


2021 ANNUAL REPORT





Robust, reliable, and accessible health data is a cornerstone for influencing value-driven quality of care. Yet numbers alone don't tell the whole story.

Behind the numbers this year is stress, burnout, leadership, sacrifice. And despite this, our healthcare partners stood by us in countless ways.

The Alberta Bone and Joint Health Institute (ABJHI) is on a mission to be a source of truth for improving the bone and joint health of Albertans. With your support, we're bringing a greater understanding of hospital, community, and home health into the picture.

EXECUTIVE MESSAGE



Dr. Don Dick
Chair, Board of Directors

The vision of our founders, Mr. Bud McCaig and Dr. Cy Frank, was for the Alberta Bone and Joint Health Institute (ABJHI) to serve as a catalyst to bring about better patient care for bone and joint conditions. The disruption that COVID-19 brought to all our lives has had a particular impact on the Albertans we serve because elective surgeries had to be deferred and clinical visits for assessments and treatments were reduced. Necessity is the mother of invention, and during this time ABJHI has provided extensive modelling support to help Alberta Health Services manage the challenging aftermath. We continue to influence clinical practice change and research for conditions like osteoarthritis and fragility fractures. In 2021, our professional team helped to accelerate high quality care and patient education in these areas. Yet, growing demand on the health care system requires bold strategies, not just for the acute care management of bone and joint conditions but also how best to support patients whose care is provided in the community.

It's not a simple road. Services in the community associated with managing bone and joint conditions are diverse. We are pleased to report on the strong position of the first-of-its-kind information platform, MAP to MOTION. Our \$2 million campaign goal is within reach thanks to the visionary leadership of our donors. The first module is set to go live and is gaining traction with healthcare partners. We're eager about what is next with the intersection of technology and healthcare.

Working closely with the University Hospital Foundation we secured federal funding that will help gather information about patient outcomes associated with their care in the community. Part of this work will place an emphasis on patients who live in rural and remote communities.



Dr. Martin Ferguson-Pell
Executive Director

We also helped to progress a key strategic goal of our partner, the Bone and Joint Health Strategic Clinical Network. Clinical tools for assessing bone and joint problems are set to make the care journey in Alberta as effective and efficient as possible. The ultimate objective is to incentivize a new provincial assessment model. Data outside of Alberta Health Services is key for accountability and we're committed to being a trusted bridge between our partners. This is one solution of many in which bone and joint healthcare can be transformed in Alberta.

To us, health partnerships are the backbone of ABJHI and you will find this featured across this report. Our health partners consistently go above and beyond to help achieve better care for people with bone and joint health conditions. We thank these partners for their continued support and leadership during the trying times of the pandemic. We're in this together.

