

HOLLAND MUSCULOSKELETAL PROGRAM TEAM NEWS

23rd Edition, Winter 2016



Orthopaedic Trauma Lead Role Enhances Coordination of Care



Dr. Richard Jenkinson, an orthopaedic surgeon of the Holland Musculoskeletal (MSK) Program has been named Head of Orthopaedic Trauma. In collaboration with the teams of the Trauma, Emergency and Critical Care Program, Dr. Jenkinson will lead work to enhance the interprofessional coordination of care for the many patients with musculoskeletal acute injury or trauma, who are brought to Sunnybrook's Trauma Centre or referred from other healthcare institutions.

These patients require urgent, specialized expertise in orthopedic surgery to treat trauma to bones, joints and muscles. "Often these

procedures are very complex but our surgeons are leaders in advanced techniques," says Dr. Jenkinson. "Our goal is to both save lives and to preserve quality of function and mobility for these individuals, as much as possible."

Dr. Jenkinson will be a liaison between the Orthopaedic Division and other Divisions at Sunnybrook's Bayview campus related to care of the trauma patient, to enhance processes, "... so that, for example, once bones are stabilized, we can better collaborate on next steps to address soft tissue injury, and reconstruction," he says.

An Assistant Professor in the University of Toronto's Division of Orthopaedic Surgery, Department of Surgery, Dr. Jenkinson focuses on lower extremity trauma and reconstructive surgery in his practice. His research interests are in the improvement of outcomes for patients who undergo hip and knee replacement and fracture surgery.

He is Sunnybrook site lead investigator on numerous multi-centre studies, including the HIP ATTACK trial that is looking at ways to improve outcomes for older patients who experience hip fractures.

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Holland Musculoskeletal Team News offers updates on clinical services, education and staff activities.

We welcome suggestions for content and your articles for future issues. Please send ideas and/or submissions to natalie.chung-sayers@sunnybrook.ca

Partners in Care: Sharing Ideas to Further Improve The Patient Experience

“We are always working to enhance the care experience, and what better way to do that than to engage patients and families for their valuable input,” says **Lindsay Crawford** about Partners in Care, an initiative recently launched at the Holland Centre.

The Partners in Care Council is a forum for patients and families to volunteer their time to meet and advise on important topics related to programs at the Holland Centre, and share recommendations and ideas to further improve the patient experience.

“Our first meeting held in mid-June was quite successful. We discussed a number of topics with a very keen and engaged membership,” says Lindsay, who is an Occupational Therapist and Patient Transition Coordinator working on this initiative with **Deborah Kennedy**, Manager, Rehabilitation and Program Development, at the Holland Centre.



The Council is made up of patient and family advisors, and staff of the Holland Centre. The group meets four to six times a year for one to two-hour meetings.

Partners in Care Council advisors enjoy working with others, are good listeners, and remain open-minded and respectful of diversity.

“The role is not about taking on a specific cause,” says Lindsay. “Instead, the role is about contributing to meaningful improvements in how patient services and care are delivered.”

For more information, please visit sunnybrook.ca/partnersincare.



Holland Centre Operating Rooms and Facility Improvements support patients

Surgical Services area renovations set for completion at the end of 2017, including:

- renovations to 4 existing Operating Rooms
- addition of a new, fifth Operating Room

Upon project completion, the Holland Centre will run 4 Operating Rooms with future potential to run 5 operating rooms.

Renovations enhancements include:

- addition of a large, state-of-the-art Air Handling Unit for high quality airflow, filtration.
- improved medical gas monitoring as a result of system upgrades.
- fortified building infrastructure and significant waterproofing for longevity of the facility
- addition of new generators to support 24/7 backup power.

Welcome to Dr. Bheeshma Ravi

The Holland Musculoskeletal Program welcomes **Dr. Bheeshma Ravi**, orthopaedic surgeon. He joins the arthroplasty (joint replacement) team of the Hip and Knee Arthritis program at Sunnybrook’s Holland Centre.

Dr. Ravi is a graduate of the University of Toronto Residency program in Orthopaedic Surgery. He is an alumnus of the Surgeon Scientist Program, and also received his PhD in Clinical Epidemiology and Health Care Research from the University. He also completed a subspecialty fellowship in adult reconstruction at the Mayo Clinic.

