The IMPACT of Dr. Cy Frank
(1949-2015)

Alberta Bone and Joint Health Institute

2015 Impact Report

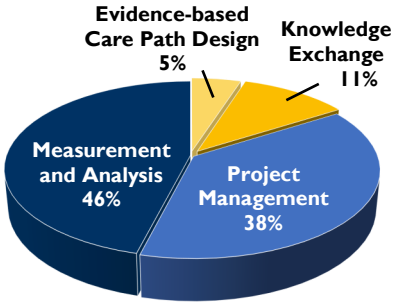
ALBERTA BONE & JOINT HEALTH INSTITUTE

Inform. *Instigate.* Improve.

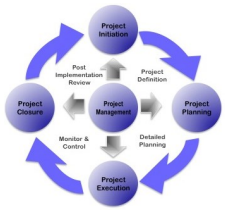
Alberta Bone and Joint Health Institute

In ABJHI's 2015 Impact Report

Our Core Competencies



Project Management



ABJHI is one of the leading organizations in Canada for managing projects designed to increase the quality of care patients receive. We are also highly effective at engaging stakeholders whose participation is critical to project success. The projects we manage are diverse. They range from designing and implementing integrated care paths to wringing greater efficiency out of health care resources and testing innovative service concepts. But they all have one common thread: they are designed to improve quality in one or more of six dimensions, including safety, access, efficiency, acceptability, appropriateness and effectiveness.

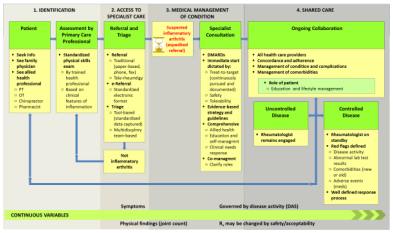
Measurement and Analysis

You can't improve what you don't measure. This truism is at the heart of ABJHI's work. We measure and analyze performance in critical areas of health care using measurement frameworks built around the six dimensions of health care quality. We use the results to identify opportunities for improving quality, to develop highly effective improvement strategies, and to provide timely reports for health service planning.

Knowledge Exchange

Health care should be dynamic, changing as knowledge sheds new light on practices, procedures, drugs and devices. But the gap between creating knowledge and putting it into practice is wide in Canada. ABJHI works to close that gap by quickly disseminating, exchanging and applying knowledge to improve the quality of bone and joint health care and strengthen the public health system in this high-need area of medicine. Our knowledge-to-practice approach is comprehensive. It includes comprehensive reports to leading decision makers, briefing notes to stakeholders, presentations to medical groups and health professional organizations, impact modelling, papers for scientific journals, opinion articles to raise awareness of issues, and website postings.

Evidence-based Care Path Design



ABJHI is a recognized leader in designing integrated care paths for patients that are based on the latest evidence of best practices and best products. Integrated care paths bring together different health care professionals to work in a multidisciplinary partnership, with the patient firmly at the centre. Integrated care is crucial because most disorders that attack the bones and joints are chronic, meaning they require ongoing, possibly long-term, treatment that is multifaceted and involves different medical disciplines.

Our Position

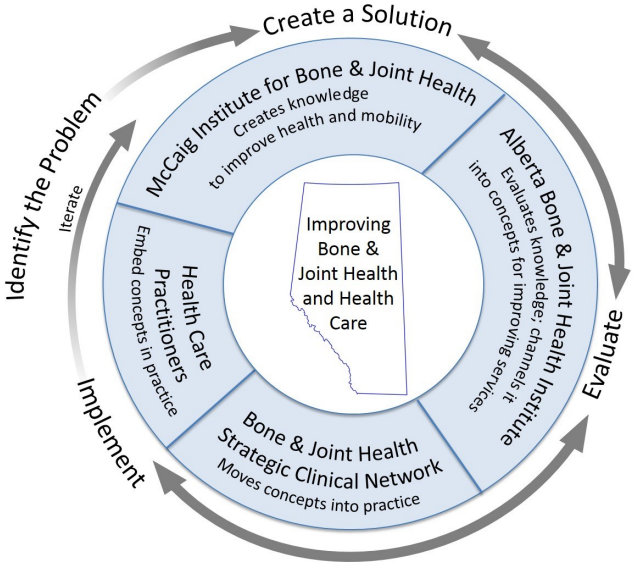
We are Canada's only independent institute for channelling knowledge into better bone and joint health care services, and the nation's leading organization for engaging stakeholders in adopting best practices.