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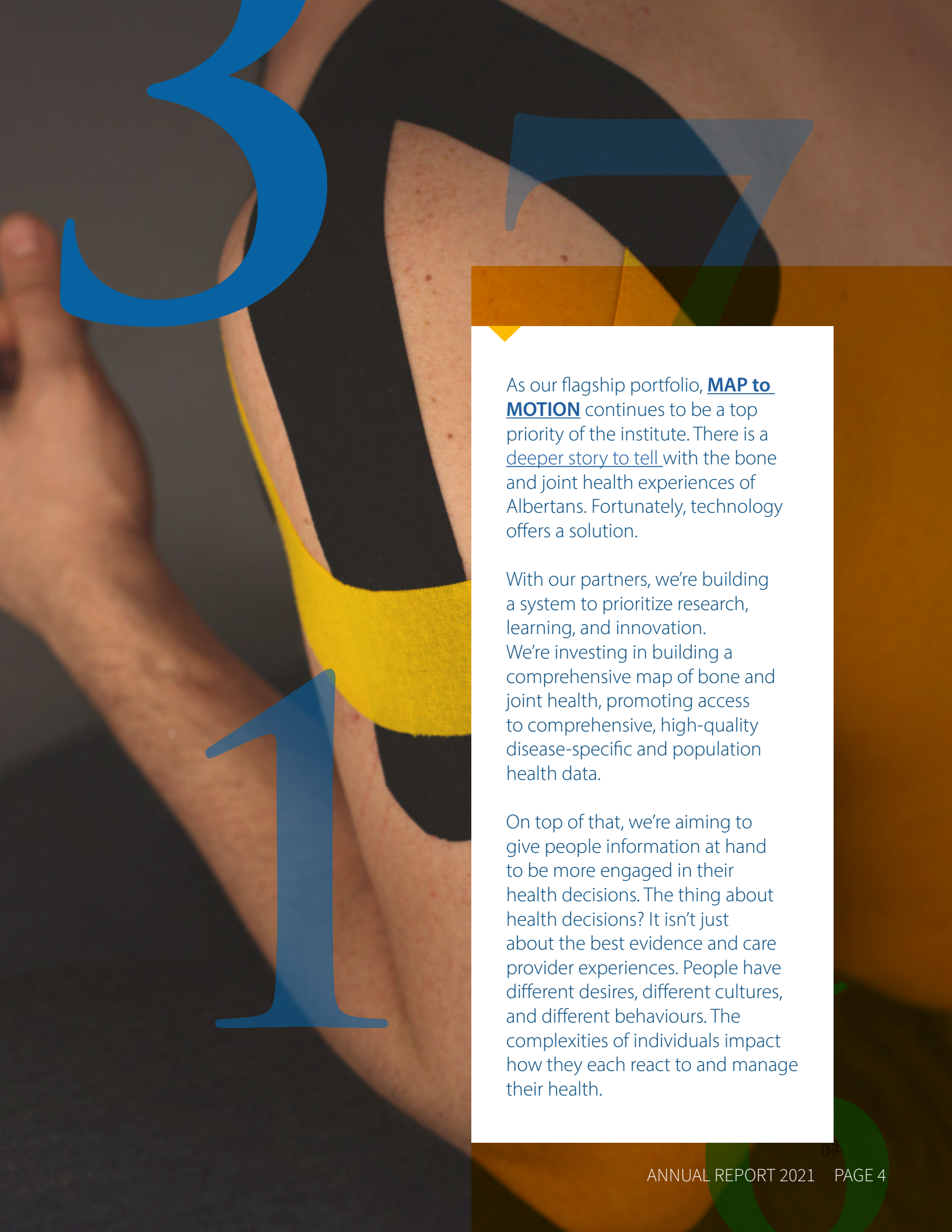
Murray Smith*
Director

**Joined Board during the 2020/2021 fiscal year.*

Our executive leadership team and board of directors guide core responsibilities through policy and strategic planning.

Our experienced project management team assembles healthcare professionals to work in multidisciplinary partnership to bring tools, services, and implementation projects to life.

Our expert data team oversees data capture and analysis including such activities as quantifying disease burden, creating and maintaining quality reports, trend investigations, and demand modelling.



As our flagship portfolio, **MAP to MOTION** continues to be a top priority of the institute. There is a deeper story to tell with the bone and joint health experiences of Albertans. Fortunately, technology offers a solution.

With our partners, we're building a system to prioritize research, learning, and innovation. We're investing in building a comprehensive map of bone and joint health, promoting access to comprehensive, high-quality disease-specific and population health data.

On top of that, we're aiming to give people information at hand to be more engaged in their health decisions. The thing about health decisions? It isn't just about the best evidence and care provider experiences. People have different desires, different cultures, and different behaviours. The complexities of individuals impact how they each react to and manage their health.



BUILDING RELATIONSHIPS

Thanks to the hard work and generosity of so many, our fundraising team made significant headway with our \$2 million campaign goal.

We worked to raise the profile of the initiative and received financial support from several partners. This includes the Calgary Health Foundation, the University Hospital Foundation, and the Royal Alexandra Hospital Foundation.

Through the University Hospital Foundation, a significant economic and academic partnership is underway. We're teaming up with Prairies Economic Development Canada, the University of Alberta Faculty of Medicine and Dentistry, and the Alberta Machine Intelligence Institute. Together, we aim to facilitate better management of chronic health conditions, enhance Alberta's health data capacity and analytics, and train the next generation of health data scientists in Alberta.

With our development strategy, we also garnered support with Alberta Health Services, an Alberta patient research group, medical technology companies, a surgical group in Manitoba, and an organization specializing in artificial intelligence.


This growing community of partners continues to inspire us, and we're grateful for the passion and complementary work already being done to provide patients and care providers with better health decision support.

FOUNDATION FOR INNOVATION

Our operations team continued building the base infrastructure of the data platform in 2021. The focus then turned to designing data capture for shoulder conditions. We engaged with MAP to MOTION's Shoulder Topic Expert Group along the way to refine the measurement framework.

MAP to MOTION is already proving its use in progressing research. The Shoulder Topic Expert Group recommends a project to validate a digital tool that would allow people to accurately determine whether they have a certain shoulder condition—without an assessment from a care provider.

