# AHS Strategy for Clinical Health Research, Innovation and Analytics 2015-2020







DELIVERING BETTER CARE TO ALBERTANS, TODAY AND TOMORROW



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#### **Dedication**

This AHS Strategy for Clinical Health Research, Innovation & Analytics is dedicated to Dr. Cy Frank, who was instrumental in setting the foundation for this work. Dr. Frank was with the Research Innovation and Analytics Portfolio from 2012 to 2013 and led the creation of the Strategic Clinical Networks as engines for research, innovation and vehicles for translating evidence into practice. Our strategy embodies his dedication and commitment to research in the public health care system.



## MESSAGE FROM THE PRESIDENT AND CEO AND VP RESEARCH, INNOVATION AND ANALYTICS

Alberta's front-line health professionals rely on research and innovation to deliver better quality, better outcomes, and better value to patients. Alberta Health Services plays a crucial role in fostering those improvements by enabling researchers and innovators to develop and apply solutions to today's health care challenges.

AHS is committed to a health care system that takes into account the voices of those we serve, applying values-based decision-making, and leveraging research, information and innovation to achieve excellence. In broad terms, research can be seen as a process by which data is collected and transformed into information, which is further refined into knowledge. And knowledge is the foundation on which quality health care depends.

AHS and its partners have accomplished much since 2012 to achieve the goals set out in the Government's Alberta Health Research and Innovation Strategy. We are particularly proud of our launch of 10 Strategic Clinical Networks (SCNs), each with an embedded research network that brings together Alberta's clinicians and university academics to develop research programs informed by clinical priorities. These research networks will improve the quality of life of Albertans by developing new and better ways to address health issues and through focused investments in an integrated, world-class health research and innovation system.

AHS' Strategy for Clinical Health Research, Innovation and Analytics, 2015-2020 follows the priorities established in the AHS Health Plan and Business Plan, and will help us fulfil our commitment to Albertans to build and maintain the best possible health care system. It is an exciting time for health research in Alberta, and we look forward to the progress we will make, and the outcomes we will achieve, through this strategy.

Vickie Kaminski President and CEO

Kathryn Todd Vice President, Research, Innovation and Analytics

#### INTRODUCTION: FUNDAMENTALS TO ADVANCING CARE

Our people make what we do possible. Through the skilled and dedicated health professionals, support staff, volunteers and physicians, Alberta Health Services (AHS) promotes wellness, prevents disease and injury, and reduces suffering every day to almost four million Albertans. Our people do this in a rapidly changing and always demanding environment – one where research, innovation and analytics generate the basis for new and improved services and treatments of tomorrow.

Together, these three capabilities form the foundation of AHS as a learning organization—an organization skilled at helping our people to create, acquire and transfer knowledge that raises the standard of care delivered to all Albertans.

Albertans who participate in clinical research receive state of the art care and play a key role in improving the care of future Albertans. Patients report that their involvement in clinical research "puts meaning into my pain," "gives me more good moments," and "gives me tangible hope." Evidence indicates that health centres with active programs of clinical trials have better patient outcomes, even for those patients who did not participate in the research. The reason is that the research allows our physicians, nurses and other health care professionals to acquire the expertise, resources and skills they need to deliver the best care.

Through past investments in health research, Alberta's researchers and clinicians have made significant discoveries that have improved the health of Albertans, and of people around the world. Our world-renowned scientists, combined with a strong provincial health care delivery system, are positioned to continue making outstanding discoveries and applying them here in Alberta.

Health research is the systematic study of ideas to generate the knowledge needed to improve the care we deliver. Research is used to solve new or existing problems, support theorem or develop new theories, establish or create facts, and reaffirm results.

**Innovation** means the realization of a new or improved product, service, method or approach. An innovation can involve a device, a drug, a technique, a method, a system or a service.

**Analytics** involves transforming data into useful information to guide decision-making and improve performance.

As Alberta's largest provider of care, AHS partners with Alberta's universities, funders and others to enable frontline teams to test ideas and adopt them. By integrating research and innovation into the delivery of care, AHS can nurture health research breakthroughs, innovations and new knowledge to the point where they generate tangible, real world clinical value. In this context, AHS has four essential roles within the broader health system:

- Enabling health research and innovation, often led by academic researchers and sponsored through external funders.
- Incenting researchers and innovators to work with our patients, staff, physicians and volunteers to solve specific
  challenges affecting (a) the health and well-being of Albertans and (b) the ability of Alberta's health system to
  meet those challenges.
- Using the best available evidence and information across our care settings to improve patient outcomes and system performance.
- Helping Albertans create social and economic benefits from health research and innovation.

#### **OUR PRIORITIES**

The AHS Strategy for Research, Innovation and Analytics, 2015-2020 sets out five strategic priorities to better support our health care professionals and our partners in solving health care issues of importance to Albertans and to become measurably better in the care we deliver. Our strategy is informed by the Alberta Health Services Health Plan and Business Plan 2014-2017, which identifies three strategic directions for the upcoming years:

- 1. Ensuring quality of care in our communities,
- 2. Partnering for better health outcomes, and
- 3. Achieving health system sustainability.

As well, our strategy defines how AHS will continue to work with our partners to sustain Alberta's leadership in health research by achieving the outcomes of the Alberta Health Research and Innovation Strategy (AHRIS), which defines two strategic priorities:

- 1. Wellness at every age
- 2. Innovative health service delivery

A number of themes emerged regarding research and innovation in AHS when consulting with clinicians, patient advisors and patient engagement researchers, AHS staff and senior leaders, university administrators and researchers from across many faculties, and others:

- The time to adopt new discoveries into care is lengthy, often taking more than a decade. It can take as long to remove obsolete technologies and practices.
- Patients and families need better support during transitions in care and we want to find more ways to encourage their active participation in all aspects of care; including as partners in planning, implementation and evaluation of existing and future care and services.



Karen Hamilton, at home with daughters Emma and Lily, after receiving new lungs that were repaired before transplant using the Ex-Vivo lung perfusion device.

- Alberta's population is aging and there is a growing need to manage patients with multiple chronic diseases, using multiple medications.
- There is recognized need for a constructive balance between security and information sharing to safely and
  effectively support the improvement of health care delivery.
- The health information AHS collects is difficult to acquire so as to inform decision-making and research. There is
  a need to integrate our corporate and clinical data, information and knowledge (e.g., order sets, care pathways,
  clinical documentation) through effective tools and repositories so that they can be accessed anywhere in
  Alberta.

