

BONE & JOINT HEALTH

STRATEGIC CLINICAL NETWORK™



Keeping Albertans
Moving

FEBRUARY 2017

Congratulations McCaig!

McCaig Institute Announces New \$13.2-million Bone and Joint Health Research Facility



McCaig Institute Director Steven Boyd and Study Participant, Patricia Salo.

Last September, the McCaig Institute for Bone and Joint Health announced the opening of their new Centre for Mobility and Joint Health (MoJo). The new facility will allow researchers to develop new technologies for the prevention, early diagnosis and treatment of bone and joint conditions.

Located at the University of Calgary's Cumming School of Medicine, the MoJo was established with support from the Canada Foundation for Innovation (CFI) (\$4.7 million grant), the Province of Alberta (\$4.7 million grant), industry partners and private donors. It features state-of-the-art imaging, movement assessment and diagnostic equipment that will allow scientists to assess bone and joint health on every level. Research in the MoJo is guided by clinical needs identified by Alberta Health Services, with the goal of turning scientific evidence into health care solutions for Albertans.

"The MoJo is unique because we bring so many diverse groups together, all working to develop personalized care options for the individual through research," says Steven Boyd, PhD, director of the McCaig Institute. "We are a hub where physicians, basic scientists, biomedical engineers, patients and the Alberta health system, collaborate to keep Albertans moving."

To learn more about the MoJo, visit: <http://www.mccaiginstitute.com/mojo-official-opening>

Fragility and Stability Program

Alberta's Hip Fracture Prevention and Treatment Programs Showcased at IHI Conference

A storyboard outlining Alberta's multifaceted effort to prevent hip fractures and restore quality of life to those who fracture their hip was showcased at the Institute for Healthcare Improvement's 28th Annual National Forum.

The storyboard describes **Catch a Break**, a program for detecting and treating osteoporosis in people who have had a minor fracture, and **Fracture Liaison Services**, a program to restore quality of life to hip fracture patients and prevent another hip fracture. Both programs Catch a Break and Fracture Liaison Services have yielded impressive results. A copy of the storyboard is on the next page.

Redefining Fracture Care: A multifaceted program of osteoporosis detection, fracture prevention and evidence-based treatment

DESCRIPTION

Hip fracture is life-altering for the frail elderly. Without appropriate, optimally timed therapy, many decline cognitively and physically, and require long-term care. 28% of women and 37% of men die within 1 year of hip fracture.

Osteoporosis causes >80% of all fractures in people 50+. Most are non-life threatening fragility fractures signalling osteoporosis. If detected, fragility fractures can be used to trigger education and treatment to prevent escalation to hip fracture.

In hip fracture, quick access to surgery, early mobilization, screening for osteoporosis and comorbidities, evidence-based treatment and fall prevention education increase the probability of regaining pre-fracture health and independence.

AIM

Increase awareness of osteoporosis treatment options, reduce subsequent fractures and ensure appropriate hip fracture treatment.

ACTIONS TAKEN

Prevention: Cast clinic files scanned for fragility fractures. 'Fragility' patients screened. High-risk patients and their family physician educated about treatment/modifiable risk factors.

Treatment: Surgery <48 hours. Next-day mobilization. Patient assigned dedicated nurse/physician team. Treated for osteoporosis, screened for comorbidities, referred for fall prevention. **Primary care integrated into care plan.**

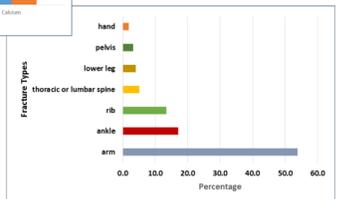
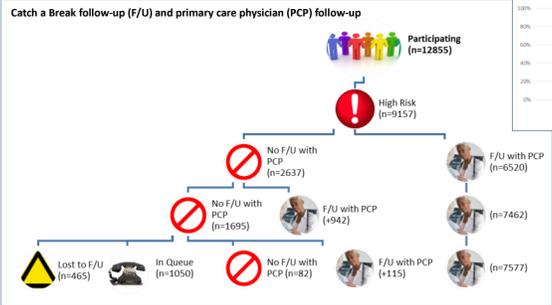
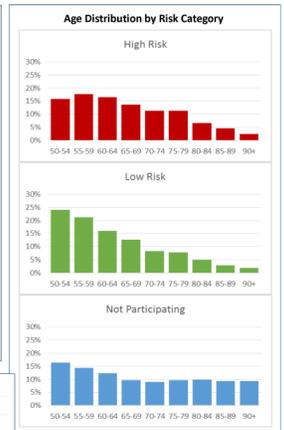
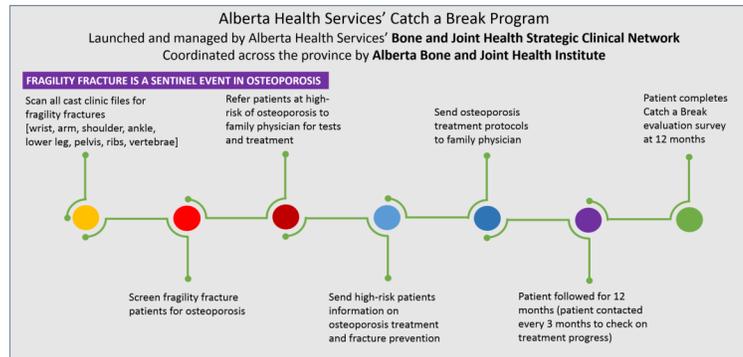
From Dec. 2014 – May 2016