Our Mission

We work with Alberta's health professionals, researchers and policy makers to close the gap between what we ***learn*** and what we ***do*** in bone and joint health care.

Collaboration through Improvement

Health care is a collective enterprise. It extends from the laboratory where researchers seek new knowledge to defeat disease and repair injury, to doctors and other clinicians who put new knowledge into practice, and administrators who set standards and parameters around services, products and practices. ABJHI has built and fostered close working relationships with all of these parties. We use our relationships to bring the parties together in collaborative efforts to improve health care.



Dr. Cy Frank's Work and Vision Form a Powerful Legacy that Will Benefit Patients

We cannot speak about the impact of ABJHI on patient care without in the same breath recognizing the impact of Dr. Cy Frank on ABJHI.

Cy was a ground-breaking and highly respected orthopaedic surgeon, a world-renowned researcher, a tireless teacher, an inspired innovator, and an ingenious visionary. He passed away suddenly on March 5, 2015. But Cy left a powerful legacy of better medical practice, more enlightened public health policy, healthier research, and more robust exchange of knowledge that extends to areas of medicine beyond his specialty of orthopaedics.

Death inevitably brings pause for reflection on life. And as we reflect on his life's work, there is greater clarity of purpose in Cy's actions. We now understand with extraordinary clarity why he founded ABJHI and shaped it to be what it is today: a catalyst for improved patient care by influencing medical practice, public policy, research and the exchange of knowledge – the very components of his life's work. We see plainly how ABJHI's four pillars of expertise – performance measurement and analysis, knowledge exchange, project management, and evidence-based care path design – give us the capability to lend life and force to Cy's legacy for years to come.

In our 2015 Impact Report, you will learn how ABJHI is doing just that through programs we are managing for the Bone and Joint Health Strategic Clinical Network, a unit of Alberta Health Services. One program, a unique continuous quality improvement effort in hip and knee replacements, is being watched with envy by policy makers in other parts of Canada. Through this work, ABJHI has uncovered new evidence that has the potential to change surgery protocols making hip and knee replacements safer for obese patients.

Another program is reducing the unnecessary use of precious blood products in surgery, ensuring the "gift of life" goes to those who actually need it.

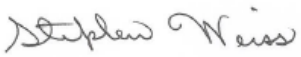
We are also working with rheumatologists and allied health professionals on a program to develop an innovative model of shared care. The new model would enable Alberta's rheumatologists – numbering just 40 – to meet growing demand as the rate of rheumatoid arthritis and other dangerous inflammatory joint diseases increases in the population.

Yet another program is putting existing resources to work in an ingenious way to avoid devastating hip fractures that can cripple and even kill people, especially the elderly.

These programs have the potential to influence practice beyond Alberta's borders. They were inspired by Cy's work and his vision of evidence-based health care that makes the lives of patients better.

Our friend and colleague is gone. But as the stewards of the organization he founded with like-minded colleagues in 2004, we intend to keep his legacy alive and healthy for the benefit of patients.

Dr. Stephen Weiss



Executive Director

P.S. You will find a moving tribute to Cy on ABJHI's website by clicking here or going to www.albertaboneandjoint.com/cy-frank/. You can also listen to colleagues, friends and patients of Cy reflect on his impact in a video tribute produced by the Canadian Orthopaedic Association. Click here or go to www.youtube.com/watch?v=gR9KHllfPJ0&feature=youtu.be to view the video.

Continuous Improvement Reports Put Alberta's Orthopaedic Surgeons in Vanguard of Quality Improvement Efforts

In public health jurisdictions across Canada, a watchful – and envious – eye is being kept on Alberta.

This is the province whose hip and knee replacement surgeons have done something that puts them in the vanguard of quality improvement efforts.

They have opened their patient data to a trusted third party to be examined and analyzed as part of a comprehensive continuous improvement program the likes of which have never before been seen in public health care anywhere in Canada.