#### **Clinical Trials Offer Hope**

When Frank De Bortoli was diagnosed with inoperable pancreatic cancer, he wasn't expected to live much longer than six months. That was in 2010.

Today, the 57-year-old enjoys spending some of his free time refinishing two cedar trunks that his parents brought with them to Canada from Italy. He intends to give one to each of his two adult children.

De Bortoli credits his survival, in large part, to his involvement in a clinical trial at the Tom Baker Cancer Centre in Calgary that tested two pharmaceutical agents given in a novel combination: a new drug, nab-Paclitaxel (Abraxane), plus a drug that's been the standard treatment for 15 years, Gemcitabine.

Researchers found that administering the two drugs together resulted in an average increased survival of 8.5 months, with many patients surviving much longer.

De Bortoli is one of more than 300 cancer patients at the Tom Baker who enrol in clinical trials each year.



Frank De Bortoli, left, reviews test results with Dr. Scot Dowden.

"Clinical trials are a vital endeavour for us as an institution," says Dr. Gwyn Bebb, an oncologist and director of the Clinical Trials Unit at Tom Baker. "The fact that we can give patients the opportunity to participate in studies offers hope, often where there isn't any. Always, the aim is to find more effective, less toxic, new treatments."

- Frontline care providers and those who manage the delivery of care want earlier and greater involvement with the types of research and innovations occurring in the health system, including the assessment of new and emerging health technologies.
- AHS lacks some key clinical outcome data to inform clinical decisions about patient care.
- Research is a competitive endeavour across the world. For our patients to benefit, our processes to initiate and
  administer research studies, and to access health information, need to improve and reduce the administrative
  workload on our staff, our researchers and our clinicians.
- The next generation of health care professionals and researchers continue to need opportunities for training.

Based on this and other input, we will focus on 13 actions within five strategic directions to guide our activities over the next several years:

- 1. Build strong partnerships
- 2. Incent research and innovation of highest value to Albertans
- 3. Liberate health system data
- 4. Apply and spread knowledge
- 5. Innovate to achieve service excellence

#### 1. BUILD STRONG PARTNERSHIPS

The transformation of care through research, innovation and analytics is complex and requires solid infrastructure across a number of organizations to succeed. Alberta offers significant advantages that enable research and innovation to be positive drivers for improvement, including:

- A single, province-wide health services authority (AHS), with the ability (unique in Canada) to analyze and use data from across the continuum of care.
- World class universities with internationally recognized research programs.
- 13 province-wide, Strategic Clinical Networks (SCNs) (see below).
- A single organization, Alberta Innovates Health Solutions (AIHS), to promote provincial partnerships in health care research funding.
- A comprehensive process to assess and evaluate emerging health technologies that involves the Ministry of Health, AHS, the universities and other organizations – the Alberta Health Technologies Decision Process (AHTDP).
- An Alberta Strategy for Patient Oriented Research (SPOR) to strengthen the infrastructure for health research in our province.
- A harmonized, simplified approach to research ethics review and approval.
- Province-wide access to knowledge resources within AHS that provide our physicians, clinicians and staff with the most current evidence from credible sources.

Did you know that AHS patients, staff and data are actively involved in over 2,200 health research projects across Alberta? For new cancer-related research alone, this involved 927 registered patients who received almost \$8M of advanced medications provided by the pharmaceutical industry.

In 2014, researchers in cancer and at the University of Alberta requested that AHS administer almost \$49.9M in external funding for research studies, including \$29.6M for industry-sponsored studies. This research involves clinical trials of new medications and technologies, health system research and research about the health and well-being of Albertans.

For example, over 50,000 people have enrolled in the Tomorrow Project, which will provide a basis for studying the links between cancer, lifestyle and chronic diseases.

In an environment where funding and resources are at a premium, AHS must focus on what will best support its mission, both today and in the future. In turn, as the province-wide service delivery organization, AHS offers unique capabilities and knowledge that our partner organizations need for their success. Through partnerships, we can each focus on what we do best while leveraging the expertise of others to accomplish our respective goals.

### **1.1** USE ALBERTA'S SCNS TO ENGAGE OUR PARTNERS TO IMPROVE PATIENT CARE AND THE PERFORMANCE OF THE HEALTH SYSTEM

Alberta's Strategic Clinical Networks (SCNs) are teams designed to bring together the distinct "worlds" of clinicians, researchers and innovators. They comprise frontline health care providers, physicians, managers, patients, academics and community partners who work in specific health domains with the goal of finding new and innovative ways to deliver care. Since 2012, AHS has launched 13 SCNs:

1. Addiction and Mental Health	8. Kidney
2. Bone and Joint Health	9. Maternal, Newborn, Child and Youth
3. Cancer	10. Primary Health Care
4. Cardiovascular Health and Stroke	11. Respiratory Health
5. Critical Care	12. Seniors' Health
6. Diabetes, Obesity and Nutrition	13. Surgery
7. Emergency	

In addition to a clinical and an administrative leader, each SCN also has a scientific director and assistant scientific director who oversee the SCN's research activities. Through the SCNs, AHS is able to embed university-based researchers within the health system, giving researchers a better understanding of key health challenges facing Albertans and a stronger ability to apply their knowledge to inform care. As well, by working closely with frontline clinicians and others who deliver care, the SCNs allow researchers, innovators and funders to align their efforts with the priorities of AHS and its patients.



Muskaan Grewal, who for a period was the world's youngest person with an artificial heart, is pictured here after her heart transplant at Stollery Children's Hospital. Her medical team included, from left: Dr. Ivan Rebeyka, Chief of Pediatric Cardiac Surgery; Dr. Holger Buchholz, Director, Pediatric Artificial Heart Program; and Selvi Sinnadurai, Edmonton VAD Program Co-ordinator.

#### Research in Action on the Frontline

Denise Steele, a parenteral nurse clinician and team leader at Misericordia Hospital, discovered with her staff something disturbing in the summer of 2013– an abnormal number of patients with peripherally inserted central catheters (PICCs) were developing blood clots.

The nursing staff investigated and formed a promising hypothesis: The new PICCs were made of stiffer material than older ones and they believed that the standard practice of cutting the PICC tips to reduce the length created jagged edges that ultimately caused the increase in clots.

"As soon as we stopped cutting (the PICCs)," says Steele, "we saw a decrease in the rate of blood clots."

But the problem was broader than a single Alberta health facility. "Everyone else in the Edmonton zone was still cutting (the PICCs) and we thought that was crazy," Steele says.

