



Orthopaedic Care update

Yvonne White

Words to Live By

There are five words on the wall by the window in Yvonne White's kitchen: "it is what it is." These are the words she lives by.

Ten years ago, Yvonne and her husband Bill, who she'd known since she was 12 and he 14, were enjoying a motorcycle trip down to West Virginia to visit Bill's brother. In an instant while travelling through Springhill, New York, everything changed.

"At about 4:20, a half-ton truck came at us. It killed my husband instantly," says Yvonne.

Yvonne's injuries were extremely severe and included fractures to her spine that affected the nerves which control the hips, legs, arms and hands, as well as the muscles of her abdomen and back. Not only did she have broken ribs and a broken femur, she completely lost her tibia – the shinbone – along with a muscle in her lower left leg. On top of all her other injuries, she also suffered a concussion and brain injury. "When I say I was left with almost every bone in my body broken, that's pretty much what happened. I don't remember the accident. I was in an induced coma for a week. The doctors were afraid that if I heard my husband had died, I would go into cardiac arrest."

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London Health Sciences Foundation Orthopaedic Care Campaign

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During the first four days after the accident, Yvonne underwent four surgeries in the U.S. On the fifth day, she was flown to London and brought to the trauma unit at London Health Sciences Centre (LHSC).

Yvonne had seven surgeries at LHSC, surgeries which typically have a long and difficult recovery period.

"They thought I might never walk again," she recalls.

She spent three months in rehab, which included intense physiotherapy and occupational therapy. But Yvonne was determined, and over the next four years, she progressed from using a wheelchair, to walking with crutches, to using a cane. Five years after the accident, Yvonne was able to walk without using a cane. She credits Dr. David Sanders, an orthopaedic surgeon, and the surgical teams at LHSC for getting her back on her feet.

"The whole team has terrific bedside manners; I was treated like gold. Dr. Sanders gave me my life back. I was treated with respect and compassion."

While she has spent many years working hard to regain her physical abilities, Yvonne also experienced posttraumatic stress disorder (PTSD) and continues to grieve the loss of her husband.

"I do not have my husband, but I have so much. I wanted to be the best I could be and I wasn't going down without a fight. I am a stubborn Cape Breton woman."

A Message from the Orthopaedics Program at LHSC

When you think "Orthopaedics program," what springs to mind? Maybe a hip or knee replacement in a patient with arthritis, or perhaps a fractured bone that needs to be fixed. But that's only part of a very large picture. The Orthopaedics Program at LHSC is multi-faceted, with separate yet connected Clinical Teaching Units that treat a wide variety of patients, including young people, athletes and others who may have suffered sports injuries, illness or accidents. We care for patients with bone, muscle and joint health issues. We have programs for both inpatients and outpatients, focusing on prevention, diagnosis, treatment, surgery, rehabilitation and education.

Joint Replacement Institute at University Hospital

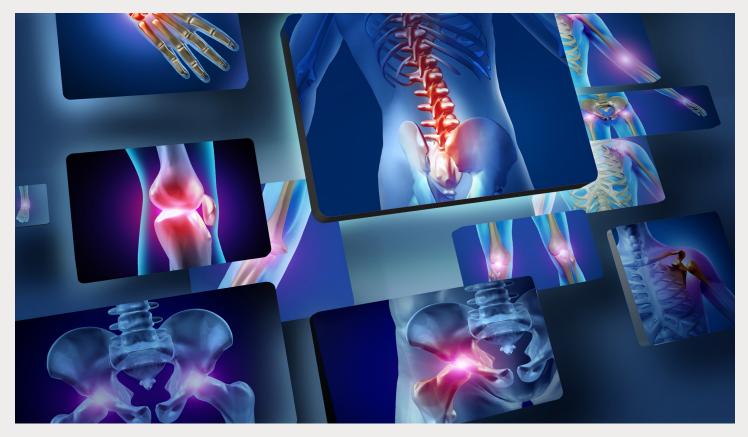
The Arthroplasty Program at University Hospital is one of the largest academic health care centres in the province performing joint replacements. In 2017/2018, we expect to perform almost 2,000 joint replacements. Our surgical services emphasize new technologies, such as minimally invasive surgical procedures, designed to offer patients more treatment options, less pain and faster recovery time. Multiple ongoing research projects and trials are performed each year to further advance knowledge in this cutting-edge field.

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Fowler Kennedy Sport Medicine Clinic (FKSMC)

As a leading centre for sport & exercise medicine, Fowler Kennedy provides high quality, timely, comprehensive and compassionate care. The clinic helps people of all ages stay active, from recreational enthusiasts to elite athletes. We now provide direct access for acute sport injuries with a comprehensive assessment within a day or two. The Fowler Kennedy Clinic has close to 100,000 patient visits annually and provides surgical care to 1,500 patients with leading edge techniques including joint preserving procedures. Our award-winning researchers study common joint disorders including knee arthritis, tendon tears, shoulder instability and hip disorders in younger patients.