He joins the University of Toronto’s Division of Orthopaedic Surgery, Department of Surgery, as an assistant professor and a clinician-scientist and has been appointed as a scientist with the Evaluative Clinical Sciences Platform at Sunnybrook Research Institute. His research focuses on improving outcomes for patients

after total joint replacement and other orthopaedic procedures.

Says Dr. Ravi, “Many of us think of pain reduction as the main benefit of total joint replacement but it is also about regaining a walking ability.”

“To be able to move again offers emotional and physical benefits. Whether you’re spending time with family keeping up with the grandchild, or enjoying the independence of daily walks with the dog, these movements matter, and research suggests that treatments may also provide a heart health benefit.”

“Many of us think of pain reduction as the main benefit of total joint replacement but it is also about regaining a walking ability”

He is first author of an analysis published in the *British Medical Journal* that reports a dramatic 40 percent reduced risk of coronary events for patients with moderate

to severe osteoarthritis who underwent knee or hip replacement. For an average of seven years, the researchers followed a group of 153 patients



Dr. Bheeshma Ravi

ages 55 years and older who had these surgeries, and 153 matched participants who did not. Though more research is needed, this study is the first to show a possible cardio-protective benefit of total joint replacement or total knee or total hip arthroplasty.



Adding To The Patient Experience

Teams of the Holland MSK Program are always looking at ways to improve processes. These improvements seem unrelated to daily activities in the clinic, but in fact, enhance the care experience.

“Our goal is to add to the patient experience by carefully and systematically finding efficiencies in the way we deliver care as a team. The result is that staff gain more clearly defined roles to both build on their

areas of expertise and contribute to team success in providing exemplary care,” says **Carolyn Roknic**, Manager, Administration, Working Condition Program (WCP) who completed a LEAN course offered through the Ontario Hospital Association. LEAN in healthcare is a well-established approach of engaging in continuous process improvements to add to positive experiences for patients, and also for health care partners.

The Working Condition Program at the Holland Centre supports patients with workplace and accident-related musculoskeletal injuries. Insurers such as the Workplace Safety and Insurance Board, and workplace employers refer individuals to the program for assessment and treatment.

The program identified a need to improve the delivery time of assessment reports to the referral as well as to the patient’s family physician. To better understand how to improve the process, a project team was created from members of the WCP team, to map out all of the steps in a patient’s journey, from their first appointment to the final report sent to the referral and his/her family physician.

This mapping revealed areas in the journey that could be removed or improved, to add value to the patient experience.

One area identified was

time spent editing the patient’s report after her or his visit. The team implemented a dual dictation process. The physician and therapist would contribute to sections of the report on the day of clinic to reduce time required for edits after clinic.

The group also identified a need to improve the assessment tool used to record the patient’s history during assessment. A

special group within the WCP team, dedicated to this initiative, revised the tool to better capture the information from the patient, and more clearly communicate the treatment plan.

A simpler process improved the completion time of assessment reports and ensured more timely action on recommendations and treatment plans. Clinicians (physiotherapists and occupational



Some of the Working Condition Program team members who engaged in continuous process improvements to add to the patient experience. Photo by Louise Jardine

therapists) and administrative staff gained greater focus on their specific roles in the patient experience and more time to be with patients.

Holland MSK’s **SCIL Program (Sunnybrook Centre for Independent Living)**, at Sunnybrook’s Bayview campus, is also underway with a LEAN initiative, with goals to enhance practice and patient care.

SCIL supports patients with musculoskeletal conditions that present challenges for independent performance of activities of daily living. The program provides services in pedorthics (foot orthotics and custom footwear), podiatry and prosthetics (specialized support devices).

“Through streamlining of processes to reduce technical and clinical labour, we have optimized production time for foot orthotics,” says **Kevin Fraser**, Pedorthist, SCIL Program. Foot orthotics are custom-made devices that support, align and accommodate for a foot abnormality to help how the foot functions.