The solution? Get the data into wider circulation in the form of a research study. Steele was not an experienced researcher and knew she needed help.

Enter Dr. Colleen Norris, the Scientific Director for the Cardiovascular Health and Stroke Strategic Clinical Network. Steele's team already had 19 years of outcome data – unique in the Edmonton zone – and Norris worked with Steele to bring an accepted research methodology to the study.

The result: The study was published in the November/December, 2014 issue of the Journal of Infusion Nursing and the data has been handed off to Norris and her SCN for knowledge translation throughout AHS.

"We needed to get this out to people," Norris says. "That's the beauty of the SCNs...Here are the results and it's going to change practice. This is huge. This is a frontline worker identifying an issue and we say, 'we can help you.' "

The SCNs are tasked with mapping out the best care options for Albertans based on clinical evidence. These options are translated into clinical care pathways, a key tool to promote organized and effective patient care. The pathways outline the patient's journey across the care continuum – from primary care, to acute and community care and back to primary care. Once clinical care pathways have been defined, AHS and our community partners implement these care pathways to (a) reduce unwanted variability in clinical practice, (b) measure clinical outcomes, (c) streamline the transition between care teams, (d) achieve better health outcomes, and (e) improve the experience for patients. These care pathways provide an excellent framework within which to integrate new research, innovations and models of care to improve all six dimension of quality.

AHS will continue to strengthen the SCN's knowledge, skills and capabilities<sup>1</sup> and assess emerging opportunities for additional SCNs to address the unmet needs of Albertans.

<sup>&</sup>lt;sup>1</sup>See Appendix 1 for a summary of the SCN Maturity Framework, which identifies 10 capabilities of the SCNs.

### **1.2** WITH ALBERTA'S UNIVERSITIES, STRENGTHEN OUR ABILITY TO UNDERTAKE PATIENT-ORIENTED RESEARCH AND INNOVATION

Alberta is fortunate to have developed a significant infrastructure to design and undertake health research. Within our universities, health centres and research institutes, Alberta has established strong programs in basic and applied research in key areas. Our partnerships with the universities, for example, allow AHS to leverage the universities' knowledge, skills and personnel to manage challenges that are unique to academic and clinical research without duplicating efforts. Within AHS, the vast majority of health research is led by academics and clinicians affiliated with Alberta's universities, research institutes and other post-secondary institutions. Alberta universities are the "engines" of health research that provide the infrastructure to (a) attract and retain highly skilled researchers, (b) secure the funds for research, and (c) provide the space and equipment to test ideas in all major disciplines of health research: biomedical, clinical, health services, and public and population health.<sup>2</sup>

AHS is committed to helping researchers and their teams to undertake patient-oriented research and innovation. AHS will strengthen its capabilities to ensure researchers are more competitive in seeking funding and innovators can bring their ideas into the marketplace. We also need our partners' expertise to help our clinicians obtain and apply the knowledge they need to improve care (see Strategic Priorities 4 and 5).

#### Patient-Oriented Research

AHS will support the provincial implementation of the national Strategy for Patient Oriented Research (SPOR).
Jointly funded by CIHR and Alberta Innovates - Health Solutions (AIHS), the Alberta SPOR SUPPORT Units
are provincial service centres providing support and expertise to those engaged in patient-oriented research.
Developed in collaboration with AHS, the University of Alberta and the University of Calgary, the partners
identified seven province-wide platforms that will provide services and resources to those undertaking patient-oriented research:

1. Data Platforms and Service	5. Methods Support and Development
2. Health Systems Research, Implementation Research and	6. Career Development in Methods and Health Services Research
Knowledge Translation	7. Consultation and Research Services
3. Pragmatic Clinical Trials	
4. Patient Engagement	

AHS and the SCNs' Scientific Directors will identify key individuals to work with the platform leads appointed by AIHS and will define the actions required to achieve the SPOR objectives.

<sup>&</sup>lt;sup>2</sup>As defined by the Canadian Institute for Health Research (CIHR).

#### Strategic Partnership To Accelerate Research Into Care (SPARC)

As a provider of health care, AHS applies its resources to develop the knowledge, skills and capabilities our clinicians and staff need to achieve our mission: To provide a patient-focused, quality health system that is accessible and sustainable for all Albertans. Every day, our health care professionals, support staff, volunteers and physicians learn from our patients and from each other and seek to apply these learning to improve what we do.

Studies indicate that it can take over a decade for a new discovery to be fully adopted within the health care setting. We want to shorten that timeframe so that Albertans and our health care providers benefit much sooner from research and innovations. SPARC is an Alberta initiative that seeks to use the capabilities of many partners to deliver health care innovations more efficiently, quickly and effectively. The initiative brings together the resources and expertise of Alberta Health, Alberta Innovation and Advanced Education, AHS, AlHS, Alberta Innovates - Technology Futures, the Alberta TEC Health Accelerator and Alberta's universities.

AHS is committed to working with our partners to identify the specific clinical opportunities where, together, we can produce better solutions and eliminate existing inefficiencies, with evidence, to meet current and new needs.

#### **Giving Patients Meaning through Research**

All signs pointed to a nice Calgary summer in 1997 when budding chartered accountant Tricia Antonini went to play golf one day that June only to suddenly pass out on the golf course.

Within days, she was diagnosed with Acute Lymphoblastic Leukemia and enmeshed in a previously unknown world of cancer treatment, drugs, procedures, relapses and diminishing choices that, more than 17 years later, has left the now 40-year old battling to beat the odds for survival.

Her struggle has been about maintaining hope, strength and a determination to bring meaning to whatever time she has left – and she hopes for many more years. Hope and meaning have come through participating in research through clinical trials, which, she believes, no matter the impact on her body, have improved the odds for all patients who follow her.

"Patients have to have hope," she says from her home in Calgary. "But they don't have anything tangible and research really is the only form of tangible hope. Especially for their families."

She learned of a drug treatment being pioneered by a team of doctors. "There was a lot of work behind the scenes" to get her into the trial. "I had incredible doctors" who worked diligently to get her approved.

While she has yet to be cured, her participation has been profoundly meaningful to Tricia – a patient advisor for the Cancer SCN core committee. "It really strengthened my view that research is so important...so we can have generations who don't have to deal with this."