We're now shifting focus to launch the module on shoulder conditions and begin encouraging people to sign up and start relaying their health experiences. Thanks to generous support from community sponsors, our fundraising efforts also enable us to begin with **the next module of MAP to MOTION focused on the knee.**



An important component of ABJHI's 2018-2023 strategic plan is to support initiatives that advance prevention and care for a diversity of bone and joint conditions. Funding and partnership with the **Bone and Joint Health Strategic Clinical Network** is a critical avenue for this. We're combining forces to bring evidence-based solutions to life.

Traditional strategies narrow the approach to particular patient populations for tackling the complexity of the health system (for e.g. end-stage hip and knee osteoarthritis or fragility fractures) .

This time, we're going after large, transformational solutions at greater scale. Albertans with joint and muscle problems face similar obstacles. Many are waiting for care that is unnecessary, growing wait lists even longer. Others bounce from one provider to the next, unable to find lasting relief. Instead of a team-based care model, individual practitioners are reimbursed and this is contributing to fragmented service delivery.

We're helping the **Bone and Joint Health Strategic Clinical Network** develop a care model to get people assessed more thoroughly and rapidly. We aim to incorporate broad stakeholder engagement and partnerships across multiple independent practitioners, clinics, and services.



“Our shoulder pathway has the potential to inform best practice care and improve quality of care provincially by ensuring that patients receive the right care at the right place in the right timeframe from the right provider.”

- Breda Eubank
researcher, certified athletic
therapist, Mount Royal
University instructor



TIMELY, LASTING TREATMENT AND CONTINUITY OF CARE

With your help, a new clinical tool is being put to work by two clinics in Edmonton. The tool guides processes to assess and triage someone with shoulder pain. Direction is given to flag urgent cases, conduct physical examinations, and next steps. The tool came to life through consensus-building sessions with over 45 stakeholders. Next, we'll evaluate and refine the tool and begin to share learnings with other stakeholders.

A major focus of the Bone and Joint Health Strategic Clinical Network Musculoskeletal Transformation Program is in getting patients to the right providers from the start. **Over the past year, we helped gather information to develop assessment standards for spine conditions and soft tissue knee injuries.** Once assessment standards are in place, efforts will be applied to standardizing treatment for these conditions.

To bring about change amongst the highly varied services across the province, the problem and solution need to be well-defined. Eight clinics helped us better characterize the needs of spine clinicians. Two clinics worked with us to understand patient experiences with soft tissue knee injuries. Multi-disciplinary stakeholders are now amassing to begin consensus-building in these areas, similar to what was done for the creation of the shoulder pathways.


REALIZING QUALITY OUTCOMES AND SUSTAINABLE RESOURCING

The year was marked by considerable engagement with speciality and primary care clinics around data for quality purposes. Another focus of our work with the Bone and Joint Health Strategic Clinical Network is building a cohesive view of quality and outcomes around assessment processes. This work involves building mutually beneficial relationships between providers within Alberta Health Services and the community.

As we build this cohesive view, we're reaching out to other programs and initiatives in the province to collaborate. We conferred with the Alberta Health Services Review Implementation Office (ARIO) and Improving Health Outcomes Together (IHOT) teams on provincial diagnostic imaging practices. We lent our voice towards access and referrals with the Alberta Surgical Initiative. We linked with the Edmonton Zone's Facilitated Access to Surgical Treatment Program around filling gaps in surgical data.

Our team developed a series of key performance metrics and reporting tool for the shoulder pathways. The same is expected to occur for the other clinical focus areas. The measurement tools will help inform about the impact of the pathways on patients and clinicians.

We want better outcomes for patients, and we think that can be achieved with this new care model proposed by the Bone and Joint Health Strategic Clinical Network and their partners. Given better patient navigation and streamlined testing, a case can be made to resource this model long term.



Working side-by-side with the **Bone and Joint Health Strategic Clinical Network**, we progressed their strategic plan with actions taken to maximize mobility and function, mend the loss of function as a result of bone and joint disorders and injuries, and mitigate the risks for bone and joint injuries and conditions.

Multidisciplinary care is the foundation for bone and joint health conditions. People often require many different services to manage their condition and over lengthy periods of time.

We're advancing how people receive assessments for bone and joint conditions. In progressing care for specific conditions like arthritis and fragility fractures, we also: provided **clinical practice change support**, helped promote **education and awareness**, and supported **scale and spread** of a prevention program.



