FACES OF CHANGE
Division of Orthopaedic Surgery
Progress Report 2011-2013
Many Steps Taken, Many Faces of Change

The last three years has demonstrated that our spirit for innovative approaches to education, our culture of collaboration, and our vision towards evidence-based orthopaedics is stronger now than ever—and fuelled by our most valuable resources - our faculty, residents, and staff.

As we approach the end of 2013, we are reminded of several significant achievements within our growing Division. These include, but are not limited to, successes within our residency training and educational platforms, awards garnered by numerous faculty, and new benchmarks and frontiers in our programs of research.

- Orthopaedic residency training program receives full approval from the Royal College
- Drs. Brad Petrisor and Jaydeep Moro are appointed Royal College Examiners
- Drs. Victoria Avram, Mitch Winemaker and Jaydeep Moro are recognized with Teaching Awards
- Drs. Anthony Adili, Justin DeBeer, and Devin Peterson win Faculty Recognition Awards
- Dr. Bhandari is given the Canadian Orthopaedic Association’s Award of Merit and delivers the 2012 COA Presidential Guest Lecture, “Think Big”
- Drs. Ayeni and Bhandari receive the Canadian Orthopaedic Legacy Grant
- Dr. Michelle Ghert is selected for the prestigious ABC Travelling Fellowship and one of only two in the history of our Division to have this honour
- Dr. Dale Williams dramatically expands our Fellowship Program
- Dr. Ben Dehesi trailblazes with an innovative Mentorship Program for residents

Our milestones not only signify our distance travelled...
“Unity in vision and leadership”
We are humbled by the success of our faculty and the realization that their work has implications far beyond our Division. We are meeting the world’s big challenges head on. Our efforts will impact road traffic safety worldwide (INORMUS study) and make important strides towards making the world safer for victims of domestic violence (PRAISE study). We are creating a culture of social responsibility, both locally and abroad, and engaging the world’s best in our quest as life-long educators and learners. Let us take this moment to celebrate our many steps taken and our faces of change.

Sincerely,

Mohit Bhandari MD, PhD, FRCSC
Professor and Academic Head, Division of Orthopaedic Surgery
Associate Chair, Research, Department of Surgery
Canada Research Chair in Surgical Outcomes
McMaster University

...but also indicate our future course
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OUR CONTACT
Our Leadership

The Executive Committee is responsible for assisting and supporting the educational, research and administrative activities within the Division of Orthopaedic Surgery.

Anthony Adili
Chief of Surgery and Site Lead, SJH

Olufemi Ayeni
Director of Advancement

Mohit Bhandari
Academic Division Head; Associate Chair of Research, Department of Surgery

Sarah Burrow
Chief of Orthopaedic Surgery, HHSC

Benjamin Deheshi
Mentorship Director

Brian Drew
Site Lead, HGH

Michelle Ghert
Associate Program Director, Residency Education Training; Research Director, Division

Richard Lachowski
Director, Alumni Affairs

Jaydeep Moro
Clerkship Director

Bradley Petrisor
Program Director, Residency Education Training

Dale Williams
Fellowship Director

Mitchell Winemaker
Clinical CTU Director, JHCC
Who we are

Our goal is to improve the lives of patients with musculoskeletal disease through the paradigm of evidence-based orthopaedics. Whether engaged in orthopaedic surgery, education, research, or practice, we are all here to learn, to innovate and to disseminate our culture and values to our patients, students, faculty, and community.
Our Vision

**Education** - We aim to be a top tier program in Canada for evidence-based orthopaedic training, attracting the best and most promising students to our Division.

**Research** - As a research institution, we endeavour to be the best environment for clinical research, fostering global collaborations, conducting high impact clinical research, and educating exceptional students at the undergraduate and graduate levels.

**Faculty** - We seek to attract and retain top orthopaedic faculty from Canada and internationally. We will ensure that our faculty’s accomplishments are recognized and promoted.

**Leadership** - The success of our Division is highly dependant upon the unified core values and culture within our leaders. We will continue to produce lifelong learners that practice orthopaedic surgery in a responsible, ethical, and evidence-based manner.
Our Faculty

Hamilton General Hospital

Dr. Drew Bednar  Clinical Professor
Dr. Mohit Bhandari  Professor
Dr. Matt Denkers  Assistant Professor
Dr. Brian Drew  Associate Clinical Professor
Dr. Desmond Kwok  Assistant Clinical Professor (Adjunct)
Dr. Bradley Petrisor  Associate Professor
Dr. Krishan Rajaratnam  Assistant Clinical Professor
Dr. Bill Ristevski  Assistant Professor
Dr. John Sadler  Assistant Clinical Professor
Dr. Dale Williams  Assistant Professor

McMaster University Medical Centre

Dr. Olufemi Ayeni  Assistant Professor
Dr. Sarah Burrow  Associate Professor
Dr. Jung Mah  Clinical Professor
Dr. Paul Missiuna  Assistant Clinical Professor
Dr. Rick Ogilvie  Associate Clinical Professor
Dr. Devin Peterson  Associate Professor