SCIL is also looking at ways for optimization related to foot orthotics. They are testing the combined use of conventional fabrication methods and newer methods using computer-assisted design technology:



Aligning custom foot orthotics

Conventional fabrication involves the use of plaster, foam impression or fiberglass castings of a patient’s feet to then make orthotics.

Modeling CAD (computer-assisted design)-CAM technology uses 3D laser and white light image scanning directly on a patient’s feet, which eliminates the need for casting. The CAD-CAM then mills the orthotics to the specifications of the digital model.

For patients with diabetic wounds, 3D scanning and modeling technology may prove to provide a better experience, instead of more

contact with plaster casting.

Pressure-related injuries or ulcers are unfortunately very common in patients with diabetes. Once Kevin and the team make the orthotics, the use of these by patients, for bracing or offloading pressure and strain, becomes a key strategy to help with wound healing.

“Testing this combination enhances the practice of pedorthics, but also importantly, has a positive impact in supporting more tailored care for our patients,” says Kevin.

My Storyboard posters enhance compassionate care for patients

Caring, listening, shared decision-making, dignity, respect, compassion: these critical elements encompass Person-Centred Care, a collaborative approach that teams across Sunnybrook strive to exemplify in providing care to patients every day.

This approach is about seeking and embedding the voice of the patient. For patients who have cognitive challenges, finding their voice involves greater engagement with them and with their family members.

William Wong is a physiotherapist in the Holland MSK Program who supports care in the in-patient units at the Holland Centre. Teams help patients recovering from orthopaedic surgery, and a smaller group, some of whom may have cognitive impairments. These latter patients are part of a program in collaboration with the Bayview campus focused on encouraging mobility and independence to enhance transitions to alternate levels of care.

“We wanted to further improve communication between cognitively challenged patients and their loved ones, and members of the care team. Some of these patients may have difficulties articulating their needs,” says William.

To facilitate a greater voice for them, William developed My Storyboard posters. These posters will be placed at each patient’s bedside. The posters share a brief history of the person, their hobbies, interests and accomplishments.

“Each poster becomes an affirmation of the person’s

individuality and of how they have contributed to society,” says William.

The poster approach, based on evidence William gathered from peer-reviewed, published literature on care experiences of patients with dementia, also serves as an important communication tool.

“We work closely with patients and their loved ones to identify and understand potential factors that may influence behaviours, and develop approaches and communication strategies to better support these patients.” These details are also shared on each My Storyboard poster.

“The more we can understand about these patients, and ‘hear’ their voice by means of these posters, the better we can individualize, and enhance their care experience,” he adds.



“The more we can understand about these patients, and ‘hear’ their voice by means of these posters, the better we can individualize, and enhance their care experience,” says William Wong, pictured in the front row, 4th from left.

Behaviours in individuals with dementia are due to changes in the brain that affect memory, judgement, orientation, mood. These behaviours, represent how their actions, words and gestures are a response, often intentional, that express something important about their personal, social or physical environment.

To further improve compassionate care, William is also conducting interviews with patients, family members and with team members including nursing, physical therapy, occupational therapy, social work, environmental services and clerical.

William is a 2016-17 Holland Musculoskeletal Health Professions Innovation Fellowship Award recipient for his practice-based research, ‘Personhood: Optimizing the Management of Responsive Behaviours, with Compassion’.

Awards

Drs. Margarete Akens, Michael Hardisty, Brian Wilson, Diane Nam, Albert Yee, and Cari Whyne were a “Best Papers Award” recipient at the iCORS (International Combined Orthopaedic Research Society Annual Meeting. The team won for their oral presentation “Photodynamic Therapy (PDT) to enhance healing of femur fractures with a critically sized defect”.

Dr. John Murnaghan, Orthopaedic Surgeon, Holland Musculoskeletal Program and Surgeon Educator in the University of Toronto’s Department of Surgery, received an Award of Merit from the Canadian Orthopaedic Association, for his

work in surgical education in Canada. This prestigious award is given for service to the profession in the field of medical organization as it relates to orthopaedic surgery, and personal contributions to the advancement of orthopaedic education in Canada.