The third party – ABJHI – gathers patient data from 67 surgeons and administrative data from hospitals around the province. The data are linked and analyzed by ABJHI to produce a confidential Continuous Improvement (CI) Report for each of the surgeons. The CI Reports are produced twice yearly. They provide the surgeons with a detailed analysis of their performance against benchmarks in patient outcomes, waiting time for surgery, resource utilization, and other key indicators of quality.

"Measurement and analysis are essential elements of improvement because you can't improve what you don't measure and don't understand," Christopher Smith, ABJHI's Chief Operating Officer, said.

The continuous improvement program also contains a subtle element of competition. The CI Reports also show individual surgeons how they are doing compared with their peer group.

Since the first CI Reports in 2010, there have been numerous improvements. Among them, waiting times are down, patients are home from hospital sooner, fewer patients are returning to hospital with complications, and patients are more satisfied with their care.

"When we began this process in 2010, we were funding it on our own and the first CI Reports gave surgeons their performance in four key indicators," Mr. Smith said. "Alberta Health Services quickly recognized the value and began funding the program through its Bone and Joint Health Strategic Clinical Network. Since then, the number of indicators reported has grown steadily. The latest CI Reports cover 17 key performance indicators across all dimensions of health care quality."

> "We are now into the next wave of benefits from the CI Reports.
>
> "We are doing a deeper dive into the data we gather. The goal is to find more opportunities to turn the data into actionable information on a larger scale."
>
> Christopher Smith, Chief Operating Officer, ABJHI

In addition to the surgeon reports, ABJHI produces a CI Report for each of Alberta Health Services' five zones. These reports, which are unrestricted, use the aggregated data from the surgeons linked with administrative data from the hospitals in the zones. Aggregating the data protects the confidentiality of patient information.

Christopher Smith

In total, ABJHI produces 144 CI Reports a year.

"We are now into the next wave of benefits from the CI Reports," Mr. Smith said. "We are doing a deeper dive into the data we gather. The goal is to find more opportunities to turn the data into actionable information on a larger scale. For example, last year we noticed that obese patients seemed to be experiencing a higher rate of adverse events than non-obese patients. We decided to investigate further and have uncovered results that have the potential to change the risk-reduction protocols for obese patients."

Calgary orthopaedic surgeon Raj Sharma, who specializes in hip and knee replacements, reviews his personalized Continuous Improvement Report.

Catch a Break Aims to Avert Devastating Hip Fracture and Loss of Mobility

Thousands of unsuspecting Albertans have been alerted over the past year to a bone disease they didn't know they had and, for many, their surprise diagnosis may have averted a devastating hip fracture and loss of mobility.

They were alerted thanks to Catch a Break, a program developed by the Bone and Joint Health Strategic Clinical Network (BJH SCN) in conjunction with Alberta Bone and Joint Health Institute.

Catch a Break aims to reduce the number of hip fractures caused by osteoporosis, a disease that makes the bones thin and brittle.

Through the program, nurses with Health Link Alberta, the 24-hour public health information and advice phone line, routinely scan patient files from emergency departments and cast clinics. They look for signs of fractures caused by osteoporosis. These breaks, called fragility fractures, are often the first sign of osteoporosis.

Patients suspected of having had a fragility fracture are contacted and sent information about the disease, including the risk factors and how to stop osteoporosis from progressing. Notification and information about treatments for osteoporosis are also sent to the patient's family doctor.

"We want to make the first fragility fracture the last," Liz Evens, ABJHI Project Manager, said. Ms. Evens is responsible for managing the roll-out of Catch a Break for the BJH SCN.

Mel Slomp, Executive Director of the BJH SCN, said early intervention is critical. "By identifying that first break and treating osteoporosis early, we significantly reduce the chance of a second, more serious fragility fracture, especially a hip fracture."

It worked for Edward Kohel. He slipped on ice and broke his wrist. The fracture was flagged by a Health Link nurse. This led to his enrolment in Catch a Break. "I was really impressed the follow-up was made," Mr. Kohel said. "When it comes down to patient care, this program is great."

Catch a Break was expanded province-wide in January 2015 after successful launches in the Edmonton and Calgary zones in 2014. In Catch a Break's first nine months, approximately 10,600 fracture patients were identified as potential osteoporosis patients. About 7,000 were screened for osteoporosis and of these, approximately 5,000 were identified as high-risk of having the disease and requiring treatment.

