

Osteoporosis Canada

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SAC Link

Osteoporosis Canada's Scientific Advisory Council

Autumn 2013

2013 Lindy Fraser Award Presented to Dr. Earl Bogoch

On Saturday Oct. 5th 2013, the 2013 Lindy Fraser Memorial Award was presented to Dr. Earl Bogoch at the annual OC SAC ASBMR Breakfast meeting in Baltimore. Osteoporosis Canada would like to congratulate Dr. Bogoch!

Osteoporosis Canada established this award in 1993. This prestigious award recognizes individuals who have done exemplary research and have helped to increase the knowledge about osteoporosis. The recipient is nominated by members of our Scientific Advisory Council.

Dr. Bogoch is an Orthopaedic Surgeon at St. Michael's Hospital, and a Professor of Surgery at the University of Toronto, whose surgical interests have focused on surgical management of inflammatory arthritis, and hip and knee reconstruction. His interest in bone remodelling and structure lead him in the last fifteen years to the common orthopaedic issue of the fragility fracture patient who presents in fracture clinic or on hospital wards with increased, but usually unrecognized risk of future hip and vertebral fracture.

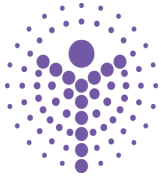
He has collaborated with scientists and program designers both in Canada and internationally to build system wide networks to identify and treat the high risk fragility fracture patient. After starting a small QI project at Wellesley Hospital, he formed a team at St. Michael's Hospital with scientists, clinicians and a program manager to create a working coordinator model of systematic intervention for the fracture clinic and orthopaedic ward, where high risk fragility fracture patients are concentrated. This team has worked with Osteoporosis Canada and others in seeking and obtaining support for and helping to develop, evaluate and improve a multicentre Ontario Program for fracture clinics.

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With his colleagues, he has published and lectured widely on this subject and has promoted fracture prevention internationally. Research to optimize various aspects of the model has been widely published by the team. Efforts to promote models of systematic fracture prevention nationally and internationally have resulted in Dr. Bogoch working on projects involving numerous organisations such as the Canadian and Ontario Orthopaedic Associations, Osteoporosis Canada, Fraser Health Authority, International Osteoporosis Foundation, American Society of Bone and Mineral Research, Fragility Fracture Network, and the American Orthopaedic Association.

Congratulations!





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Fracture Liaison Service

As you are all aware, each year, hundreds of thousands of Canadians needlessly experience debilitating fractures because the underlying cause of their broken bones — osteoporosis — was undetected and untreated. These fractures impose a tremendous burden on ageing Canadians, our health care and social systems, and the national economy as a whole.

Osteoporosis Canada has now released an expert report, *Make the FIRST break the LAST with Fracture Liaison Services* that examines the personal and financial burden of fractures and recommends a cost-effective model of care that has been proven to reduce the impact of osteoporosis and repeat fractures. It can be accessed at:

<http://www.osteoporosis.ca/fracture-liaison-service/>

The Benefits of FLS

- Improved quality of life and enhanced independence of seniors
- Reduced incidence of avoidable — and often life-threatening — fractures
- Reduced disruption to patient flow in the health care system by:
 - decreasing pressure on already scarce orthopaedic resources
 - freeing up capacity for elective surgery
 - decreasing pressure on long-term care beds and demand for home care
- Significant cost-savings

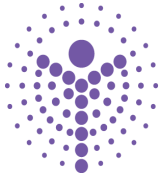
This expert report examines the magnitude of this burden and describes a cost-effective model of care that has been proven to minimize the impact of osteoporosis and repeat fractures. The main document is supported by a comprehensive suite of Appendices to support implementation.

They can be downloaded from osteoporosis.ca/FLS

- A. The human face of osteoporosis
- B. Fracture incidence and costs by province
- C. Best practices for post-fracture osteoporosis care: Fracture Liaison Services
- D. Other models of post-fracture osteoporosis care
- E. Generic Fracture Liaison Service business plan template
- F. Potential cost savings of FLS by province
- G. How to start and expand Fracture Liaison Services
- H. Step by step guide to setting up a Fracture Liaison Service
- I. Algorithms for FLS by fracture type (including templates for form letters to Primary Care Providers).
- J. Other practical tools for FLS
- K. Fracture Liaison Service online resources
- L. International Osteoporosis Foundation Capture the Fracture Best Practice Framework

Special recognition to Dr. Diane Theriault and Nashater Sanghera for their outstanding work on this document.

**Osteoporosis Canada
urges all jurisdictions
to implement FLS by
2015**



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SAVE THE DATE!

The next SAC Update Teleconference will be held on Monday, December 2nd at 7pm ET. Details to follow.

UPCOMING CONFERENCES

IOF-ISCD Skeletal health Orlando 2014

IOF-ISCD Skeletal Health Orlando 2014 will be held on February 20-22, 2014.

A two and a half-day program will provide the most current, clinically relevant, concepts on the assessment and management of Osteoporosis. The meeting encompasses all medical disciplines and specialties involved in the assessment, diagnosis and treatment of Osteoporosis and related diseases.

