.

QUALITY OF CARE FOR FIRST NATIONS PEOPLE IN EMERGENCY DEPARTMENTS

Contact: Dr. Patrick McLane, Assistant Scientific Director, Emergency SCN

1 Alberta Health and the Alberta First Nations Information Governance Centre (AFNIGC). (2016). Top reasons for Emergency Department visits for First Nations in Alberta 2010-2014. Available at: http://www.afnigc.ca/main/includes/media/pdf/fnhta/HTAFN-2016-07-26-ED-VISITS.pdf.

2 Cameron, B.L., Plazas, M., Salas, A.S., Bearskin, R., and Hungler, K. (2014). Understanding inequalities in access to health care services for Aboriginal people: A call for nursing action. *Adv Nurs Sci.*, 37(3): E1-E16.

3 Browne, A.J., Smye, V.L., Rodney, P., Tang, S.Y., Mussell, B., and O'Neil, J. (2011). Access to primary care from the perspective of Aboriginal patients at an urban emergency department. *Qual Health Res*, 21(3): 333-348.

4 Ospina, M.B., Rowe, B.H., Voaklander, D., Senthilselvan, A., Stickland, M.K., and King, M. (2016). Emergency department visits after diagnosed chronic obstructive pulmonary disease in Aboriginal people in Alberta, Canada. *CJEM: Can J Emerg Med.* 18(6): 420-428.

5 Batta, R., Cary, R., Sasbrink-Harkema, M.A., and Oyedokun, T.O. (2019). Equality of care between First Nations and non-First Nations patients in Saskatoon emergency departments. *CJEM: Can J Emerg Med*, 21(1):111-119.

6 Dell, E.M., Firestone, M., Smylie, J., and Vaillancourt, S. (2016). Cultural safety and providing care to Aboriginal patients in the emergency department. *CJEM: Can J Emerg Med*, 18(4): 301-305.

7 Newton, A.S., Rosychuk, R.J., Dong, K., Curran, J., Slomp, M., and McGrath, P.J. (2012). Emergency health care use and follow-up among sociodemographic groups of children who visit emergency departments for mental health crises. *Can Med Assoc J*, 184(12): E665-E674.

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