Juravinski Hospital and Cancer Centre

Dr. Victoria Avram  Assistant Professor
Dr. Justin de Beer  Associate Clinical Professor
Dr. Michelle Ghert  Associate Professor
Dr. Benjamin Deheshi  Assistant Professor
Dr. Dinshaw Punthakee  Assistant Clinical Professor
Dr. Frank Smith  Associate Clinical Professor
Dr. Mitchell Winemaker  Associate Clinical Professor
Dr. David Wismer  Associate Clinical Professor
St. Joseph's Healthcare Hamilton

Dr. Anthony Adili  Associate Clinical Professor
Dr. Brett Dunlop  Associate Clinical Professor
Dr. Richard Lachowski  Associate Clinical Professor
Dr. Jaydeep Moro  Assistant Clinical Professor
Dr. Arthur Porte  Assistant Clinical Professor
Dr. Louis Saunders  Assistant Clinical Professor

Other

Dr. Markus Bischoff  Assistant Clinical Professor (Adjunct)
Dr. Heather Brien  Assistant Clinical Professor
Dr. Paul Grosso  Assistant Clinical Professor (Adjunct)
Dr. Thomas Hupel  Assistant Clinical Professor (Adjunct)
Dr. Robert Josefchak  Associate Clinical Professor
Dr. Marc Kalchman  Assistant Clinical Professor (Adjunct)
Dr. Ajay Manjoo  Assistant Clinical Professor (Adjunct)
Dr. David Martin  Assistant Clinical Professor (ROMP)
Dr. John McCall  Assistant Clinical Professor (Adjunct)
Dr. Scott McKenzie  Assistant Clinical Professor (Adjunct)
Dr. John Ostrowski  Assistant Clinical Professor (Adjunct)
Dr. David Pugh  Assistant Clinical Professor (ROMP)
Dr. Matthew Snider  Assistant Clinical Professor (Adjunct)
Dr. Gerard Slobogean  Associate Clinical Professor
Dr. Peter Stevenson  Assistant Clinical Professor (Adjunct)
Dr. Steven Richie  Assistant Clinical Professor (ROMP)
Dr. Michael Woolfrey  Assistant Clinical Professor (Adjunct)
Dr. Paul Zalzal  Assistant Clinical Professor
Our Education

Our mission is to educate and empower the surgeons of tomorrow with the capacity for evidence-based clinical care, critical thinking, creativity, professionalism and a proclivity towards lifelong learning. The development of these attributes surrounds a core of technical training in the art and science of orthopaedic surgery.
McMaster has graduated over 190 surgeons since the inaugural class of 1982.

Our graduates have gone to practice in many different places across the globe.

Since 2011, over 49 undergraduate students have completed research projects, co-op placements or theses.

6 undergraduate students have been supported through the CIHR Undergraduate: Mobility, Musculoskeletal Health and Arthritis grants.
Orthopaedic Residency Education Training Program Highlights

MacOrtho leadership selected for a podium presentation at the International Conference on Residency Education (ICRE) in Ottawa to present reliability data on the MacOrtho Orthopaedic OSCE (Objective Structured Clinical Examination).

Orthopaedic Surgery Residency Program nominated by the residents for the Professional Association of Interns and Residents of Ontario (PAIRO) Outstanding Program of the Year Award.

The first program to test the feasibility of CASPer (computer-based assessment for sampling personal characteristics) in the CaRMS pre-interview process. The adoption of CASPer will ensure that we are recruiting the best candidates into our program who will be trained to become top notch orthopaedic surgeons in the future.

Orthopaedic residents have a major presence in the McMaster Surgeon Scientist Program (SSP)/Clinical Investigator Program (CIP).

Four annual OSCE’s (2 Junior & 2 Senior)
MacOrtho prides itself on innovative educational tools.
Clerkship Program
Here in the Division of Orthopaedic Surgery at McMaster University, we recognize the importance of engaging students at every level of education. Moving forward, our main goal is to identify various ways to further inspire and prepare clerks to pursue a career in orthopaedic surgery.

Mentorship Program
The success of our Mentorship Program will lead to a strengthening of relationships between orthopaedic surgeons and trainees, aid in conflict resolution, assist in career planning resulting in overall positive morale amongst residents and staff. We take pride in the strong support of this program and the participation from our orthopaedic community.

Fellowship Program
We are focused on disseminating our brand of fellowship opportunities in Canada and abroad. Our active fellowships include hip and knee reconstruction, orthopaedic trauma, sports medicine and arthroscopy, paediatric orthopaedic surgery, and musculoskeletal oncology.

Current Orthopaedic Residents

**PGY1**
Mike Brown, Adrian Kurz, Colm McCarthy, Marcin Partyka, Mike Riediger, Leon van der Watt

**PGY2**
Darren de SA, Sebastian Heaven, Gavinn Niroopan, Vandit Sardana, Thomas Wood, Marco Yeung

**PGY3**
Marcin Kowalczuk, Matthew MacLeod, James Nuttall, Clary Foote

**PGY4**
Stuart Bisland, Kevin Chan Khaled Hasan, Daniel Hoppe, Mohammed Khan, Robert McCloy III, Justin Todd

**PGY5**
Nasser Al-Gowizai, Kamaljeet Banga, Patricia Farrugia, George Mathew, David Newman, Rubini Pathy, Theresa Pazionis, Marcel Abouassaly

**Surgical Scientist Program / Clinical Investigators Program**
Harman Chaudhry, Nathan Evaniew, Raman Mundi

“A dedication to training surgeons”
Our LEADERSHIP Series

Presented as an addendum to our Grand Rounds lectures, MacOrtho has implemented a highly successful series - “Visiting Professor Leadership Series.”