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Orthopaedic Trauma Unit at Victoria Hospital

The Orthopaedic Trauma Unit provides total patient care for adult traumatic injuries, from moderate to severe. Victoria Hospital is the provincially designated Level One trauma centre for Southwestern Ontario. Research, outreach education, and injury prevention is supported within the program. We work closely with multiple services at LHSC and throughout the area to provide comprehensive trauma care with a team approach.

The Spine Centre at Victoria Hospital

The Spine Centre at Victoria Hospital is a multi-disciplinary program that provides assessment and care for all types of spinal conditions. The Spine Unit supports the Trauma Unit in providing comprehensive care of traumatic spinal column and spinal cord injuries. The unit also supports the London Regional Cancer Program in providing surgical care of patients with cancer involving their spine. The Spine Centre also manages a large volume of regional patients with degenerative conditions involving the spine and spinal deformity. The Spine Centre is committed to ongoing research, education and program development to improve outcomes and spine care for all patients. Sandy Kirkley Centre for Musculoskeletal Research The Dr. Sandy Kirkley Centre was established to honour

the memory of Dr. Sandy Kirkley, an extraordinary orthopaedic surgeon, scientist and mentor, dedicated to the advancement of research on musculoskeletal health and diseases, particularly related to bones and joints.

We care for patients with bone, muscle and joint health issues. We have programs for both inpatients and outpatients, focusing on prevention, diagnosis, treatment, surgery, rehabilitation and education.

The Centre is located on Level 6 of the Lindros Legacy Research building at University Hospital, and is designed to encourage collaborative research related to bone and joint disease. The Centre facilitates citywide, multidisciplinary research in sport medicine, joint replacement surgery, musculoskeletal imaging, skeletal biology, physical therapy and clinical epidemiology.

Building the Future | Spine Biomechanics Lab

London Health Sciences Centre is the only spine centre in Southwestern Ontario, providing advanced surgical treatment and care for spine trauma, degenerative disorders (a loss of normal structure and function causing serious back pain), and oncological spine conditions.

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Each year, approximately 6,000 spine patients are referred to our Hospital and more than 500 complex spine surgeries are performed by LHSC surgeons.

These surgeons – Drs. Kevin Gurr, Tim Carey, Chris Bailey, Fawaz Siddiqi, and Parham Rasoulinejad – are constantly looking to improve patient care for spine conditions through biomechanics (the study of the muscular, joint and skeletal actions of the body during a certain task).

In order to continue to advance surgical innovation and further develop London's international reputation as a centre of excellence for spinal surgery and research, LHSC has plans to fully relocate the research program into a newly developed Spine Biomechanics Research Laboratory located within its Victoria Research Laboratories.

With donor support, LHSC will develop this exciting new laboratory to carry out novel spine research for the next decade – with plans to eventually expand to foot and ankle biomechanics. Researchers will design, test, commercialize and acquire new technologies and instrumentation to improve patient care, create jobs and attract top international spine surgery fellows and research trainees to London.

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The O-arm surgical imaging system allows for real-time 2D and 3D imaging of a patient during surgery, which is especially useful during spine surgery where accurate surgical navigation makes all the difference.

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Fowler Kennedy Welcomes Donor-Supported Research Manager



For over 20 years, donors have gathered at the London Hunt and Country Club for the Fowler Kennedy Charity Tennis Classic, an annual tennis tournament with proceeds supporting FKSMC initiatives. Recently, the proceeds from the tournament were used to help

Stacey Wanlin

hire Research Manager Stacey Wanlin, who shares the following:

"I'm very grateful to this group who supported my new position as Research Manager. Since my arrival in January 2016, I've had the pleasure of being introduced to a number of different tasks, some of which include:

Manage logistics along with research staff, students and volunteers for over 20 research studies

- Coordinate TeleSurgery Program
- Main point of contact with Industry Partners
- Liaison with the Research Ethics Board and the University Hospital Internal Research Committee to submit new research protocols, continuing ethics reviews and hospital approvals to conduct research
- Organize weekly rounds meetings
- Manage over 25 research accounts
- Coordinate Fellowship Program
- Assist with logistics for internal events like our annual Sport Medicine Day

Donor support was also used to purchase three new desktop computers for our Research Department. This has allowed us to be more efficient by providing a space for volunteers to help us with our data entry. We are always looking for new ways to increase our productivity.

I'm excited for 2017 and the new opportunities that will arise. Thank you for your continued support!"



Attendees of the Fowler Kennedy Charity Tennis Classic

Community Support of Concussion Research



Dr. Lisa Fischer, Director, Primary Care Sport Medicine, FKSMC

The physicians, physiotherapists and staff at FKSMC are dedicated to providing exceptional care for athletes with sport concussion, including diagnosis, clinical management strategies and enhanced rehabilitation.