Osteoporosis Canada is one of the collaborating Organizations supporting this conference.

Watch Your Step 2014 National Fall Prevention Conference May 27-May 28th, 2014 Eaton Chelsea Hotel Toronto

This event will bring together experts from across Canada and around the world to share research excellence, clinical advances and policy innovations in fall and injury prevention among older adults.

Call for abstracts is NOW OPEN and the deadline for submissions is December 16, 2013. Abstracts are to address seniors' fall or injury prevention, either for research studies or practice/community initiatives. For more details please go to www.watchyourstepcanada.com/call-for-abstracts

Breaking News on Broken Bones (BNBB) Blitz Week Update

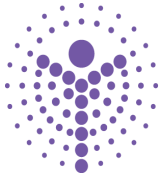
The week of September 23 was a flurry of BNBB related activity right across Osteoporosis Canada and the country. BNBB is turning out to be possibly the most successful awareness campaign ever launched by Osteoporosis Canada.

All in all there were 48 separate activities and events ranging from display booths to Stand Tall clinics, webinars, newspaper articles, radio and TV spots, public forums, and even a provincial utility bill insert. 17 OC Chapters, Branches, the national office and 8 healthcare professionals delivered a consistent message to more than 500,000 Canadians. The message:

- 1) It is **not normal** to break a bone from a minor fall.
- 2) If you do, you may be at high risk of breaking **another** bone.
- 3) A broken bone may be the first sign that you have **osteoporosis**.
- 4) There are effective **treatments** to reduce the risk of broken bones.

While the blitz week was an opportunity to turn the focus of the organization on a single and consistent message for a given period of time, BNBB activity will continue throughout November, Osteoporosis Month, and beyond.

Congratulations to everyone who participated in the BNBB blitz week; your efforts are going a long way to help spread the word about the consequences of broken bones and the need for follow up assessment and treatment to avoid recurring fractures.



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RESEARCH 2013

Osteoporosis Canada's Priority

Osteoporosis Canada's Research Priority is to support clinical, translational and health outcomes research that focuses on the high fracture risk population, especially on preventing fractures and their negative consequences.

Research Competition

The Osteoporosis Research Program provides training awards to support Canadian investigators conducting research that promises to yield new insights into the prevention and treatment of osteoporosis and improving the lives of individuals with this disease. Awards are offered to individuals through annual research competitions, which involves an extensive peer review process.

The Osteoporosis Canada-CaMos Fellowship Award 2013

A collaborative award, by the [Canadian Multicentre Osteoporosis Study \(CaMos\)](#) and Osteoporosis Canada. This program funds a graduate student or postdoctoral fellow for one year in the amount of \$20,000 and provides that individual with an opportunity to engage in research training with investigators at CaMos. Awardees gain new insight into the field of osteoporosis and are presented with the basis for a career in clinical/epidemiological research related to osteoporosis. This program strives to improve the lives of individuals with osteoporosis while seeking optimal prevention and treatment of the disease.

Kyla Naylor, PhD(c) of the Department of Epidemiology at Western University was the successful applicant.



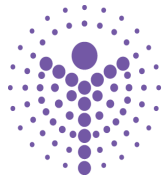
Her study is entitled:

“Evaluation of FRAX in Chronic Kidney Disease Patients: The Canadian Multicentre Osteoporosis Study”

The research aims to determine the prognostic value of the Fracture Risk Assessment Tool (FRAX) in individuals with reduced kidney function. Several objectives will also be examined to better characterize the relationship between chronic kidney disease and fracture. This research is important to chronic kidney disease patients and their physicians, as it will help guide prognostication and help reduce the burden of fracture in this growing population.

From Kyla...

“I first developed an interest in osteoporosis during my undergraduate degree where I learned more about the severe consequences of osteoporosis. Through volunteering with Osteoporosis Canada (OC) and attending osteoporosis clinics I have seen firsthand the devastating effects of osteoporosis. These experiences have further strengthened my commitment to producing meaningful research that can reduce the consequences of this disease”.



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OC/CIHR AWARD

A jointly supported award by Osteoporosis Canada and CIHR is offered under the mandate of the Small Health Organizations Partnership Program (SHOPP). SHOPP fosters partnership opportunities with small health charities and not-for-profit organizations with modest health research funding capacity by co-funding training and salary awards.

The benefit of this program is that CIHR offers partnership opportunities for small health organizations to increase their health research capacity while becoming more in line with the strategic directions of the Institutes. This program also meets CIHR's strategic objective of outstanding research through effective partnerships in specific areas of research.

This award under CIHR and Osteoporosis Canada funds applications that reflect the research priorities identified by Osteoporosis Canada



Marta Erlandson, PhD, Postdoctoral fellow at the University of Toronto

The title of Marta's project is: The relationship between muscle mass, density and size to functional measures in pre and post menopausal women.

From Marta...