## **1.3** STRENGTHEN THE ABILITY OF ALBERTANS TO PARTICIPATE IN AND BENEFIT FROM CLINICAL RESEARCH, NO MATTER WHERE THEY LIVE, THEIR STAGE OF LIFE OR HEALTH CARE NEEDS

Where possible, all Albertans should have the opportunity to participate in research that is relevant to their health needs. In partnership with the Alberta Clinical Research Consortium, AHS will develop strategies to simplify the ability of Albertans to become involved in health research studies.

In some countries, health systems assume that patients are willing to participate in research unless they opt out. This provides the health system with more flexibility with how they approach patients when conducting research and how they use patient information to improve the care they deliver through research. This approach allows these health systems to obtain more value from the heavy investment in clinical information systems by allowing the data to be used for research. Alberta's legislation requires patients to consent to be contacted for research and to have their identifiable health information used for research. AHS will work with our patients, the Minister of Health, the universities and other partners to explore how Alberta's legislation, and its interpretation, can better enable research.



Investigating the effect of probiotics on gastroenteritis: Dr. Stephen Freedman and study participant 18-month-old Rylen, with his mom Jaime.

## **1.4** INVOLVE PATIENTS, HEALTH CARE PROVIDERS, PHYSICIANS AND OTHER DECISION MAKERS IN ALL ASPECTS OF RESEARCH AND INNOVATION – FROM INCEPTION TO OUTCOME

The adoption of new knowledge and evidence into care occurs much sooner when those using the knowledge are engaged in all phases of research and innovation: from setting priorities, allocating funding, and implementation through to the translation and adoption of the findings. The early and active involvement of clinicians, physicians, managers, patients and policy makers in research and innovation integrates them into the research team, thereby clarifying (a) what knowledge is needed, (b) the potential challenges of adoption and (c) how the research will make a difference to patient outcomes.

This approach builds and extends a culture within AHS that arranges care around the patient and their families. As outlined in the AHS Patient First Strategy, patient- and family-centred care sees patients and families as integral members of the health-care team, and encourages their active participation in all aspects of care, including as partners in planning, implementation and evaluation of existing and future care and services.<sup>3</sup> Their expressed values, needs, and preferences are then used to inform care planning and delivery.

As noted on page 7, Alberta's Strategy for Patient Oriented Research (SPOR) establishes two platforms to support the involvement of stakeholders:

- Health Systems Research, Implementation Research and Knowledge Translation, which aims to put knowledge into action.
- Patient Engagement, which aims to prepare patients to be collaborators in all phases of research.

Through the SCNs, AHS is actively involved in both platforms. First, as the SCNs develop focused provincial research programs in collaboration with academic partners, they create a mechanism for researchers and knowledge users to understand the challenges in translating the knowledge across care settings. Second, the SCNs will continue to work with the University of Calgary to train Patient Engagement Researchers each year. Patient Engagement Researchers are former or current patients who have experience with one or more chronic health conditions. They are trained in formal research methods and then join AHS' SCNs to help determine how the health care system can improve its delivery of high quality, patient-centred care and to support other researchers through SPOR.

#### Research in Action on the Frontline

After hearing about a program in Calgary to check a patient's pulse to identify potentially life-threatening issues, the Camrose Primary Care Network began performing mandatory one-minute pulse checks on all adults 18 and over at St. Mary's Hospital almost three years ago. Based on the results, they expanded the program to include all emergency rooms in the network.

Janice Throndson, a nurse at St. Mary's Heart and Stroke Clinic, says the network screened an estimated 12,500 patients in 2014, including 20 patients with atrial fibrillation and an attendant heightened risk of a stroke. "This has made a tangible difference for negligible costs," Throndson says. "When you think of what 20 strokes would cost (in treatment), the pulse check is a quick, easy fix."

A case in point is 59-year-old Alan Stuber, a commercial water treatment consultant who spends long hours in his car between clients in Alberta and Saskatchewan. He came to the hospital early in the morning in October 2013 with a congested cough, a bit of chest pain and the belief he had a bad case of the flu.

The one-minute pulse check showed his condition to be far more serious and potentially fatal if he had suffered a "silent stroke" before his condition could be diagnosed. The hospital sent his risk score to Stuber's family doctor, referred him to their stroke prevention clinic and also a St. Mary's cardiologist.

Now, Stuber says, he visits the clinic regularly, has modified his diet and even bought a blood pressure machine he uses at home. "I pay attention more now," Stuber says, "to anything out of the ordinary."

### 2. INCENT RESEARCH AND INNOVATION OF HIGHEST VALUE TO ALBERTANS

The vast majority of health research within AHS is conceived and led by independent investigators who generally define their own research questions, attract independent funding and partners, and assemble appropriate teams of researchers to address their questions over time. Successful investigators build research programs with multiple sources of support, such as grants, contracts and philanthropy.

AHS has a responsibility to inform our academic partners, industry sponsors and funders, including foundations, about the clinical and population health needs that are relevant to Albertans. By matching Alberta's research and innovation talent with demonstrated needs, funders can have greater confidence that their investments will benefit our patients and our health system. We need to ensure that research, innovation and analytical activities remain relevant and



Dr. Lois Donovan with patient Lauren Moore, who wore a glucose monitor during her pregnancy as part of a research study.

bring value – through solutions – that support improvements in health care across all six dimensions of quality: acceptability, accessibility, appropriateness, effectiveness, efficiency and safety.

### **2.1** IDENTIFY GAPS IN CARE AREAS WHERE RESEARCH AND INNOVATION WILL HAVE A SIGNIFICANT BENEFIT TO PATIENTS AND THE HEALTH SYSTEM

Each year, AHS collects a tremendous amount of clinical and activity data as it invests \$13 billion to deliver health services. This information, combined with the knowledge and experience of health care providers, physicians, managers, patients, and other stakeholders, creates an opportunity to set clinical priorities across the continuum of care.

Each of the 13 SCNs will continue to engage their respective communities to analyze health information to set clinical priorities. By working closely with those who deliver care, the SCNs will explore practice variations across Alberta, analyze measures of health system performance, and interpret the priorities of AHS programs within the context of their networks. AHS will share these priorities with researchers, funders, entrepreneurs and other partners. Through the Scientific Directors, the SCNs will translate these clinical priorities into programs of research in collaboration with our academic partners.

### **2.2** STRENGTHEN AHS' ABILITY TO COMMISSION HEALTH RESEARCH AND INNOVATIONS FROM ALBERTA UNIVERSITIES AND OTHER PARTNERS

External organizations fund the vast majority of health research in Alberta. In the majority of cases, the decisions about what health research to fund are made with little input from AHS health care providers. Some partners, such as AlHS and Alberta foundations, do consult with AHS health care providers when setting priorities for investment in research and innovation. AHS is committed to strengthening the ability of our clinicians to influence health research and innovations investment decisions by our partners.