- Prevention:**
- 12,855 fragility fracture patients screened for osteoporosis
 - 9,157 deemed high risk and referred to primary care

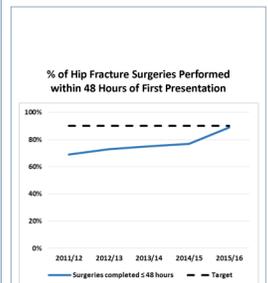
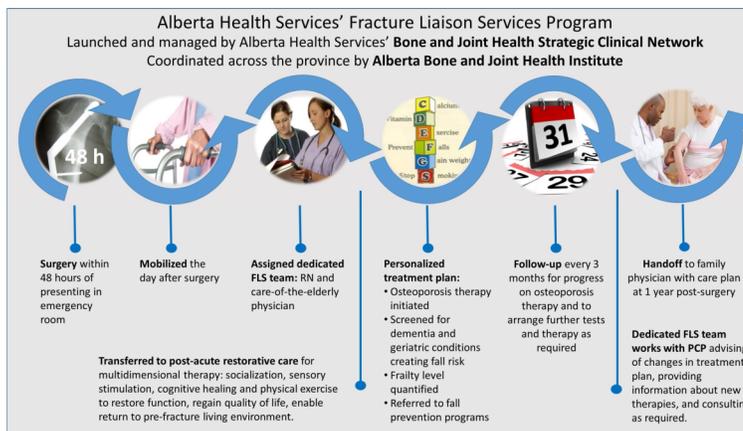
From June 2015 – June 2016

- Treatment:**
- 89% have surgery <48 hours, up from 77%
 - 41% discharged on osteoporosis medication, up from 6%
 - 84% return to previous living environment, up from 77%

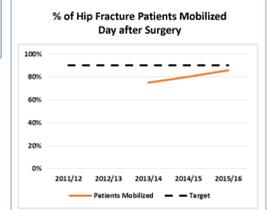
Hip Fracture Prevention



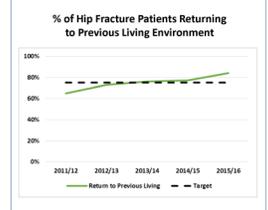
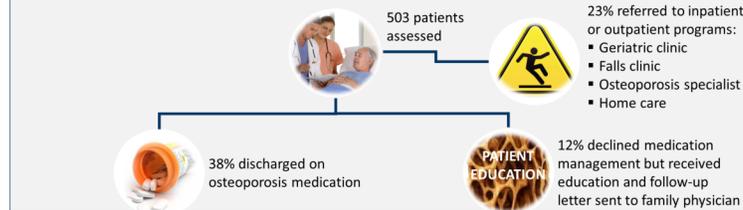
Hip Fracture Treatment



- Alberta's Fracture Liaison Services meets Osteoporosis Canada's 9 essential elements of a fracture liaison services model:**
- Dedicated coordinator
 - Pro-active, system wide case finding of new fragility or vertebral fractures
 - Targets at least 2 of WHO's major osteoporotic fracture types
 - Includes 2i (identification, investigation), or 3i (identification, investigation, initiation)
 - Uses validated fracture risk assessment tool
 - First-line osteoporosis medications initiated (3i) or recommended (2i)
 - Integrated with primary care
 - Data collected for program assessment



Results from launch to June 2016: June 2015 launch in Misericordia Hospital (northern Alberta); November 2015 launch in Peter Lougheed Hospital (southern Alberta); February 2016 launch in Red Deer Hospital (central Alberta). Further expansion in 2017.