"As a young scientist, the honour of receiving the Osteoporosis Canada and CIHR Fellowship means I will be able to explore important questions in musculoskeletal health. The training support provided by Osteoporosis Canada to young investigators will lead to new invitations in Osteoporosis and fracture prevention. Osteoporosis and sarcopenia are significant health burdens among older adults in general and postmenopausal women in particular. The greatest clinical consequence of osteoporosis is the morbidity and mortality associated with low trauma fractures. An important common consequence of sarcopenia is the tendency to fall which can lead to a fragility fracture. There is increasing interest in the scientific community in the interactions between muscle and bone, how these two are linked, and how they contribute to disability. Musculoskeletal imaging has the potential to advance our ability to understand age-associated changes in muscle as well as the relationship between muscle and bone. My research project will use state of art musculoskeletal imaging to examine the relationship between muscle size, density and physical function in both healthy and at risk populations. My hope is to better understand sarcopenia and its predictors as well as how they relate to fracture risk. If low muscle density or mass are associated with fracture risk, it provides another tool for the diagnosis of individuals at high risk for fractures and skeletal muscle health may be a potential target in the prevention of fractures. Reducing the number of falls in older adults can potentially decrease the incidence of fracture and reduce health care burden. I am excited to contribute to the future of Osteoporosis and fracture prevention and have the opportunity to conduct research which I am passionate about. This fellowship funding will assist me to move closer to my goal of establishing myself as a musculoskeletal health researcher in Canada."



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OC/CIHR AWARD

Laura Targownik, MD, FRCPC

Section of Internal Medicine, Department of Medicine
University of Manitoba



Project: "Skeletal Safety of Chronic Proton Pump Inhibitor Use: Evaluating Bone Density, Structure and Strength".

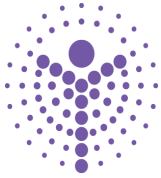
From Laura...

"The goal of this endeavor is to try to better understand if the commonly used class of medications known as proton pump inhibitors, or PPIs, can either lead to loss of bone density and strength, and whether the use of PPIs increase the risk of fracture. We initially became interested in this issue after our research group was among the first to report a link between PPIs and osteoporosis related fractures, which we determined by looking at a database of all persons in Manitoba diagnosed with a fracture, and linking it to a provincial database of prescription medication use.

While discovering an association between a commonly used drug like PPIs and a dreaded complication like fracture is important, it does not necessarily prove that PPIs actually cause fracture. For example, it may be that people who use PPIs are more likely to have other risks for fracture that we were not able to detect. Also, it is not known what action PPIs have on bone that should increase the risk of fracture. While some had speculated that PPIs interfere with our body's ability to absorb calcium, this has been disproven in more recent studies. We also showed in multiple studies that PPI use does not appear to cause a decline in bone density, as would be expected if PPIs truly increased the risk of fracture.

Where this study is different is that we are trying to see if PPIs affect bone strength in a way that is not dependent on calcium absorption from the gut, and in a way that does not affect the density of bones. To accomplish this, we have identified persons over age 50 who either had been using PPIs for over 5 years, or had not used them at all in the past 5 years. People who agree to participate undergo a CT scan of the hip which will allow us to create a three-dimensional model of the femur, as well as a standard DXA scan. We will look for any differences in the three-dimensional structure of bone between PPI users and non-users to see if these changes make PPI users more likely to break if subjected to a force. We are also collecting information on these people's dietary and exercise habits, and measuring chemicals in the blood which can be affected by PPI use or which assess calcium balance and bone health.

After some delay, we are now well into patient enrollment, and hope to be completing this within the next 12 months. "



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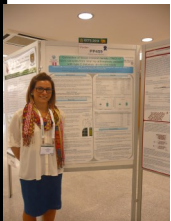
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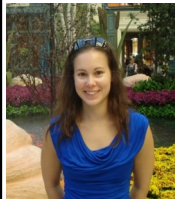
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THE OSTEOPOROSIS CANADA TIM MURRAY SHORT-TERM TRAINING AWARDS

These awards give three individuals the opportunity to learn more about osteoporosis and/or advance existing research skills in osteoporosis. It is open to undergraduate, graduate, postgraduate trainees and junior faculty members (where junior is defined as less than 5 years in their first academic appointment). The awards aim to build on Dr. Timothy Murray's impressive legacy of teaching, research and patient care by recognizing, supporting and encouraging future leaders in bone health.



Janet Prichard, PhD from McMaster University will travel to present research at the European Calcified Tissue Society Annual Meeting in Lisbon, Spain. Her paper is entitled: "Correlates of tissue mineral density of bone samples from total hip arthroplasty patients with type 2 diabetes: an ex vivo study".



Lauren Burt, PhD from the University of Calgary travelled to present at ASBMR. The abstract outlined true age-related changes in bone quality as identified by high resolution peripheral quantitative computed tomography within a normal Canadian cohort. This work uses novel longitudinal data and will add to the knowledge base within the field of bone loss and skeletal health.



Kyla Naylor, PhD(c) from Western University will travel to the American Society of Nephrology's Kidney week to present a paper entitled "Osteoporotic Fracture Risk in Adult Chronic Kidney Disease Patients"