Global Orthopaedic leaders share their journey with the mandate of providing key insights on true leadership, trials and tribulations faced on the road to success, strategies for refining the health care system in the upcoming years and the true value of collaboration.

Mr. Jonathan Howell
(October 2011)
Exeter Consultant on the hip unit, specializes in complex revision hip and knee replacement surgery, trauma, educational and is a supervisor for the hip fellowship

Mr. John Timperley
(October 2011)
Council of the British Orthopaedic Association, Chairman of the Exeter Hip Foundation (Surgery, Training, and Research), Exeter Orthopaedic Consultant

Dr. Emil Schemitsch
(November 2011)
Scientist in the Keenan Research Centre of the Li Ka Shing Knowledge Institute of St. Michael’s Hospital; Professor and Division Head of Orthopedic Surgery

Dr. David Ring
(February 2012)
Director of Research, Hand and Upper Extremity Service, Orthopaedic Surgeon, Associate Professor, Harvard Medical School

Dr. James Waddell
(March 2012)
Orthopaedic Surgeon, St. Michael’s Hospital, Professor, University of Toronto, Coordinator, National Action Network for the Bone & Joint Decade in Canada
Dr. Bernard Morrey  
(April 2013)  
Emeritus Chair and Professor of the  
Department of Orthopaedics, Mayo Clinic at the University of Texas Health Science Center, San Antonio

Dr. Mandeep Dhillon  
(May 2013)  
Professor, Department of Orthopaedics, Post Graduate Institute of Medical Education and Research, Chandigarh, India

OUR EDUCATION  Innovative Series

Dr. Richard Buckley  
(May 2012)  
Head of Orthopaedic Trauma, Foothills Medical Centre, University of Calgary; Canadian Orthopaedic Trauma Society

Dr. Benjamin Alman  
(June 2012)  
A.J. Latner Professor; Chair of Orthopaedics, University of Toronto; Senior Scientist Developmental and Stem Cell Biology Research Institute

Dr. Ross Leighton  
(January 2013)  
Professor of Surgery, Dalhousie University; Canadian Orthopaedic Trauma Society; Nova Scotia Orthopaedic Society

Dr. Bernard Morrey  
(April 2013)  
Emeritus Chair and Professor of the Department of Orthopaedics, Mayo Clinic at the University of Texas Health Science Center, San Antonio
### MacOrtho Special Guest Lecture
This invited speaker is selectively chosen from across a variety of disciplines to educate our orthopaedic community based on the theme of our annual academic day.

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<thead>
<tr>
<th>Speaker</th>
<th>Role and Affiliation</th>
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<tbody>
<tr>
<td>Dr. Derek Moore</td>
<td>Orthopaedic Spine Surgeon Southcoast Hospitals Group Boston, MA</td>
</tr>
<tr>
<td>Dr. Reva Joshee</td>
<td>Associate Professor, Ontario Institute for Studies in Education, University of Toronto; Chair of the Advisory Committee, Mahatma Gandhi Canadian Foundation for World Peace</td>
</tr>
<tr>
<td>Dr. Beate Hanson</td>
<td>Director of Clinical Research and Documentation at the AO Foundation; Associate Clinical Professor, Department of Health Services, University of Washington</td>
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### Robert F. Martin Lectureship
The Robert F. Martin Lectureship was established in 2011 to honour the former Academic Division Head, Robert Martin (1983-1998). Dr. Martin made significant contributions to the orthopaedic department by recruiting academically qualified subspecialty orthopaedic surgeons to help establish an improved academic and research environment. Invited speakers discuss topics crucial to leadership and education.

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<tr>
<th>Speaker</th>
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<tr>
<td>Dr. PJ Devereaux</td>
<td>Associate Professor, Department of Clinical Epidemiology and Biostatistics, Population Health Research Institute, McMaster University</td>
</tr>
<tr>
<td>Dr. Michael McKee</td>
<td>Adjunct Scientist, Keenan Research Centre, Li Ka Shing Knowledge Institute, St. Michael’s Hospital; Professor, Department of Surgery, University of Toronto</td>
</tr>
<tr>
<td>Dr. James Heckman</td>
<td>Past Editor-in-Chief, American Volume of The Journal of Bone and Joint Surgery; Chairman of the Research Grants Committee, Orthopaedic Research and Education Foundation</td>
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### Robert Lofhouse Memorial Lectureship
The Dr. Robert Lofhouse Memorial Lectureship was established in 2011 in memorial of the former Academic Division Head, Robert Lofthouse (1970-1982). Dr. Lofthouse participated in the development of the orthopaedic program and was a positive influence on his community and his family. Invited speakers for this lectureship are encouraged to share their experiences and insights into innovation and pioneering new frontiers.

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<tr>
<th>Speaker</th>
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<tr>
<td>Dr. Bruce Browner</td>
<td>Professor and Orthopaedic Trauma Surgeon, University of Connecticut Health Centre, Storrs, CT</td>
</tr>
<tr>
<td>Dr. Parminder Raina</td>
<td>Professor, Department of Clinical Epidemiology and Biostatistics, McMaster University</td>
</tr>
<tr>
<td>Dr. Victor Neufeld</td>
<td>Professor Emeritus, Department of Clinical Epidemiology and Biostatistics, McMaster University; National Coordinator, Canadian Coalition for Global Health Research</td>
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MacOrtho Award of Excellence
This premier award of distinction was established to honour, recognize and celebrate the accomplishments of leaders in orthopaedic surgery.