Proceeds from See the Line – a concussion research and awareness symposium event held annually in August – help support concussion research.

"We provide care to more than 4,000 patients of all ages each year with sport concussion, and the numbers continue to rise. This work would not be possible without the support of our donors. Through their generosity, we have been able to hire a physician assistant who (in conjunction with our physicians) is able to dedicate added valuable time for education and management strategies. We have also been able to provide a quiet examination room, and bring in specialized equipment to enhance care and research," says Dr. Lisa Fischer, Director, Primary Care Sport Medicine, FKSMC.

Led by Dr. Fischer, the research team is examining many variables in people with concussions. Some of the research is focused on using blood samples to determine if a patient is concussed, imaging, measuring blood supply to the brain in a given period of time, and examining changes in heart rate and blood pressure through exercise.

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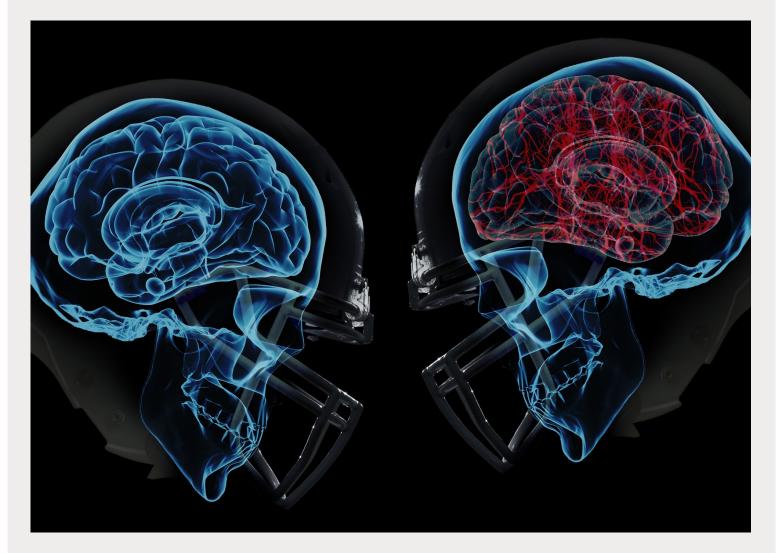
Special focus is being placed on exercise as treatment for concussion and on the role of anxiety as a persistent symptom in both adults and adolescents. Studying the effectiveness of compression vests and weighted vests in adolescents with mild traumatic brain injuries is also part

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of the program. The vests are effective to help patients to calm themselves before anxiety attacks. Eye-motor control dysfunction is present in about 90 per cent of concussed athletes and the team is working to determine if this might be inhibiting positive responses from people who have concussions.

Highlights of Published and Ongoing Research

- Metabolomics Profiling of Concussion in Adolescent Male Hockey Players. A novel diagnostic method helps to identify whether or not an individual is concussed by having their blood drawn and analyzed within 24-72 hours from time of occurrence of injury.
- Detection of Biomarkers in Child Athletes at Risk of Concussion. A closer examination of the varying proteins within one's system used to help detect concussions.
- Dynamic Cerebral Autoregulation Impairment to Postural Stress following Concussive Injuries in Adolescents. Examining the amount of blood flow to the brain and its effects to different parts of the body (ex. heart rate, blood pressure) and the role it plays in persistent symptoms of those suffering from post-concussive syndrome.



Donors Support the Future of TeleSurgery

Thanks to incredible donor support, FKSMC's vision to enhance its orthopaedic surgical program through TeleSurgery has become a reality. TeleSurgery is a remote surgical collaboration that offers many opportunities to advance education, share knowledge and support

new and complex surgical procedures and techniques.

With the InTouch Vantage TeleSurgery system, FKSMC's incredible team – including orthopaedic surgeon and clinician scientist Dr. Alan Getgood – will be able to:

- Demonstrate and teach new techniques in real time to surgeons around the world
- Mentor and attract the next generation of orthopaedic and sport medicine specialists
- Generate funds to support future cutting-edge research projects right here in London

Specifically, the system will act as a source of ongoing revenue generation for FKSMC to support their latest research breakthroughs as other health care providers and medical research companies will provide stipends to Fowler Kennedy in exchange for TeleSurgery demonstrations.

Thank you to the group of investors from our community who funded the InTouch Vantage TeleSurgery system.

We'd Be Happy to Hear from You!

Please contact us if you have any questions about the Orthopaedic Care Campaign in support of the Orthopaedic Care Program at LHSC. Whether you want to know more about the program and its fundraising priorities or how philanthropic support is helping to create world-class orthopaedic care right here in London, we are more than happy to help.



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