Every year, more than 2,400 Albertans – most of them elderly – fracture their hip. Almost all have osteoporosis and most are unaware they have it. As many as one in five people diagnosed with a fragility fracture will have another fracture within 12 months. A hip fracture can lead to permanent loss of mobility and reduced independence.

Statistics from Osteoporosis Canada show fewer than 20% of fracture patients undergo diagnosis or adequate treatment for osteoporosis. "We know this is a huge gap and closing it will make a significant difference," Mr. Slomp said.

The Facts on Hip Fracture in Alberta

- Approximately 2,400 hip fractures yearly.
- Most are the result of a fall.
- Most at risk: the frail elderly and women who have osteoporosis.
- Cost to public health in the first year after hospitalization: more than $21,000.
- Cost per year if institutionalized: $44,000.

The Facts on Osteoporosis

- More than 80% of all fractures in people 50 and older are caused by fragile bones.
- One in two women and one in five men will have an osteoporosis-related fracture.
- It can occur at any age.

Edward Kohel shows Health Link Alberta Manager Cindy Connell where he broke his wrist.

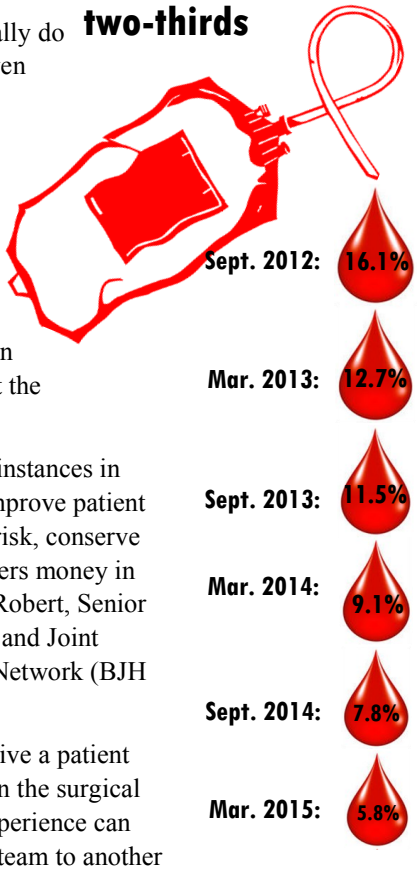
Albertans Getting More from Less with New Blood Transfusion Guidelines

The 'gift of life' is going to those in need when it comes to hip and knee replacement patients as surgical teams across Alberta embrace new guidelines for blood transfusions during and after surgery.

The guidelines were introduced by Alberta Health Services (AHS) in fall 2012 to reduce risks to patients and conserve a valuable resource. Since then, blood product use has been cut by nearly two-thirds.

"Blood is a limited resource," Christina Barr, ABJHI's Hip and Knee Project Manager, said. "Despite this, blood products are frequently given to patients who do not need them even though research has shown that surgical patients do not have better outcomes – and may actually do worse – when they are given blood they do not need."

Blood transfusion rate down by nearly two-thirds



Blood transfusion introduces a risk of medical complications. Though the risk is very small, a blood product may be contaminated or carry a virus, produce an allergic reaction or disrupt the immune system.

"This is one of those rare instances in medicine where we can improve patient outcomes, reduce patient risk, conserve resources and save taxpayers money in one fell swoop," said Jill Robert, Senior Provincial Director, Bone and Joint Health Strategic Clinical Network (BJH SCN).

In the past, a decision to give a patient blood was based largely on the surgical team's experience. But experience can differ markedly from one team to another leading to wide variations in practice and overuse of blood products. Introducing evidence-based guidelines is the first step in standardizing proven best practices.

Elective hip and knee replacements were among the non-urgent surgeries with the highest consumption of blood products. These patients typically received two units of blood at a cost of approximately $900 per unit.

The guidelines call for pre-surgery tests to determine the patient's levels of red blood cells, which carry oxygen through the body, and treating those whose levels are inadequate. They also include using tranexamic acid to reduce bleeding during surgery and applying higher thresholds for receiving blood products during recovery.

The guidelines were developed by Dr. Charles MacAdams, an anaesthesiologist and clinical associate professor of anaesthesia at the University of Calgary. ABJHI presented them to the committee of orthopaedic surgeons who oversee the provincial care path for hip and knee replacement patients. The committee incorporated them into the care path. ABJHI then began working with the BJH SCN to promote their use with surgery teams in the 12 hospitals across Alberta where hip and knee replacements are performed.