MacOrtho Faculty Recognition Award
This recognition award is given annually to a faculty member recognizing excellence in educating, mentorship, research and professional endeavours.

Nigel Colterjohn Teaching Award
This annual teaching award is given to a faculty member, nominated by residents only, who exemplifies the qualities of a great educator. The award is given in honour of the late Dr. Nigel Colterjohn who was an orthopaedic oncologist and arthroplasty surgeon at McMaster University. Dr. Colterjohn will forever be remembered for his contributions to education and patient care.

William L. Orovan Leadership Fund
The "William L. Orovan Leadership Fund" was established in support and acknowledgement of Dr. Orovan’s extraordinary leadership as the Chair of the McMaster University Department of Surgery over the past decade. The goal of this fund is to provide leadership opportunities to help foster and develop a legacy of surgeon leaders in our field.

On March 7 & 8, 2013, the Division of Orthopaedic Surgery invited Mr. Gerald Huesch, Chairman and CEO of the Global Leadership School, to McMaster University for a two-day workshop on Evidence-based Leadership. This retreat was the first leadership forum held in honour of the William L. Orovan Leadership Fund. Mr. Huesch kept the audience fully engaged with a myriad of team building exercises while simultaneously providing our faculty and residents with leadership tools, communication skills and emotional intelligence. A world record was also set by passing a total 1120 tennis balls between the participants in two minutes!
Our Research

The Division of Orthopaedic Surgery is committed to clinical research and the education of clinicians and students in the principles and practices of evidence-based orthopaedics. Our key values include collaboration, innovation, and the principles of evidence-based medicine.
At the core of research is the Centre for Evidence-based Orthopaedics (CEO). This newly established centre merges and integrates the local and global research activities of the Division into one collaborative centre.

Our vision for this centre will focus on enhancing and integrating research activities as well as providing education and research training opportunities to learners and faculty.

The CEO is governed by a steering committee responsible for the oversight of research activities and education programs including undergraduate research training, research elective blocks, graduate research training, and post-doctoral fellowships.

Mohit Bhandari
Director

Michelle Ghert
Musculoskeletal Tumor Surgery Research Unit Co-Head

Bradley Petrisor
Trauma and Injury Research Unit Co-Head

Brian Drew
Disorders of the Spine Research Unit Head

Gerard Slobogean
Trauma and Injury Research Unit Co-Head

Olufemi Ayeni
Sports Medicine Research Unit Head

Benjamin Deheshi
Musculoskeletal Tumor Surgery Research Unit Co-Head

Justin de Beer
Degenerative Joint Disease Research Unit Head
Our Global Reach

With collaborators located throughout 25 countries, we are building relationships and expanding our network to conduct global orthopaedic research.

Argentina
China
Ghana
Malawi
Nicaragua
Tanzania
Zimbabwe

Australia
Egypt
Haiti
Mexico
Norway
Uganda

Brazil
Ethiopia
India
Nepal
Pakistan
United Kingdom

Canada
Finland
Kenya
Netherlands
South Africa
United States of America

"Transcending orthopaedic care across borders"
In October 2012, Dr. Petrisor visited Uganda to provide orthopaedic trauma education. One year later, accompanied by Dr. Kwok and as part of a team from USTOP (Uganda Sustainable Trauma Orthopedic Program), they returned. Dr. Petrisor will be working toward implementing the INORMUS study (burden of orthopaedic trauma) at Mulago Hospital.

Mulago Hospital is the national referral hospital and training hospital for Makerere University. The hospital receives the majority of severely injured people of poor economic status in the country. The project will help with the direct delivery of care to those individuals and will create a sustainable program for the region as it is currently only one of only two orthopaedic training centres in East Africa.

Success in this low resource setting could provide groundbreaking progress and training modules for under resourced areas. The ability to create effective training modules and build capacity in this setting will create an effective paradigm that can be applied to numerous settings. The issue of disability due to neglected injury creates a burden on the health care system and economy of, not just Uganda, but many low-income countries and even rural and remote areas of middle income and high-income countries. Road traffic injuries, just one area of orthopaedic trauma, are set to rank third in disability adjusted life years (DALY) by the year 2020. Current systems for treatment must be immediately improved to handle this growing disease burden.

The Global Burden of Disease Study estimates that 10% of global deaths are due to injuries and that if the current trend persists, this burden will greatly increase in the next 20 years. Trauma and particularly road traffic injuries are a major but neglected public health challenge. The World Health Organization (WHO) in 2004 determined that motor vehicle related injury is seriously harming global health and development. Their World Report on Road Traffic Injury Prevention recorded a 63% reduction in road traffic fatality rate in Canada between 1975 and 1998 while at the same time predicting an 80% increase in the fatality rate in Sub-Saharan Africa between 2000 and 2020. It is imperative that countries like Canada share their knowledge and expertise with countries like Uganda to reduce the impact of trauma on human suffering and poverty. This project will aim to educate health care providers in Uganda in systems and techniques for delivery of trauma care. This will result in a sustainable improvement in the care of individuals who are injured and will reduce the rates of death and disability secondary to trauma. The proposed project fits with Makerere University’s Department of Orthopaedics mandate to provide education for medical students, surgical trainees, nurses and paramedical personnel in the care of trauma and particularly musculoskeletal trauma in Uganda.
Current Research in Orthopaedic Surgery

Open fractures account for an estimated 250,000 fractures in North America annually.