#### Alberta Partnership For Research And Innovation In The Health System (PRIHS)

Recognizing that funding for health services research is limited, AHS has partnered with AIHS to co-fund and co-deliver the Alberta Partnership for Research and Innovation in the Health System (PRIHS). Launched in 2013, this funding program creates networks of health researchers and clinical practitioners within the SCNs that:

- Promote more effective and efficient AHS services by supporting research and innovation activities focused on (re)assessing technologies, services and processes (including primary care, specialty care, acute care and/or transitions in care);
- Enable AHS to eliminate activities that make little or no contribution to positive patient outcomes or to the health system;
- Build relevant applied health research capacity in Alberta;
- Support high-value research focused on the six dimensions of quality; and
- Encourage collaborative research and innovation activities between Alberta's academic institutions, SCNs and AHS programs to achieve a measurable and sustainable impact.

AHS and AIHS will continue to adjust the funding program to increase the involvement of personnel within AHS to identify the priorities for health system research, develop potential solutions to test, and inform the selection of grant applications.

#### **Health Technology Assessment And Adoption**

AHS supports clinicians by partnering with the Ministry of Health, the universities, and provincial, national, and international agencies to assess the short-term and long-term effects of emerging health technologies or new interventions. This involves examining the safety, health effects, technical performance, and financial costs of a particular technology or intervention compared to existing technologies, as well as other factors.

AHS is adjusting its approaches to involve care providers and program leaders much earlier in the assessment of emerging technologies. This added perspective will give AHS a greater opportunity to understand the operational impact of the new technologies on our workflow and budgets. It will also provide additional time to plan the adoption of new technologies deemed to provide better value to patients, and how to anticipate the elimination of the technologies they replace.

#### 3. LIBERATE HEALTH SYSTEM DATA

As a fully integrated health system unique in Canada, AHS collects and governs an extensive amount of clinical and corporate data and information—that data is also an asset. The large administrative databases maintained by Alberta Health and AHS are used to examine disease clusters, practice variations and health outcomes. This rich data environment helps link frontline clinical health service delivery to program and policy decisions. The provincial scope of our data, covering the entire continuum of care, gives researchers a stronger ability to answer questions of relevance to Albertans and to compete for national and international grants.

The potential of health care professionals, managers, patients and researchers to access and use the health information to generate evidence and guide decisions remains to be fully realized. AHS will work with Alberta Health to enable efficient access to high quality data by consolidating disparate data repositories. Instead of developing their own data repositories, organizations and researchers can use the consolidated data for research, policy creation, decision-making, and providing health care services.

As the custodian of health information, AHS must protect our patients' records and other sensitive data. But to advance the goal of improved health care, we need to balance security with information sharing. Through the AHS Information Management and Information Technology (IMIT) Strategic Plan, we are developing a broader strategy to make the right data available to the right people at the right time so that AHS teams can rely on the data and use it in meaningful ways to improve the delivery of health care for Albertans.

### **3.1** PROVIDE EASY, TIMELY, SECURE AND APPROPRIATE ACCESS TO HEALTH INFORMATION TO ENABLE RESEARCH AND INNOVATION

Our goal is to securely give the right people across the health system the right access to the information they need, at the time they need it, inside and outside of AHS. This goal actively supports the infrastructure focused on data platforms and services developed through the Alberta Strategy for Patient Oriented Research (SPOR).

AHS and Alberta Health will continue to develop the Provincial Health Analytics Network (PHAN), which will enable relevant and timely access to high quality health data for those Alberta organizations that need health data to deliver on their mandates. This multi-year effort will enable many organizations to access the data, including other government ministries, AIHS, Health Quality Council of Alberta (HQCA), professional colleges and associations, and the universities. The PHAN will enable robust analysis of clinical and administrative data related to Alberta's integrated health system. It will be an authoritative source of comprehensive information for health system management, clinical program improvement, monitoring of population health and for related health research. Both identifiable and anonymized data will be available to enable direct access to Albertan's health data.

Finally, AHS and the universities are expanding the number of analysts dedicated to extracting data for research purposes within the provisions of the *Health Information Act*. Through the SPOR unit, researchers will receive guidance in developing their own data sets that can also be used by other researchers.

#### **Benefits Add Up with Clinical Pathway**

For patients who have undergone head and neck surgery, the Head and Neck Cancer Clinical Pathway represents a faster route to recovery.

Now in place in both Calgary and Edmonton, the pathway is reducing complications from surgery, decreasing the number of patients readmitted to intensive care, and reducing the length of stay in hospital.

"Patients see a simplified form of the pathway taped to the wall in their hospital room that tells them what will happen in their post-operative care," says Dr. Joe Dort, Chief – Otolaryngology, Head & Neck Surgery at Foothills Medical Centre in Calgary, and the clinician who led the development of the new pathway. "As a result, they've become more engaged in their own recovery."



Dr. Joe Dort led the development of the Head and Neck Cancer Clinical Pathway. A simplified version of the pathway lets patients follow their recovery progress.

The chart outlines elements of patient care during the first 10 days following surgery, including fluid and nutrition needs, medications, care of surgical sites, and management of the tracheotomy.

Using front-line data, the team measured key outcomes, established standards of care designed to better those outcomes, then analysed the resulting data again to create a system of continual quality improvement.

The results are impressive. Since the pathway was implemented in 2011:

- Average patient length of stay in hospital has been reduced from 21 to 14 days.
- Proportion of patients returning to the operating room fell from 16% to 9%.
- Proportion of patients readmitted to ICU has been reduced from 13% to 5%.
- Overall pulmonary complication rate has been reduced from 64% to 30%.
- Incremental cost reduction of \$6,169 per patient (27% overall savings).

"The development of the Head and Neck Cancer Clinical Pathway provides a model of how other areas in AHS can use metrics and analysis to help improve patient outcomes," says Dr. Stafford Dean, Senior Program Officer for Analytics. "It's a great success story."