> The provincial blood transfusion rate for hip and knee replacements was
>
> 16% in fall 2012 when new guidelines were presented by ABJHI to orthopaedic surgery teams from hospitals across Alberta. By March 31, 2015 (most recent data available), the transfusion rate had fallen to under 6%.

Under the program, ABJHI has been tracking each team's blood transfusion rate. The rate is incorporated into a team performance scorecard produced quarterly by ABJHI.

"When AHS introduced the guidelines, we showed the teams their blood transfusion rates," Ms. Barr said. "Those rates began falling in every hospital almost immediately after the presentation. And they continue to improve in response to ongoing reporting through the scorecards."

The teams are now working toward a transfusion rate target of 5% set by the BJH SCN.

The program has saved approximately $2.8 million in blood transfusion costs over its first two and a half years in hip and knee replacement alone.

The guidelines have been so successful in hip and knee replacements that the BJH SCN plans to promote their use in hip fracture surgery.

Knee replacement patient Marni Besser is among the growing numbers of Albertans who are having a hip or knee replaced without a blood transfusion thanks to new guidelines that conserve 'the gift of life'.

Shared Care Model Seen as Solution to Shortage of Rheumatologists

Alberta has just 40 rheumatologists to care for an estimated 40,000 people with inflammatory arthritis. If that burden seems heavy, consider this: the number of Albertans with inflammatory arthritis will almost double in the next 15 years and the province cannot train enough rheumatologists to meet the growth. The outlook is even more unsettling for the 50% of Albertans who live outside the province's two largest cities. There is not a single rheumatologist in resident practice anywhere but Edmonton and Calgary.

Facing this scenario, the Bone and Joint Health Strategic Clinical Network called on its Arthritis Working Group to find a creative solution and put ABJHI in the position of managing the process. The Working Group – comprising rheumatologists, family physicians, therapists and pharmacists – didn't disappoint. With the assistance of ABJHI, the group designed a model for shared care.

> Alternative care practitioners working in a shared care model
>
> would increase the capacity of rheumatologists to diagnose and treat the growing numbers of RA patients and reduce the service disparity that exists between urban and rural areas of Alberta.

The new model introduces alternative care practitioners (ACP) specializing in rheumatoid arthritis (RA), which accounts for more than half of all inflammatory arthritis cases in Alberta. ACPs will be medical professionals, such as nurses, general practitioners, pharmacists and therapists, who are trained to perform routine monitoring and provide maintenance-level care of RA patients. This will give rheumatologists more time for diagnosing patients, getting new patients into treatment before joint damage occurs, and managing existing patients who experience a painful disease flare-up.

Andrea Emrick

ACPs will be located around the province so that patients in rural areas do not have to travel to Edmonton or Calgary for routine monitoring and care of their condition.

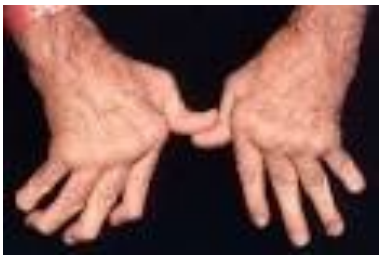
"The model is a true shared care approach to expanding Alberta's capacity to handle the growing volume of patients," Andrea Emrick, ABJHI's Project Manager for the Arthritis Working Group, said. "Communications is a crucial component. The ACP will keep the rheumatologist informed of the patient's condition and will consult with the rheumatologist if any changes are observed.

"In rural areas, contact between the ACP and rheumatologist could be via land line, mobile device or other electronic communications or a rheumatologist could make regularly scheduled visits. This will reduce significantly the service disparity that exists between urban and rural areas in the province," Ms. Emrick said.

Getting RA patients into treatment quickly is crucial. RA is an inflammatory arthritis that attacks the lining in the joints causing severe and irreversible joint damage. The disease cannot be cured but drugs and biologic agents are highly effective at controlling it. Treatments must begin within three months of the onset of symptoms to reduce the chance of joint damage, and patients must be actively monitored and treated for life.