Research Corner — From the BJH SCN Scientific Office

BJH SCN Workshop #1 — Stem Cells and OA

Mesenchymal Stem Cells: The hope, the hype and the reality in the treatment of Osteoarthritis



The first workshop of the BJH SCN was held Oct 27 & 28 2016 and focused on the emerging issue of application of mesenchymal stem cells in the treatment of osteoarthritis.

The knowledge and perspectives shared at the workshop made it very clear that stem cells and their application for the treatment of osteoarthritis is a complex matter. Currently, we simply do not know conclusively if stem cells are an effective OA treatment. However, we are also in an environment where patients are seeking this treatment option and providers are exploring how and when to provide such an intervention.

The rich discussion and ideas generated at the BJH SCN Stem Cell Workshop resulted in identification of three priority areas which we in Alberta should move forward on:

1. Contribute to the work being done to establish the efficacy of stem cells for the treatment of osteoarthritis
2. Development of appropriate communication tools and strategies to ensure that the right information is accessible to inform decision making by patients, providers and policy makers
3. Standardization of practice for safe delivery of stem cells for OA

These priority areas will be addressed by implementation committees, which will report to the BJH SCN Scientific Office.

Get Involved!

If you are interested in participating in one of these groups, contact Ania Kania-Richmond, Assistant Scientific Director of the BJH SCN, at anna.kania-richmond@ahs.ca or 403-701-0141.

BJH SCN Workshop #2 — Obesity and OA

Fitness vs Fatness: Implications for Patients with Osteoarthritis

The obesity rate has grown substantially over the past decade in Alberta and across Canada, and is anticipated to continue to increase. Obesity has implications in relation to musculo-skeletal health, and in particular osteoarthritis. It is a risk factor for development of OA, predictor of early hip and knee replacement at an earlier age, and poses a significant challenge in determining appropriateness for hip and knee arthroplasty.

The purpose of the BJH SCN Obesity and OA Workshop is to provide an opportunity for a broad range of stakeholders in Alberta to come together, exchange information and identify how we may provide better care to Albertans with osteoarthritis who are obese.

Date: May 9 & 10, 2017

Location: TBD

Workshop Planning Committee:

Deb Baranec (Patient)
Dr. Emily Bishop (U of C, BME)
Jane Howden-Squire (Director, Ed MSK Clinic)
Dr. Mike Kallos (Director — U of C, BME)

Dr. Raul Kuchinad (Orthopedic Surgeon)
Dr. Linda Woodhouse (U of A, Rehab Med)
Dr. David A. Hart (BJH SCN Scientific Director)
Dr. Ania Kania-Richmond (BJH SCN Assistant Scientific Director)

Research Corner—Continued

Student MSK-Obesity Competition

The Bone and Joint Health Strategic Clinical Network™ and the Cumming School of Medicine Orthopedic Section at the University of Calgary are partnering to run a pilot student competition** on the topic of arthroplasty and obesity.

Problem

Orthopedic surgeons are challenged with providing high quality evidence based care to patients with osteoarthritis and obesity.

Specifically:

Problem Area 1:

Optimization of patients with obesity for arthroplasty

Problem Area 2:

Fitness vs Fatness – Is there a better and cost-effective way than BMI to easily identify body composition in a clinical environment?

Do you want to be part of the solution?

The deadline for email submission of your team's proposal is February 15, 2017.

In summary, requirements are:

- First year University of Calgary medical student
- Teams of 2 or more individuals
- Choose ONE of the problem areas and submit a proposal for real-world application
- Base proposal on evidence (literature, clinical expertise, and/or best practices/guidelines)
- The result could range from a screening tool to an optimization treatment algorithm for patients with obesity who are candidates for arthroplasty; see attached for a larger list of options
- Present your proposal in a report with a maximum of 12 pages (12 font, 1.5 spacing)

A review panel will assess submissions and all teams will receive feedback by March 1, 2017.

For additional details, contact Ania Kania-Richmond at anna.kania-richmond@ahs.ca or Christina Barr at cbarr@albertaboneandjoint.com.

Interested in sharing a story in our next newsletter? Please contact sheila.kelly@ahs.ca

MORE INFORMATION: In the coming months we will keep you posted on the work of our Bone and Joint Health SCN. If you wish to learn more, or become more involved, please contact : bonejoint.scn@ahs.ca