**Fluid Lavage of Open Wounds (FLOW)**

FLOW is a multi-centre, blinded, factorial trial comparing alternative irrigating solutions (soap vs. saline) and pressures (high vs. low vs. gravity) in 2545 patients with open fractures.

The secondary objective is to assess the impact of irrigation solutions and pressures and patient illness beliefs on patient function and quality of life at one year in patients operatively treated for open fractures.

FLOW is an international study with over 40 sites: Canada (14 sites), USA (16 sites), Norway (1 site), Australia (1 site), and India (10 sites).

FLOW hits recruitment milestone of 2,500 patients worldwide and becomes the largest orthopaedic fracture trial.

**Funding Received:** Canadian Institutes of Health Research, United States Department of Defense
INORMUS is a large multi-centre cohort study aimed at quantifying the global burden of fractures. The project also serves to examine the fracture types and treatment in low and middle income countries. Thirty-day in hospital surgical outcomes are being recorded.

The project was launched in India (INORMUS India) in October 2012 and has enrolled over 5,000 patients in the pilot phase. In the definitive phase, INORMUS will include sites across Asia, South-East Asia, Africa, Latin America, and South America.

INORMUS aims to recruit 40,000 patients worldwide.

Funding Applied: Canadian Institutes of Health Research, Orthopaedic Trauma Association
Hip fractures account for more hospital days than any other musculoskeletal injury and represent more than two thirds of all hospital days due to fractures.

Hip Fracture Evaluation with Alternatives of Total Hip Arthroplasty versus Hemi-Arthroplasty (HEALTH):

HEALTH is a large multi-centre randomized controlled trial comparing total hip arthroplasty with hemi-arthroplasty in 1,434 patients with displaced femoral neck fractures. The primary outcome is revision surgery rates at 24 months post initial surgery and the secondary outcome is quality of life up to 24 months post initial hip surgery. Over 70 international clinical sites will be included in the HEALTH study and surgeons across North America, Europe, Australia, and Asia will participate.

HEALTH has already recruited over 350 patients towards our goal of 1,434.

Funding Received: National Institutes of Health, Canadian Institutes of Health Research, Hamilton Academic Health Sciences Organization
FAITH is a large multi-centre randomized controlled trial comparing sliding hip screw and cancellous screw fixation in femoral neck fracture patients. Surgeons will use 1 of 2 surgical strategies in 1,500 patients who have sustained a femoral neck fracture. The outcomes measured are revision surgery rates and quality of life up to 24 months post initial hip surgery.

The secondary objective is to evaluate the impact of sliding hip screws versus cancellous screws on complications, including mortality, avascular necrosis, nonunion, implant breakage or failure, and infection.

Over 70 sites are currently participating in the FAITH study: Canada (12 sites), USA (41 sites), Netherlands (14 sites), Norway (1 site), Australia (3 sites), and India (11 sites).

The FAITH trial just enrolled their 1000th patient.

Funding Received: Canadian Institutes of Health Research, National Institutes of Health Physicians’ Services Incorporated Foundation
Domestic violence is the most common cause of non-fatal injury to women.

Prevalence of Abuse and Intimate Partner Violence Surgical Evaluation (PRAISE) in orthopaedic fracture clinics

PRAISE is a large multi-centred observational study looking at the prevalence of intimate partner violence against women (physical, sexual, or emotional abuse) both within the past 12 months and within their lifetime. The proportion of women who present to orthopaedic clinics with injuries that were the direct result of intimate partner violence from a current and/or ongoing relationship was also explored.

The study included 12 fracture clinics across Canada, the U.S., the Netherlands, Denmark and India.

The results were recently published in The Lancet which is a landmark achievement for MacOrtho and the work has shed much needed light on injuries associated with domestic violence in fracture clinics.

LANCET publication drives worldwide media attention for PRAISE.

Funding Received: Orthopaedic Trauma Association, Canadian Orthopaedic Research Legacy, McMaster Surgical Associates
PREVAIL is a single centre quasi-experimental interventional study examining patient perceptions of and willingness to discuss intimate partner violence (IPV) in orthopaedic fracture clinics. The aim of the study is to evaluate the impact of changing the fracture clinic environment through an IPV tool kit containing eye-catching posters, pamphlets, and buttons on patients’ perceptions of the clinic as a safe place in which to discuss IPV. 536 patients (268 pre-implementation and 268 post-implementation of the IPV tool kit) complete a confidential and anonymous written questionnaire in the clinic. Secondary questions include examining potential demographic differences in patient perceptions, patients’ beliefs regarding being asked about IPV in fracture clinics, and patients’ beliefs about availability of fracture clinic resources to screen for IPV.

Improving our fracture clinics to help women across Canada.

Funding: Applications in progress
As FAI progresses, the resulting hip damage may lead to osteoarthritis (OA) of the hip.