The new shared care model will start with rheumatoid arthritis. It may be expanded to other forms of inflammatory arthritis, such as ankylosing spondylitis, which causes inflammation in the joints of the spine triggering pain and stiffness.

"The goal of the Strategic Clinical Network and the Arthritis Working Group is to achieve a service level that ensures the patient is seen by the right person at the right time and best outcomes are achieved," Ms. Emrick said. "The persistence of RA makes this especially challenging. Even patients who are stable remain prone to flare-ups and need quick intervention to get their disease under control again. The capability of rheumatologists to respond quickly to these flares is built into the Working Group's model."



The Working Group is examining the option of training ACPs through the Advanced Clinician Practitioners in Arthritis Care program, a 10-month academic and clinical training program in arthritis care hosted by St. Michael's Hospital in Toronto.

ABJHI has developed a framework for measuring the model's performance. ABJHI would gather data from the clinics to measure and report on performance, giving service planners critical information they need to ensure the model is achieving the desired service levels. The model will be phased in, allowing adjustments to be made in response to its performance.

ABJHI Finds Even Low Level of Obesity Exposes Hip and Knee Replacement Patients to Greater Risk

There is an abundance of evidence that obesity puts people at increased risk of developing osteoarthritis in weight-bearing joints, such as the knees and hips. But does it put them at greater risk of adverse events during and after surgery to replace these joints?

ABJHI is building the evidence to answer this question conclusively, and preliminary findings are that risk of adverse events is elevated even at lower levels of obesity than commonly believed by Alberta's hip and knee surgeons. The results, if proven conclusively, could provide the evidence health professionals need to develop more effective risk-reduction protocols tailored to obese hip and knee replacement patients.

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The preliminary findings are from patient data ABJHI gathers from orthopaedic surgeons and Alberta Health Services.

"We analyzed more than four years of data on adverse events as well as deep infection occurring while the patient is in the hospital," Christopher Smith, ABJHI's Chief Operating Officer, said. "We found some surprising results."

The risk of adverse medical events was 1.38 times higher and the risk of deep infection was 3.6 times higher for patients with a body mass index (BMI) of 30 or greater, compared with non-obese patients. A BMI of 30, calculated from a person's weight and height, is the starting point of obesity.

"Much of the literature on the relationship between obesity and adverse events examines the risks associated with BMI levels of 35 and higher," Mr. Smith said. "We found in our discussions with surgeons that opinion about pre-surgical risk management and the influence of weight status generally reflected the literature. Our results, while early, suggest there is evidence that the risk begins at a much lower level of obesity and is higher in women."

ABJHI analyzed seven medical adverse events, including blood clot in a lung artery, blood clot in a deep vein, heart attack, stroke, intestinal obstruction, gastrointestinal bleeding and pneumonia as well as infection in the tissue below the incision. Mechanical adverse events, such as fractures and dislocation of the implanted joint, were also analyzed.

Among the medical adverse events, blood clot in a lung artery – pulmonary embolism in medical vocabulary – was the greatest risk at 1.5 times higher in obese patients than in non-obese patients. The risk rises to six times higher in obese patients who have had a previous blood clot.

Another surprise was that there was no evidence of increased risk of mechanical adverse events in obese hip and knee replacements patients.

The data were from approximately 11,000 patient records from September 2010 to December 2014. About 57% of the patients had a BMI of 30 or greater and results were adjusted to account for the impact of patient age, gender, procedure type and pre-surgery risk factors.

"We are continuing to gather and analyze data. Getting answers to questions about obesity and risk is essential considering the rising rate of obesity in Canada and the effect this is having on demand for hip and knee replacements," Mr. Smith said.

Smooth Transition out of Acute Care Key to Regaining Function for Hip Fracture Patients

A quick path to surgery is critical for people who fracture a hip. But just as crucial as fixing the fracture quickly is the process of getting patients, most of whom are elderly, back to their pre-fracture level of function. This latter stage is being tackled by Alberta's Post-acute Working Group, with the help of ABJHI, now that the fracture-to-surgery period is being addressed with a new model of care that targets surgery within 48 hours.

"We have progressed to the next level in improving the quality of care for Albertans who suffer a hip fracture," Kyle Lang, program co-lead, said. "We are seeing significant measurable progress in all aspects of acute care. Our goal now is to expand to the next stage along the continuum of care. This means moving beyond the walls of the acute care hospital to ensure patients have the resources they need to help them return to their pre-fracture level of function."