## **3.2** ACQUIRE AND LINK INFORMATION TO EXTEND THE ABILITY OF HEALTH CARE PROVIDERS, PHYSICIANS, RESEARCHERS AND OTHERS TO IMPROVE PATIENT CARE AND THE PERFORMANCE OF THE HEALTH SYSTEM

Our vision for analytics in AHS is to support clinician-driven measurement for the purpose of improving patient outcomes and care processes. This is a bottom-up approach designed by clinicians for clinicians, where we leverage the data housed in our electronic Medical Records (EMR) systems and break down the barriers to sharing data between clinical programs and centralized repositories. By linking across our various data holdings, from care processes to outcomes, we will develop richer information about our patients that will help our decision-making in the future.

The AHS Analytics Oversight Council will oversee the implementation of a coordinated analytics plan for the organization, one that targets three broad analytics functions: (a) clinical analytics; (b) operational analytics; and (c) corporate analytics. The Council will also identify analytical priorities and major data gaps and establish teams to address these issues. It will implement methods to connect the analytical teams within AHS and to enhance the skills and capabilities of AHS' analytical talent. Finally, AHS will seek to leverage the infrastructure, talent and expertise within the universities regarding the management and analysis of large, complex datasets.

We will engage with our research partners and stakeholders to inform the design of our future clinical information system. AHS will continue to integrate new data sets to improve the ability of the SCNs, health care providers, researchers and innovators to investigate health outcomes in more comprehensive ways. By linking across our various data holdings, from care processes to outcomes, we will develop richer information about our patients that will help our decisionmaking in the future. The data sets to be included will be balanced across clinical, operational, corporate, social, and outcome data, thereby increasing the ability to ask comprehensive questions about the health and well-being of Albertans – from prevention to end of life care.



Dr. Jason Werle, AHS Division Head of Joint Reconstruction, with hipreplacement patient Kelly Anhelher, one of many Albertans who have benefited from the shorter wait times and earlier release from hospital achieved through AHS' Hip and Knee Replacement Program.

#### 4. APPLY AND SPREAD KNOWLEDGE

Our 100,000 skilled and dedicated health care professionals and staff learn from their patients and colleagues every day. AHS has a responsibility to help them share what they learn with others. We also must help them seek out, synthesize, and adapt existing knowledge in a rigorous and systematic way. To obtain its full value, knowledge must be spread beyond the initial context into additional care settings. We need the right processes to reach the right people with the right skills at the time that they need it. These processes need to be implemented in a manner that fits with the environment where care is being delivered.

### **4.1** PROVIDE EFFECTIVE WAYS TO CAPTURE, TRANSLATE AND APPLY KNOWLEDGE TO IMPROVE PRACTICE AND PATIENT OUTCOMES

Every day, our personnel implement many improvement initiatives, innovations and research studies that foster learning across a diverse range of settings. The ability to capture, translate and apply knowledge is essential to making AHS an effective learning organization.

Capture - AHS will continue to develop and implement standardized approaches, tools, templates and processes that enable health care providers, physicians, researchers, patients and others to share what they have learned and find what others have learned.

Translate - SCNs provide the mechanisms to translate research findings and innovations into better patient care. Part of their mandate is to create new knowledge with academic partners and to translate the knowledge into measurably better health and health system outcomes.

Apply - Coupled with the infrastructure being developed through SPOR<sup>4</sup>, the SCNs will actively engage patients, clinicians and researchers to identify and implement effective ways to adopt province wide changes to care pathways.

### **4.2** ADOPT AN INTEGRATED SET OF TOOLS, PRACTICES AND TECHNOLOGIES THAT MAKE ACCESSING AND USING KNOWLEDGE EASIER

The knowledge of our patients, frontline care providers, physicians and staff is a critical asset that facilitates decision-making and supports our ability to learn from each other. We must be proactive and intentional in enabling a high-functioning, integrated system that assists them to create, capture, store, share, apply and leverage knowledge. Critical components of an effective knowledge management system include:

- Supporting people's ability to acquire knowledge (i.e. education and training in effective practices). By applying best practices used in other organizations, we will develop a Knowledge Management Competency Education Program to advance the capability of individuals to effectively use knowledge management practices, tools and technologies. The program will continue to develop a workforce with the required knowledge, skills, attitudes and behaviours to effectively manage and apply knowledge and influence the culture of AHS as a learning organization.
- Facilitating the creation, maintenance and sharing of the data, information and knowledge content within AHS (clinical and corporate). We will draw upon the experience of users to enhance applications such as SharePoint to support multiple business needs, including research and innovation activities.

<sup>&</sup>lt;sup>4</sup>SPOR platform to support Health Systems Research, Implementation Research and Knowledge Translation.

#### 5. INNOVATE TO ACHIEVE SERVICE EXCELLENCE

AHS must steward research breakthroughs, innovation and new knowledge to the point where they generate tangible, real world clinical value. Whether by spreading knowledge through the SCNs, enabling inventors to bring their ideas into the marketplace or other concrete steps to share ideas, having a culture where employees are innovative and ready to take on new challenges to achieve service excellence is critical.

All AHS programs strive to deliver better services. Our personnel use many tools and resources to support these efforts, including the *Alberta Improvement Way*, quality improvement, program evaluation, analytics and research. Improving our performance requires more active listening to our patients, health care providers and partners, as well as our creating environments where innovation and systems thinking can boost operational excellence across AHS. It requires embracing the utility of engineering, operations management science, health economics and a prudent, business-like approach to value as seen through the eyes of the public and the patients we serve.

We know that to deliver quality services, we need to attract and keep talented people. We need to invest in the people who serve Albertans, our partners and researchers, to continue to grow their expertise. We need to continue learning from the many teams in AHS that have created a culture that embeds research and innovation in their way of working; where teams incorporate research as part of what they do as health care professionals, staff and volunteers. Through the AHS People Strategy, AHS will continue to find ways to develop our talented and dedicated personnel.

### **5.1** STREAMLINE AHS PROCESSES FOR INITIATING AND DELIVERING RESEARCH AND INNOVATION

Researchers and innovators rely on AHS to provide them with access to our patients, health information, health care activity data, medical tests, drugs and AHS facilities. They compete with other health care researchers and centres across Canada and around the world for funding. Timeliness of initiating and completing studies is critical. AHS has actively worked with the Alberta Clinical Research Consortium to identify the challenges in undertaking clinical research in Alberta. The Consortium identified key priorities to improve the workflow for both researchers and health care providers. Based on this input, AHS developed a health research roadmap to:

- Support the ability of SCNs to develop an idea for testing, design the methodology to obtain valid evidence, and provide the knowledge and skills to implement evidence-informed improvements.
- Define consistent processes across AHS for reviewing and approving research requests. Working closely with the
  Research Ethics Boards, AHS is designing its processes so that the submission of a researcher's ethics application
  will automatically initiate the request for AHS resources needed for the study. Approvals to proceed will be
  consolidated and provided to the researcher. This process will also streamline requests for undergraduate and
  graduate research within AHS.