**FIRST**

**Femoroacetabular Impingement Randomized Controlled Trial (FIRST)**

FIRST is the first randomized controlled trial evaluating the efficacy of surgical treatment in patients diagnosed with femoroacetabular impingement. The primary objective of the study is to determine whether surgical correction of the impingement morphology (arthroscopic osteochondroplasty) provides improved clinical results (decreased pain and improved function) compared to arthroscopic lavage of the hip joint.

This trial will follow **50 patients for one year** to investigate the efficacy and safety of arthroscopy versus arthroscopic lavage for treatment of FAI.

Challenging current practice with best evidence.

**Funding Received:** American Medical Society for Sports Medicine, Canadian Orthopaedic Research Legacy, Division of Orthopaedic Surgery - McMaster University, McMaster Surgical Associates
PARITY is a multi-center, blinded, randomized controlled trial of 1000 patients undergoing surgical excision and endoprosthetic reconstruction of a lower extremity bone tumor. The primary objective is to investigate whether a long term (5 days) postoperative antibiotic regimen will decrease the rate of infection when compared to a short term (24 hours) postoperative antibiotic regimen.

The secondary objective is to determine the impact of the postoperative antibiotic regimen on the development of antibiotic-related complications (gastrointestinal infections, fungal infections, etc.), the rate of re-operations, and patient functional outcome and quality of life after one year. The PARITY study is the first-ever collaborative multi-center randomized trial in Orthopaedic Oncology.

With 10 sites in North America actively enrolling patients, the PARITY trial is demonstrating early success which has led to an explosion of interest in the trial.

Funding Received: Canadian Cancer Society Research Institute, Orthopaedic Research and Education Foundation/Musculoskeletal Tumor Society
Hamilton Arthroplasty Group

The Hamilton Arthroplasty Group (HAGrp) at the Hamilton Health Sciences Juravinski Hospital is an independently funded multidisciplinary clinical outcomes research group dedicated to improving total joint replacement outcomes, specifically patient quality of life through continuous quality improvement in clinical service, research and education in total joint replacement.

In 2012/2013, the Hamilton Arthroplasty Group continues to focus on collaborative issues with other research groups across various disciplines, most notably with the Department of Psychiatry and Behavioural Neurosciences focusing on research pertaining to psychosocial issues and their impact on total joint replacement patient outcomes.

A clinical trial on an innovative knee compression system post-TKA will be underway in 2013, and radiographic review cohort/case-control trials continue to study various knee and hip implant designs, including one THA review in collaboration with the Mayo Clinic.

We have a 30-day TJR readmission rate which is half that of the best reported rates in the US. We attribute this to our practice protocols which we have been instrumental in establishing to improve the patient experience.
Excellence and Innovation in Orthopaedic Surgery
Knowledge Translation

Our strategy is simple—to be responsible to our patients by providing exemplary patient care, using the best evidence to guide our decisions, and leading with innovation.
International Multidisciplinary Partner Abuse Course for Traumatologists (IMPACT)

The IMPACT Course was a knowledge dissemination project held on December 5th, 2012 with the objective of helping residents become aware of the issues surrounding IPV in their clinical setting and address multiple misconceptions about IPV. This course brought together an interdisciplinary group of intimate partner violence (IPV) experts.

Course participants learned about the impact of IPV in society, clinical cases involving IPV, research conducted to date on IPV at MacOrtho, what surgeons can do about IPV, what to do if a patient is a victim or a batterer, and the Canadian Orthopaedic Association’s position on IPV.

Participants in this meeting were Mohit Bhandari, Brad Petrisor, Bill Ristevski, Harman Chaudhry, Nathan Evaniew, Raman Mundi, Samir Faidi, Lehana Thabane, Forough Farrokhyar, Lauren Griffith, Sheila Sprague, Kim Madden, and Nicole Simunovic from McMaster University, Emil Schemitsch, Gerard Slobogean, and Aynsley Young from St. Michael’s Hospital (Toronto), Doug Thomson from the Canadian Orthopaedic Association, Nadine Wathen from University of Western Ontario, Ole Brink from Aarhus University Hospital Denmark, David Mathews from One T Counseling, Sonia Dosanjh from Global Research Solutions, Diana Tikasz from Hamilton Health Sciences, Clare Freeman from Interval House Hamilton, and Pat Campbell from the Ontario Hospital Association.
**Femoroacetabular Impingement Symposium**

MacOrtho hosted an International Femoroacetabular Impingement symposium on May 11, 2013. This meeting brought together the foremost experts in sports medicine treating FAI. The goal of this meeting was to foster discussion regarding current practices and challenges with a focus on future research initiatives, and ultimately create a FAI research collaborative.
Division of Orthopaedic Surgery
Annual Academic Day

Each year, the Division of Orthopaedic Surgery hosts an academic conference that brings together local, national and international speakers. The academic day aims to share insights from a collaborative of basic, clinical and education research as highlighted from our best internal research activities and esteemed guests speakers.
Together, we are engaging our distinguished community of faculty leaders and residents to be the faces of change. We aim to promote the national and international profile of our faculty members to strengthen our position as a top education and research facility.
Reflections on Clinical Leadership

We are grateful to be beneficiaries of our programs’ mentors - both current and past. We honour our mentors by leading with vision. As we develop and foster our programs’ vision of big things, all of the little things we do flow in the right direction.