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The key is resources, such as space in sub-acute and long-term care facilities and in-home support.

"The evidence tells us that patients have better outcomes from surgery when they do not linger in acute care," Liz Evens, ABJHI's Project Manager for Restorative Care Hip Fracture Clinical Pathway. "Instead, we want patients to make a timely transition to the appropriate post-acute environment. This could be a sub-acute care facility for patients who need medical intervention but not at the level delivered in acute care hospitals. It could be a long-term care facility. It could be home with support services."

Liz Evens

Alberta's benchmark is a five-day stay in acute care for hip fracture surgery, after which patients should move to a less intensive setting providing there are no serious medical complications. However, patients are often blocked from discharge because sub-acute or long-term space is not available or because in-home support resources are not available.

The Post-acute Working Group was assembled by the Bone and Joint Health Strategic Clinical Network (BJH SCN) to design evidence-based care paths for patients moving past the acute phase of care and to identify the resources that would be required for these patients. The BJH SCN engaged ABJHI to help the Working Group.

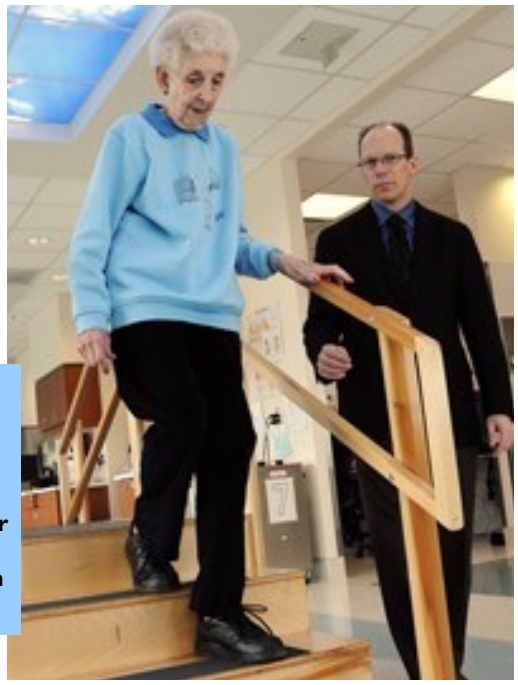
The BJH SCN made this work a high priority, recognizing the devastating effects of hip fracture on the elderly and the high cost of keeping patients in an acute care setting when lower-cost alternatives would be more appropriate. Every year, more than 2,400 Albertans, most of them elderly, fracture their hip. Without timely and appropriate care, many will not walk again and will need support to perform everyday tasks. Their quality of life will deteriorate significantly.

The Working Group has designed three discrete pathways, including one for patients moving to sub-acute care, one for patients moving into long-term care, and another for those going home with support.

"The pathways will standardize care and, with adequate resources, smooth out the transition from one level of care to another across the province," Mr. Lang said.

The BJH SCN will implement the long-term care pathway this year on a pilot basis in one major city and one rural area. Using a measurement framework developed by ABJHI, the Working Group will track the performance of the pathway against evidence-based benchmarks in key indicators. Among the indicators that will be watched closely is the success rate in getting patients back to their pre-fracture living environment and avoidance of another fracture.

"Aside from better patient outcomes, the steps we are taking to get patients out of the acute care hospital within the five-day benchmark will free up beds for waiting patients," Mr. Lang said. "If we meet the benchmark consistently, we can free up more than 24,000 bed-days per year. This is capacity that could be used to reduce waiting times for surgeries, such as hip and knee replacements."



Dr. Kevin Hildebrand watches hip fracture patient Wauna Boyer during her rehabilitation exercises.

ABJHI's Data Mining Capability Attracting Attention of Research Community

ABJHI's growing reputation for securely managing and mining health research data is leading to an expanding role in ground-breaking research projects that have the potential to dramatically alter the way health care services are delivered.

One of these research projects is developing the first criteria in Canada for determining whether surgery is the right course of action for individuals with osteoarthritis (OA) in the knee. Another project is designing and testing the optimal centralized intake system for arthritis sufferers in Alberta.