### **5.2** ACCELERATE THE ADOPTION OF RESEARCH AND INNOVATIONS OF VALUE TO THE HEALTH CARE SYSTEM

Quicker adoption of research and innovations throughout the Alberta health care system will be supported through a combination of tools and training that includes:

- Developing capacity and expertise within Alberta to support the SCNs (a) to identify research findings of value,
   (b) to identify emerging technologies that need to be considered, and (c) to mine for innovations already used in AHS that could be spread to other areas.
- Creating easy to use tools, applied universally throughout AHS, to drive improvements and to measure the benefits of research and innovation in both clinical areas and non-clinical/corporate areas.

For example, AHS is actively working with the Alberta TEC Health Accelerator, government ministries, foundations and other organizations to work with entrepreneurs and industry partners to develop innovations of value to the health and well-being of Albertans.

#### **GPS Supports Seniors with Dementia and their Caregivers**

Shen Gaidhar was worried for her grandfather-in-law, who found himself living alone after his wife of 73 years recently died.

"My family and I didn't want to take him out of his home but, at the same time, were worried that he might wander away from his building and not know how to get home," says Gaidhar. Which is why they signed him up for a collaborative research project that uses Global Positioning System (GPS) technology to locate Albertans with mild dementia who may be at risk for wandering and getting lost.

"It's really just great peace of mind, knowing that we can track him if we need to," says Gaidhar.

The Locator Device Project, jointly run by researchers at Alberta Health Services and the University of Alberta, is underway in Calgary and Grande Prairie. The six-month trial currently involves 10 clients in each city and examines how GPS technology within a wrist watch, a shoe, and a small cell phone-like device may improve the safety and quality of life for these Albertans and their caregivers.



Shannon Barnard of AHS and Peyman Azad Khaneghah and Pranshu Arora of the University of Alberta test GPS tracking technology used with seniors with dementia who are at risk for wandering.

"We have a responsibility to provide Albertans who are at risk with supports that will enable them to enjoy their independence without coming into harm," says Dr. Don Juzwishin, director of Health Technology Assessment and Innovation for AHS. "And we believe the locator project will also support family caregivers and emergency responders to assist dementia clients who have wandered or become lost."

### **5.2** MEASURE THE BENEFITS OF RESEARCH AND INNOVATION FOR ONGOING IMPROVEMENT AND REINVESTMENT

AHS and other funders invest in research and innovation opportunities to solve real world problems. Successful innovation and applied health research should improve the quality of care in one or more of the six health care quality dimensions: Acceptability, Accessibility, Appropriateness, Effectiveness, Efficiency and Safety. AHS must measure the gains in the quality it achieves in relation to the resources needed to achieve these gains.

Measurement and benchmarking, using globally endorsed indicators and metrics, is crucial to maximizing the return on research investments. With our Alberta partners, AHS will establish a framework for measuring and reporting the benefits of research and innovation to our patients and to the health system. By establishing a common framework to track the metrics to becoming measurably better, and the financial resources needed to achieve the measured gains in quality, AHS will be better able to anticipate how existing resources can be allocated elsewhere. Efficiencies in the use of resources create a win-win scenario for the programs that deliver care and the researchers and innovators who solve real-world problems. AHS is then able to reinvest some of the gains into future research and innovation opportunities.

Strategic indicators<sup>5</sup> will be developed and employed to quantify some of the effectiveness of research and innovation supported by AHS. The most important indicator will be evidence that the adoption of new knowledge has improved the health and health care of Albertans. This will be measured by:

- Improvements in population health (obesity rates, stroke rates, fracture rates, etc);
- Improved health care outcomes for patients;
- Significant health system improvements;
- Evidence of sustainable returns for AHS health investments;
- Acquisition of new external funding;
- Evidence of knowledge translation with improved quality of care; and
- Faster turnaround times to initiate research studies.

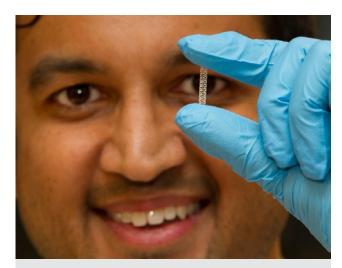
Health systems typically measure health outcomes with indicators such as survival, mortality and life expectancy. The patient perspective is missing. To address this gap, AHS is working with the University of Alberta and the Health Quality Council of Alberta to adopt the *Patient Reported Outcome Measures (PROMs)*, thus enhancing our ability to measure what we produce in terms of health impact, rather than in terms of health care utilization.

Finally, AHS will continue to help the SCNs and AHS operational leaders to assess the impact of specific research and innovations on operational performance across the patient's journey through the health care system, as compared to current performance (or status quo). With our partners, we will also help them to assess the opportunity to bring research and innovations into the marketplace through commercialization.

#### **NEXT STEPS**

Many of our partners are actively developing strategies to support health research and innovation to transform health care in Alberta. The AHS strategy will inform their work and, as the health care environment evolves, our strategy will adapt where needed, while providing continuity for the core services that enable health research and innovation.

Over the next six months, AHS will develop an implementation plan and measurement framework that will identify accountabilities and determine timelines for each identified action. The creation of the implementation plan will occur in parallel with work already underway across AHS and with our partner organizations. We will monitor the implementation of the strategy and realign our priorities to ensure the strategy continues to focus on what is truly important – delivering the best care to our patients today and tomorrow.



Dr. Kevin Bainey with a new stent that gradually dissolves over one or two years, leaving a strengthened artery that can stay open on its own.

#### **ACRONYMS AND GLOSSARY OF TERMS**

**ACRC** - Alberta Clinical Research Consortium

AHRIS - Alberta Health Research and Innovation Strategy

**AIHS** - Alberta Innovates - Health Solutions

CIHR - Canadian Institute for Health Research

**CIS** - Clinical Information System

**HQCA** - Health Quality Council of Alberta

**HTA** - Health Technology Assessment

IM/IT - Information Management and Information Technology

PHAN - Provincial Health Analytics Network

PRIHS - Alberta Partnership for Research and Innovation in the Health System

**PROMs** - Patient Reported Outcome Measures

**SCNs** - Strategic Clinical Networks

**SPARC** - Strategic Partnership to Accelerate Research into Care

**SPOR** - Strategy for Patient Oriented Research

**Alberta Health Research and Innovation Collaboratory** – A coordinating body comprised of senior representatives from Alberta Health, Innovation and Advanced Education, AHS, AIHS and Alberta Innovates - Technology Futures.