It is truly an honour to be part of this great program and stand shoulder to shoulder with my peers as we set sail on a voyage of evolutionary transformation - both within our program and in the influence we will have on healthcare delivery abroad.

Dr. Anthony Adili
Chief of Surgery,
St. Joseph’s Healthcare Hamilton

"The greatest danger for most of us is not that our aim is too high and we miss it, but that it is too low and we reach it."
Conferences & Meetings

Our faculty and residents have presented their research at many conferences, meetings and universities around the world.

- Canadian Orthopaedic Association Annual Meeting
- American Academy of Orthopaedic Surgeons (AAOS) Annual Meeting
- American Orthopaedic Foot and Ankle Society (AOFAS) Meeting
- American Orthopaedic Association (AOA) Annual Meeting
- Canadian Academy of Sport & Exercise Medicine Annual Meeting
- Orthopaedic Research Society (ORS) Meeting
- Canada Annual Meeting of Trauma Representatives
- Ontario Orthopaedic Association (OOA) Annual Meeting
- Annual Meeting of the Canadian Association of Paediatric Surgeons
- Canadian Association for General Surgeons
- Asia Pacific Arthroplasty Society (APAS) Conference
- Indian Orthopaedic Association (IOA) Conference
- Poona Orthopaedic Society Conference
- Congresso Nacional de Ortopedia y Traumatologia
- Latin America Fracture Burden Summit
- American Academy of Facial Plastic and Reconstructive Surgery
- American Society of Aesthetic Plastic Surgeons Meeting
The Division of Orthopaedic Surgery's research funding has dramatically increased over the last few years. Our Division received roughly $2.9M in grants this year which represents a greater than 7-fold increase in total dollars from the last academic year. Here are some samples of our key funded projects within the Division.

<table>
<thead>
<tr>
<th>Funding Organization</th>
<th>Study</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Orthopaedic Society for Sports Medicine (AOSSM)</td>
<td>Femoroacetabular Impingement RandomiSed controlled Trial (FIRST)</td>
<td>$20,000</td>
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<tr>
<td>Canadian Cancer Society Research Institute (CCSRI)</td>
<td>Prophylactic Antibiotic Regimens In Tumor Surgery (PARITY)</td>
<td>$199,047</td>
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<tr>
<td>Canadian Institutes of Health Research</td>
<td>Fixation using Alternative Implants for the Treatment of Hip Fractures-2 (FAITH-2)</td>
<td>$85,000</td>
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<tr>
<td>Canadian Institutes of Health Research</td>
<td>Femoroacetabular Impingement RandomiSed controlled Trial (FIRST)</td>
<td>Studentship - $4,950</td>
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<tr>
<td>Canadian Institutes of Health Research</td>
<td>Fluid Lavage of Open Wounds (FLOW)</td>
<td>Studentship - $4,950</td>
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<tr>
<td>Canadian Institutes of Health Research</td>
<td>Hip Fracture Evaluation with Alternatives of Total Hip Arthroplasty versus Hemi-Arthroplasty (HEALTH)</td>
<td>Studentship - $4,950</td>
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<tr>
<td>Canadian Institutes of Health Research</td>
<td>Hip Fracture Evaluation with Alternatives of Total Hip Arthroplasty versus Hemi-Arthroplasty (HEALTH)</td>
<td>$100,000</td>
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<tr>
<td>Canadian Institutes of Health Research</td>
<td>Hip Fracture Evaluation with Alternatives of Total Hip Arthroplasty versus Hemi-Arthroplasty (HEALTH)</td>
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<td>Canadian Institutes of Health Research</td>
<td>International Multidisciplinary Partner violence and Abuse Course for Traumatologist (IMPACT)</td>
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<td>Canadian Institutes of Health Research</td>
<td>International Orthopaedic Multicentre Study in Fracture Care (INORMUS)</td>
<td>Studentship - $4,950</td>
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<td>Canadian Institutes of Health Research</td>
<td>Prophylactic Antibiotic Regimens In Tumor Surgery (PARITY)</td>
<td>Studentship - $4,950</td>
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<td>Canadian Institutes of Health Research</td>
<td>Trial to Evaluate Ultrasound in the Treatment of Tibial Fractures (TRUST)</td>
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<td>Canadian Orthopaedic Foundation</td>
<td>Management of Proximal Humerus Fractures Scoping Review</td>
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<td>Division of Orthopaedic Surgery</td>
<td>Femoroacetabular Impingement Randomised controlled Trial (FIRST)</td>
<td>$19,979.79</td>
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<td>Division of Orthopaedic Surgery</td>
<td>A Radiographic Assessment of CAM Impingement Following Femoral Neck Fracture</td>
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<tr>
<td>Organization</td>
<td>Project Description</td>
<td>Funding</td>
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<td>---------------------------------------------------</td>
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<tr>
<td>McMaster Surgical Associates</td>
<td>Prophylactic Antibiotic Regimens In Tumor Surgery (PARITY)</td>
<td>$5,000</td>
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<td>McMaster Surgical Associates</td>
<td>An examination of the reliability, validity, feasibility and acceptability of CASPer in postgraduate medical admissions</td>
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<tr>
<td>McMaster Surgical Associates</td>
<td>Bone Matrix Invasion in Chondrosarcoma</td>
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<tr>
<td>McMaster Surgical Associates</td>
<td>Fixation using Alternative Implants for the Treatment of Hip Fractures-2 (FAITH-2)</td>
<td>$12,809</td>
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<tr>
<td>McMaster Surgical Associates</td>
<td>FGF2 and cell proliferation and differentiation in GC tumor of bone</td>
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<td>McMaster Surgical Associates</td>
<td>Femoroacetabular Impingement Randomised controlled Trial (FIRST)</td>
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<td>McMaster Surgical Associates</td>
<td>Health Care Providers' Perceived Barriers to and Facilitators for Intimate Partner Violence Screening of Women in Orthopaedic Fracture Clinics</td>
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<td>McMaster Surgical Associates</td>
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<td>McMaster Surgical Associates</td>
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<td>International Orthopaedic Multicentre Study in Fracture Care – China (INORMUS-China)</td>
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<td>Roads in India: A Safety Evaluation</td>
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<td>McMaster Surgical Associates</td>
<td>The orthopaedic core as a learning experience</td>
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<td>Office of Integrated Research Services (OIRS)</td>
<td>Fixation using Alternative Implants for the Treatment of Hip Fractures-2 (FAITH-2)</td>
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<td>Ontario Graduate Scholarship</td>
<td>OrthoEvidence</td>
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<td>OMeGA Medical Grants Association</td>
<td>The reliability and validity of the Orthopaedic in-training Objective Structured Clinical Examination</td>
<td>$9,800</td>
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<td>Orthopaedic Research and Education Foundation (OREF)</td>
<td>Prophylactic Antibiotic Regimens In Tumor Surgery (PARITY)</td>
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<td>Physician Services' Incorporated (PSI)</td>
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<td>Public Health Agency of Canada (PHAC)</td>
<td>Promoting Empowerment for Victims of Abuse and Intimate Partner Violence (PREVAIL)</td>
<td>$75,000</td>
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<td>Regional Medical Associates (RMA)</td>
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<td>Interval House</td>
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<td>Stryker</td>
<td>Hip Fracture Evaluation with Alternatives of Total Hip Arthroplasty versus Hemi-Arthroplasty (HEALTH)</td>
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<td>United States Department of Defense</td>
<td>Fluid Lavage of Open Wounds (FLOW)</td>
<td>$800,000</td>
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</tbody>
</table>
Faculty and Resident Publications