A team led by **Helen Razmjou**, Advance Practice Physical Therapist, and **Dragana Boljanovic**, Physiotherapist, received the 2015 Silver Quill Award from the Canadian Physiotherapy Association in the Qualitative and or Quantitative Research category, for their article published in Physiotherapy Canada entitled, “Association Between Neuropathic Pain and

Reported Disability After Total Knee Arthroplasty”. **Drs. Stewart Wright, John Murnaghan** and **Richard Holtby** are also authors on the paper.

Helen Razmjou, Advance Practice Physical Therapist, Holland Musculoskeletal Program, has received the University of Toronto 2015 – 2016 Department of Physical Therapy Exceptional Achievement Recognition Award for her research contributions to the profession. She has a Doctoral Fellowship from the Canadian Institutes of Health Research, and has had published over 100 peer-reviewed abstract and manuscripts.



Research Highlights

The Holland Musculoskeletal Program continues to be successful in Grant funding to conduct new research or to expand on existing work:



Dr. Diane Nam with a patient

Dr. Diane Nam was awarded bridge funding for her project: “Lithium for fracture treatment (LiFT): a double blind randomized control trial” (\$100,000).

Dr. Diane Nam and **Dr. Cari Whyne** are co-investigators on Dr. Jean Gariepy’s successful CIHR grant “Understanding and harnessing the therapeutic potential of VISTA: a PD-1-like negative immune checkpoint regulator” (\$756,855)



Dr. Veronica Wadey

Dr. Veronica Wadey and the Arthroplasty Program successfully secured an OMeGA (\$27,000) grant to support clinical fellows in the program.

Tips for Good Bone and Joint Health

“A lifetime of moving on your own is as important as your cardiovascular health,” says **Sandy Lincoln**, Physiotherapy Team Lead, Working Condition program, Holland Musculoskeletal Program, who offers these tips:

Eat calcium-rich foods. Limit caffeine and alcohol intake. Do not smoke

Eat enough vitamin D and calcium – both work to strengthen bones. Vitamin D helps the body use calcium.

Caffeine interferes with the body’s ability to absorb calcium. Have no more than two caffeinated beverages a day.

Keep your alcohol intake low. Alcohol affects the balance of the erosion and remodelling of bone tissue. It inhibits the formation of osteoblasts needed to form new bone.

Smoking cigarettes interferes with healing, as it disrupts the flow of oxygen to your tissues. Absorption of nicotine can also lead to reduced bone mass.

Maintain a healthy body weight

Being overweight or underweight are both risk factors in bone disease. The better range for body mass index is 18.5 to 25 kilograms per metres squared.



Being overweight increases the stress on lower extremity joints. This means more wear on the cartilage - a factor in the development of osteoarthritis or degenerative joint disease, especially in the knees.

Being underweight results in lower bone mass or lower amounts of mineral per volume of bone, which increases the risk of osteoporosis.

Exercise regularly: include resisted exercises, balance activities

Do resisted exercises such as weight lifting for arms and legs. The pull of muscle on bone helps to keep bones strong. “Many women do aerobics, but should also do resisted exercises.”

Sandy also recommends weight-bearing activities such as walking or running, as loading the bones helps to keep them strong. Do balance exercises as you age to maintain stability and reduce the risk of falling.

Prevent falls

Falls can result in fractures. Prolonged inactivity during healing and regaining function can lead to osteoporosis and muscle weakness.

Most falls are preventable. Check your home for hazards like loose rugs, poor lighting, uneven floorboards, and cords across floors. Stairs should have handrails on both sides.

For more health blogs, visit: health.sunnybrook.ca

The Holland Musculoskeletal (MSK) Program is one North America’s finest in musculoskeletal care, education and research, and provides integrated services in orthopaedic surgery, orthopaedic trauma, rheumatology and rehabilitation. Located at the Holland Orthopaedic and Arthritic Centre and Bayview sites of Sunnybrook Health Sciences Centre, the Holland Musculoskeletal (MSK) Program is a key referral centre for complex traumatic orthopaedic surgery, spine surgery, hip and knee joint replacement, soft tissue injury reconstruction, and shoulder and upper extremity surgery, and also encompasses the Working Condition program and the Sunnybrook Centre for Independent Living.