**Analytics** involves transforming AHS data assets into useful information to guide decision-making and improve performance. The work includes:

- Data management extracting data from source systems, validating, cleaning, structuring, standardizing, and loading into data repositories.
- Data analysis and interpretation linking data from multiple sources, applying analytical techniques, interpreting the findings and providing recommendations.
- Reporting presenting analytical outputs in consumable formats for decision makers (e.g., static reports, automated "self-serve" dashboards, scorecards, simulation models).

**Clinical care pathways** are tools used with specific groups of patients to define, optimize and sequence the different tasks (interventions) of the professionals involved in caring for the patient. Outcomes are tied to specific interventions.

**Data** consist of unconnected facts and figures that are out of context and only acquire meaning through association.

**Evidence** is information derived from a range of sources (e.g., experience, evaluation, research, and context) that has been subjected to testing and is found to be credible.

**Health Technology Assessment** is the systematic evaluation of the properties and effects of a health technology, addressing the direct and intended effects of this technology, as well as its indirect and unintended consequences, and is aimed mainly at informing decision making regarding health technologies. HTA is conducted by interdisciplinary groups that use explicit analytical frameworks drawing on a variety of methods.

**Information** consists of data arranged in some sort of order (for instance, by classification or rational presentation) so that they acquire meaning or reveal associations between data items.

**Innovation** means a 'new and improved way of doing valued things'. In the context of health and health care, an innovation can be a device, a drug, a technique, a method, a system or a service. Innovations can be procured from outside a user system or they can be developed within. Ideally, each innovation, before it is defined as such in practice, will have evidence of its 'value-add' over existing approaches and not just advocacy that 'new is better'. Innovations that have potential for 'value-add' in AHS are those that have been implemented in multiple settings outside of the original setting and where there is high-quality evidence with results consistently demonstrating a positive impact on health outcomes and/or health care system performance.

**Knowledge** is a fluid mix of framed experience, values, evidence, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms.

**Knowledge Management** is a set of principles, tools and practices that enable people to create knowledge, and to share, translate and apply what they know to create value and improve effectiveness (World Health Organization, 2009)

A Knowledge Management System (KMS) captures, makes available and enables the flow of knowledge, including the expertise and experience of the organization. The outcome of a Knowledge Management System will reduce duplication, enable efficient research, enhance the ability to find available knowledge, support employee development and effective decision making. The system is inclusive of the required people, processes, technology and content (i.e, the data, information and knowledge to be managed).

**Knowledge Translation (KT)** is a dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically sound application of knowledge to improve health of Canadians, provide more effective health services and products, and strengthen the health care system.

**Learning** refers to the acquisition, and transfer to long-term memory, of experience, information, and knowledge, which may subsequently be used for solving problems, making decisions, and creating new knowledge.

**A Learning Organization** is an organization skilled at creating, acquiring and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights.

**Organizational Culture** refers to 'the way we do things around here'. An organization's culture is a mixture of its traditions, values, attitudes and behaviour. Different organizations can have very different cultures. In knowledge management, an organization's culture is extremely important - if it is not based on qualities such as trust and openness, then knowledge management initiatives are unlikely to succeed.

**Quality Improvement** is a method of evaluating and improving processes of patient care which emphasizes a multidisciplinary approach to problem solving, and focuses not on individuals, but systems of patient care which might be the cause of variations.

**Research** in AHS involves systematic investigation to establish facts, principles or generalizable/transferable knowledge and includes academic, applied or scientific work that uses information about individuals, groups, subgroups, and populations. High quality research in AHS:

- Involves an objective, peer-reviewed scientific process of asking and answering important questions in rigorous and systematic ways;
- Requires the refinement of specific questions that are testable and potentially answerable, the use of the best
  experimental designs, with methods and tools designed to answer the specific question(s) being posed and the
  rigorous collection and analysis of data using appropriate methods;
- Often involves control groups or cohorts that are studied at the same time in the same ways by someone who
  has no bias in the results; and
- Addresses a CIHR pillar for research (1) basic biomedical, (2) applied clinical, (3) health services, systems and policy research or (4) population and public health research.

#### **APPENDIX 1: SCN CAPABILITY FRAMEWORK**

Alberta's Strategic Clinical Networks have defined a core set of capabilities that are expected to mature and strengthen over time. The 10 capabilities provide a framework for each SCN and its members with which to gauge their growth over time and guidance on the skills and competencies needed for success.

**Transformational Leadership** - Champion and drive transformation throughout the Alberta health care system.

**Strategic Alignment** - Identify, define and implement sustainable improvements to its area of focus in alignment with Alberta's Health Plan and Business Plan to transform the health care system to improve the health of Albertans.

**Innovation** - Foster innovative solutions in all aspects of health care (prevention, care delivery processes, service models, devices, procedures, etcetera) to deliver outcomes that achieve value for money and transformational change to health care.

**Planning & Priority Setting** - Understand the needs of the population and establish transformational priorities that transcend organization and geographic boundaries. Priorities have been evaluated for clinical impact and have a high likelihood of success. This capability includes the ability to consider the impact and sequencing of related initiatives.

**Evidence Informed Decision Making** - Use evidence informed decision making in strategy development, priority setting, innovation, design of new services/processes/ models/technologies and in continuously improving the network effectiveness.

**Network and Stakeholder Engagement and Relationship Management** - Continually identify and effectively engage the appropriate network members, partners and stakeholders required to achieve the overall strategy, including implementing transformation projects and initiatives.

**Program and Project Management** - Define and manage a portfolio of transformation projects that will contribute to achieving the mandate of the SCNs.

**Performance Management and Measurement** - Establish clearly defined metrics and accountability to drive the activities and behaviour required to achieve the vision and strategic objectives of the SCN's (i.e. outcome / performance based decisions, value for money, teaming across silos and geographies, etcetera).

**Knowledge Management and Translation** - Share with all stakeholders the knowledge that is gathered for, or created by the network and embed that knowledge within care delivery processes, tools and training.

**Organizational Design and Culture** - Establish and maintain a culture, organization design, structure, learning and knowledge management approach to deliver on the transformation agenda.







DELIVERING BETTER CARE TO ALBERTANS, TODAY AND TOMORROW