Walter SD, Ismaila AS, Cook DJ, Bhandari M, Tikkinen KA, Guyatt GH. Clinical experience may affect clinician compliance with assigned treatment in randomized trials. J Clin Epidemiol. 2013 Apr 6. [Epub ahead of print]


Our Awards

Recognizing the Future

Faculty Awards

Dr. Anthony Adili
2012 Faculty Recognition Award

Dr. Victoria Avram
2012 Michael G. DeGroote School of Medicine Orthopaedic Surgery Teaching Award

Dr. Jaydeep Moro
2013 Michael G. DeGroote School of Medicine Orthopaedic Surgery Preceptor Award

Dr. Justin de Beer
2011 Faculty Recognition Award

Dr. Dale Williams
2012 Dr. Nigel Colterjohn Resident Teaching Award

Dr. Mitchell Winemaker
2011 Dr. Nigel Colterjohn Resident Teaching Award

Dr. Michelle Ghert
2013 ABC Travelling Fellowship (American-British-Canadian)

Dr. Desmond Kwok
2013 Medical Staff Association President’s Award for Distinguished Long Service

Dr. Mohit Bhandari
2013 Canadian Orthopaedic Foundation Research Award

2012 Canadian Orthopaedic Association’s Award of Merit

2012 American Society for Aesthetic Plastic Surgery, American Society of Plastic Surgeons and American Academy of Facial Plastic and Reconstructive Surgery Award of Outstanding Merit

2011 Canadian Institutes of Health Research Top Achievements in Health Research

2011 Royal College of Physicians and Surgeons of Canada Mentor of the Year

Dr. Devin Peterson
2013 Faculty Recognition Award

Dr. Bill Ristevski
2013 Dr. Nigel Colterjohn Resident Teaching Award
Resident Awards

Dr. Osama Al-Shaya
2013 Medical Staff Association
Clinical Fellow of the Year Award

Dr. Kevin Chan
2013 American Society for Surgery of the Hand (ASSH)/American Foundation for Surgery of the Hand (AFSH) Annual Meeting Scholarship

Dr. Nathan Evaniew
2012 Medical Staff Association
Outstanding Resident Award

Dr. Moin Khan
2012 Margaret and Charles Juravinski Surgical Fellowship Award

Dr. Colm McCarthy
2013 Canadian Undergraduate Surgical Education Committee Sponsorship

Dr. Rubini Pathy
2012 International Surgery Desk Scholarship

Dr. Thomas Wood
2012 Department of Surgery Resident Research Day AK Mighton Award for Best Presentation by a Junior Resident

Dr. Clary Foote
2013 American Orthopaedic Foot and Ankle Society (AOFAS) Resident Scholar

2012 McMaster University Faculty of Health Sciences Excellence in Poster Presentation Award

2012 Department of Surgery Resident Research Day Best Resident Research Project

2012 McMaster University Faculty of Health Sciences Best Oral Presentation Award

“Leading evidence-based orthopaedics”
Contact the Division

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