> One in four Albertans will be living with osteoarthritis in 25 years.
>
> Osteoarthritis is responsible for almost all of the approximately 10,000 non-emergency hip and knee replacements performed every year in the province.

Data collected and analyzed by ABJHI for the Best Evidence for Surgical Treatment (BEST) Knee Study indicate up to 30% of knee replacement patients in Alberta derive little to no benefit from their surgery and, as would be expected, express disappointment with the outcome. This finding suggests a large segment of the patient population in Alberta – and likely in Canada as a whole – is having knee replacement that is not needed.

The BEST Knee research team is developing and validating criteria that will be used to assess the likelihood a patient will benefit from knee replacement as a way of treating OA. The result of this assessment will determine whether surgery or less invasive treatments would be appropriate for the patient.

Dr. Deborah Marshall

A non-emergency total knee replacement costs approximately $16,000 and about 6,000 of these surgeries are performed annually in Alberta. The province has a surgery waiting list. Eliminating surgery for those who would not benefit from it would save millions of dollars in costs and reduce the waiting time for people who need surgery.

BEST Knee is funded by the Canadian Institutes of Health Research and will end in March 2019. It is being led by Drs. Deborah Marshall and Gillian Hawker. Dr. Marshall holds the Canada Research Chair of Health Services and Systems Research and is ABJHI's Director, Health Technology Assessment and Research. Dr. Hawker is Professor of Medicine and Rheumatology, University of Toronto, and Physician in Chief, Department of Medicine, Women's College Hospital.

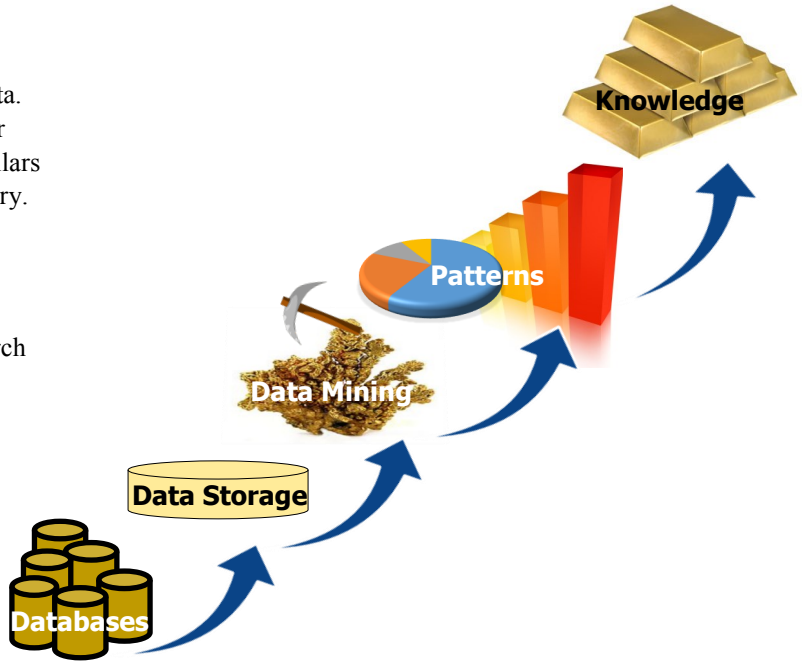
In the research to design the optimal centralized intake system for Albertans with arthritis, ABJHI is analyzing and interpreting data from multiple sources. ABJHI's work will extend across the design, implementation and evaluation phases of the research. The new system is being designed initially to refer and triage Albertans with OA and rheumatoid arthritis (RA), the most common forms of arthritis.

The researchers' goal is to increase rates of early diagnosis by reducing the waiting time for consultation, and to improve disease control by getting patients into treatment more quickly.

The system is being designed to accommodate a projected increase in rates of OA and RA and to be expanded to other musculoskeletal conditions.

The research will be completed in December 2016. It is being done by a team of nearly 40, including ABJHI senior data analysts and managers, led by Dr. Marshall and Dr. Linda Woodhouse who holds the David Magee Endowed Chair in Musculoskeletal Health and is president of the Canadian Physiotherapy Association. The work is being funded by the Partnership for Research and Innovation in the Health System, a collaborative grant program funded by Alberta Innovates - Health Solutions and Alberta Health Services.

Dr. Linda Woodhouse



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