CLINICAL PRACTICE CHANGE SUPPORT

Thanks to provincial stakeholder input, improved standards are being advanced for hip and knee replacements. Alberta's standards now include appropriate and safe same-day discharge protocols, in line with national trends. We continued to collaborate with hip and knee replacement clinics to guide quality improvement initiatives. This included a detailed analysis on opioid use in joint replacement patients to help inform Alberta's Pain Strategy.


A project was initiated to address the growing use of certain blood thinners that can cause harmful delays in surgery for hip fracture repair. The medical algorithm aims to increase efficiency with reversing drugs administered for the prevention of blood clots. With clinical partners, we also advocated around surgical best practices to prevent and treat nausea and vomiting for those over 65 years of age. Two **provincial fracture prevention programs**, Fracture Liaison Service and Catch-a-Break, now have access to new quality improvement reports to monitor program and patient outcomes.

Nine care standards will soon be available to clinicians and patients to influence higher quality care for adults with **hip or knee osteoarthritis**. Treatments and self-management techniques effective for one person are sometimes not effective for another. The *Comprehensive Quality Care Standards for Osteoarthritis of the Hip and Knee* describes support from diagnosis through to end-of-life by tailoring care planning over time that suits the needs of the patient.

EDUCATION AND AWARENESS

An educational osteoarthritis toolkit can be accessed on the [myHealth Alberta](#) and the [Bone and Joint Health Strategic Clinical Network](#) websites. *Living Your Best Life with Osteoarthritis* provides an overview of osteoarthritis, and information and resources for managing life with the condition. This toolkit and a second toolkit on shared decision-making principles were presented at the Alberta College of Family Physicians Clinical Connections Conference. A new patient handout is available for surgeons to provide to their patients, detailing minimally invasive approaches for total hip replacement.

[Educational materials](#) are now available for conducting workshops or seminars with older adults about bone health. Topics focus on bone health over the lifespan, exercise, diet, bone health medication including osteoporosis medication, and fall prevention. The multi-stakeholder development team aimed to increase dissemination of findings from the study Strategies Targeting Osteoporosis to Prevent recurrent fractures (STOP-FRACTURE).



The experience of scaling and spreading Fracture Liaison Service across Alberta was shared at the 2021 Fragility Fracture Network Global Congress. Hip fracture care in Alberta was profiled at the annual meeting for the Alberta Orthopaedic Society. We're also collaborating with Osteoporosis Canada and the global European Health Data & Evidence Network advocating for improvements in hip fracture care and the management of bone health.

SCALE AND SPREAD

In May, the **eleventh Fracture Liaison Service site in Alberta was launched**. Located at **Medicine Hat Regional Hospital**, the site serves roughly one third of people who experience a hip fracture in the South Zone. Fracture Liaison Service support hip fracture patients who transition from hospital back to the community, addressing a previous care gap for these patients. With up to one year of follow-up provided, the service helps patients with education, in accessing osteoporosis medication, in establishing good medication habits, as well as linking patients to community resources.

Fracture Liaison Service care teams use a specialized database for managing their patients. With input from clinicians, we revitalized the database in 2021 to **facilitate the transfer of cases between clinicians across the five health zones in Alberta**. Some people are hospitalized with a hip fracture in a location far from home and subsequently return home after discharge from the hospital. The revitalized database enables a Fracture Liaison Service care team to easily transition patient case management to a team in a different health zone.

“Patients and their families are active in trying to reduce the fracture risk of their loved ones. Perhaps one of the most mentioned elements of Fracture Liaison Service is the continuance of care. I've noted that the patients we serve are often overwhelmed and are often relieved and receptive when they learn the Fracture Liaison Service will continue to follow them once they're discharged from acute care.”

- Deanna Bower
Fracture Liaison Service Nurse
Medicine Hat


“The new database is clear and easy to use. Lists generated are great to keep us up to date to prioritize our follow-ups/therapy/diagnostics. Data reports are helpful to drive continuous improvements within sites and as a province.”

- Shannon Falsetti
nurse clinician Edmonton,
provincial co-lead Fracture
Liaison Service Working Group

FRACTURE LIAISON SERVICE

A hospital-based, high-intensity intervention program for people over age 50 who suffer a hip fracture.

The focus is on preventing future fractures. Initiation of osteoporosis treatments, coupled with education, falls prevention, engaging communications, and medication adherence are the basis of the service.



ABJHI remains actively involved in projects with members from the **University of Alberta**, the **McCaig Institute for Bone and Joint Health**, and the **University of Calgary**. We continued providing data extracts, analysis support, and project management services for ongoing investigations.

Subject matter mainly focused on **health system design and change management**, including topics such as an osteoarthritis modelling system, pain outcomes for total knee replacement, and infection prevention protocols and pre-surgical optimization program for hip and knee replacement.

“The HIP study performed by ABJHI demonstrates the critical importance of long-term follow-up of novel orthopaedic implants. This study confirms that Birmingham Hip Resurfacing is an excellent alternative to total hip arthroplasty, particularly in younger males who want a bone-preserving procedure that allows them to have a high level of activity.”

- Dr. Jason Werle
principal investigator,
orthopaedic surgeon, section
chief of orthopaedic surgery,
BJH SCN Medical Director

“As this is a newer type of implant, I wanted to review the patient outcomes for those with at least two years of data - specifically looking at any complications or revision surgeries needed to see what early outcomes looked like. The impact on our team was all in the positive. I will continue to use the implant, but I would also like to start investigating some more implants in a prospective manner to collect more data on pre-surgical patients quality of life scores/ range-of-motion and gather long term data.”

- Dr. Justin LeBlanc
orthopaedic surgeon, clinical
assistant professor

CHANNELING KNOWLEDGE

Notably, 10-year patient follow-ups concluded for the Alberta Hip Improvement Project (HIP). In April and June, the project was profiled at the World Arthroplasty Congress and the Canadian Orthopaedic Association annual meetings (conducted virtually). The project addresses a significant gap in literature on the long-term functional outcomes of Birmingham Hip Resurfacing procedures. Birmingham Hip Resurfacing has emerged as a viable alternative to total hip arthroplasty, particularly for younger, more active patients who have not responded to non-surgical treatment. Numerous clinicians and support staff have come and gone over the course of the study. We thank each of them for their contributions over the years.

In May, a quality improvement study was published with findings on infection monitoring tools for surgical site infections of hip and knee replacements. Investigators found a significant variation in the post-operative infection rates reported within two different quality monitoring programs in the province.

In June, we participated in a real-world evidence study looking at performance outcomes for a shoulder implant, a collaboration with Alberta-based orthopaedic surgeon, Dr. Justin LeBlanc, and an industry partner.

IMPROVING THE PROCESS

We noted a slow down in research applications the previous two years. Last year, we began an evaluation of our research-related activities with stakeholders to improve accessibility and expediency of our research intake process. We reduced the application fee, revised priority focus areas, and created support documentation for researchers. The advisory committee, formerly overseeing applications, is disbanded. Applications are now reviewed internally with guidance from an executive research advisory committee as needed. It's our hope these changes will ease the process burden for our research partners, while still respecting resourcing capacity and areas of need for urgent knowledge.

It's important to note, as before, data custodians of the ABJHI data repository can request their own data at any time. The research intake process only applies if that custodian's data is to be linked with another custodian's data.



Thank you to our generous donors who supported the Institute and MAP to MOTION with their gifts from October 1, 2020 to September 30, 2021.

With your support, we're creating innovative, long-lasting solutions for bone and joint health and a healthier future for Albertans.

University Hospital Foundation
Landrex Ventures

Ann McCaig

Tony Fields

Martin Ferguson-Pell

Christopher Smith

Liz Evens

Lisa Glenn



FINANCIAL SUMMARY

For the year ended September 30	2021	2020
Revenue	\$ 1,972,879	\$ 1,856,688
Expenses	<u>2,042,452</u>	<u>1,901,660</u>
Deficiency of revenue over expenses	(69,573)	(44,972)
Net assets - beginning of year	<u>618,915</u>	<u>663,887</u>
Net assets - end of year	<u>\$ 549,342</u>	<u>\$618,915</u>

As at September 30	2021	2020
Cash and certificates of deposit	\$ 403,216	\$ 761,648
Grants and donations receivable	1,642,263	2,041,449
Other assets	<u>286,318</u>	<u>177,974</u>
Total assets	<u>2,331,797</u>	<u>2,981,071</u>

Accounts payable & accrued liabilities	143,650	143,443
Lease inducements	52,161	-
Deferred revenue and deferred contributions which have not been recognized as revenue	1,586,644	2,218,713
Unrestricted net assets	<u>549,342</u>	<u>618,915</u>
Total liabilities and net assets	<u>\$ 2,331,797</u>	<u>\$2,981,071</u>

The above summary has been derived from the audited financial statements of ABJHI which are available upon request. Please contact us at info@albertaboneandjoint.com for a copy of the statements.

ABJHI has a contract with Alberta Health Services to provide data analysis and project management services on a cost recovery basis. The contract was renewed and will continue through March 31, 2025.

WE'VE MOVED!

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