



Research Institute

Healthy Active Living and Obesity Research

Institut de recherche

Recherche sur les saines habitudes de vie et l'obésité



# ANNUAL REPORT 2012

*HEALTHY ACTIVE LIVING AND OBESITY RESEARCH TO PROMOTE THE HEALTH AND WELLNESS OF OUR MOST PRECIOUS RESOURCE – OUR CHILDREN*

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## WELCOME FROM THE DIRECTOR

*In this column last year, I highlighted international, national, and provincial declarations of increased commitments to health promotion and disease prevention. I posed the question, are we really ready, finally, to commit to prevention and the preservation of health? While recognizing that the political machinery moves slowly, there is no evidence that the various declarations have gained any traction. This has been the case since the Lalonde Report brought the intuitive importance of disease prevention to the collective consciousness of Canadians in 1974. Such lethargy further mortgages the health of the population and the Canadian health debt continues to rise far beyond what we will ever be able to afford to repair or pay back. Unfortunately, informed predictions forecast the greatest consequences will be borne by our children.*



*On a positive note, the physical activity sector in Canada continues to make significant progress despite anemic government involvement or support. In March 2012, with leadership from HALO, the Canadian Society for Exercise Physiology released the first Canadian Physical Activity Guidelines for the Early Years (aged 0-4 years) and the world's first Sedentary Behaviour Guidelines for the Early Years. Throughout 2012 the physical activity sector worked together to create Active Canada 20/20 - A Physical Activity Strategy and Change Agenda for Canada. Although the 2012 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth gave the country a failing grade for the 6th consecutive year, the Report Card theme questioning "is active play extinct?" led to the creation of a communications campaign by ParticipACTION to Bring Back Play! A national initiative targeted to health care providers called Exercise is Medicine was also launched in an effort to increase the measurement of physical activity as the 5th vital sign and the prescription of physical activity for the preservation and enhancement of health.*

*Through research, leadership, knowledge translation, partnerships, training and education, and advocacy HALO will continue to promote and preserve healthy active lifestyles while managing and treating childhood inactivity and obesity. The Centre for Healthy Active Living (CHAL), directed by Dr. Stasia Hadjiyannakis, is a provincial centre of excellence for the management and treatment of children and families with complex obesity, and provides HALO's clinical research leadership. The contributions of HALO in pursuing its mission in 2012 were the most substantial to date. The size and scope of HALO's activities have increased significantly and continuously throughout its 5-year existence. Please read through this annual report for highlights and details of our accomplishments in 2012 and visit our website ([www.haloresearch.ca](http://www.haloresearch.ca)) to keep abreast of our work and contributions.*

*HALO remains indebted to the donors, contributors, researchers, stakeholders and partners who fund, facilitate, support, and synergize our efforts. To all of you, please accept our most sincere thanks.*

*This Annual Report provides a catalogue of the activities and accomplishments made by HALO in 2012 and is intended to inform partners, stakeholders, funders, potential students and staff, and other interested parties about our group. It is available in print form upon request and on our website at [www.haloresearch.ca](http://www.haloresearch.ca).*

*If you have any questions, suggestions, or opportunities for HALO, please do not hesitate to contact us.*

*Best wishes for a healthy, active 2013.*

A handwritten signature in black ink, appearing to read 'Mark Tremblay'.

Mark Tremblay, Ph.D., D.Litt. (Hons), FACSM, CSEP-CEP  
Director, Healthy Active Living and Obesity Research Group (HALO), CHEO-RI  
Professor/Scientist, Department of Pediatrics, University of Ottawa  
Chief Scientific Officer, Active Healthy Kids Canada



## ABOUT HALO

### Our History and Impact

*The Healthy Active Living and Obesity Research Group (HALO) was established in 2007 in response to the escalating obesity crisis and the increasing complexity of related co-morbidities. Today the HALO team consists of 15 staff (including 6 researchers), a childhood obesity clinical team (Centre for Healthy Active Living), 12 graduate students, and many community volunteers.*

#### ***Some of our practice-changing contributions include:***

<ul style="list-style-type: none"><li>• <i>Development of the Kenyan International Development Study – Canadian Activity Needs Research Alliance (KIDS-CAN)</i></li></ul>	<ul style="list-style-type: none"><li>• <i>Creation of the Centre for Healthy Active Living (CHAL)</i></li></ul>
<ul style="list-style-type: none"><li>• <i>Development of the Canadian Assessment of Physical Literacy</i></li></ul>	<ul style="list-style-type: none"><li>• <i>Development of the Canadian Physical Activity Guidelines</i></li></ul>
<ul style="list-style-type: none"><li>• <i>Development of the first ever Canadian Sedentary Behaviour Guidelines</i></li></ul>	<ul style="list-style-type: none"><li>• <i>Co-creation of the Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth</i></li></ul>
<ul style="list-style-type: none"><li>• <i>Creation of the Sedentary Behaviour Research Network</i></li></ul>	<ul style="list-style-type: none"><li>• <i>Development of the Active Healthy Kids Canada Position Stand on Active Video Games for Children and Youth</i></li></ul>

*Since its inception in 2007, HALO has received over \$7 million in research funding; produced more than 265 peer-reviewed publications; has given more than 580 scholarly presentations locally, nationally and internationally; and secured more than 1 billion media impressions!*



## Our Vision

*HALO will...*

*Provide international leadership and research excellence as it relates to healthy active living and obesity in children and youth.*

## Our Mission

*HALO will...*

*Be a multidisciplinary centre of excellence in healthy active living and obesity research for children and youth that will:*

- *Advance the understanding and promotion of health and wellness where children live, play, and learn.*
- *Develop, evaluate, and mobilize innovative strategies to prevent, manage, and treat obesity and lifestyle-related diseases.*

## Our Lines of Business

### Research

*Promote and assess healthy active living among children and youth.*

*Identify, examine and address environmental, behavioural, psychosocial, and biological factors related to healthy active living and obesity in children and youth.*

*Develop, implement, and evaluate strategies to prevent, manage, and treat obesity and lifestyle-related diseases in children and youth.*

### Leadership

*Be a credible, innovative, and authoritative source for child-focused healthy active living and obesity research, information and planning.*

### Training and Education

*Be an internationally recognized centre for trainees, researchers and professionals interested in healthy active living and obesity research, leadership and advocacy for children and youth.*

### Knowledge Translation

*Show leadership and innovation in translating, disseminating, and mobilizing child-focused healthy active living and obesity research.*

### Partnership

*Use municipal, provincial, national, and international partnerships to create, promote, and evaluate healthy active living initiatives for children and youth.*

### Advocacy

*Serve as a professional, informed, and authoritative voice to promote healthy active living and prevent obesity in children and youth.*

### Good Governance

*Be effective, efficient, and transparent in all aspects of our work.*



### **Education, Credentials, Academic appointments**

- MSc Faculty of Human Biology & Nutritional Sciences; University of Guelph
  - Visiting scholar- Copenhagen Muscle Research Centre & August Krogh Institute, Denmark (1997)
- PhD Dept. of Cellular and Molecular Medicine, Faculty of Medicine, University of Ottawa
  - Visiting scholar - Joslin Diabetes Centre- Harvard Medical School (2005)
- Canadian Society for Exercise Physiology – Certified Exercise Physiologist
- Assistant Professor, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Cross-appointed to Department of Human Kinetics, University of Ottawa
- Faculty appointment in Ph.D. Program in Population Health, University of Ottawa
- Senior Research Scientist, Children's Hospital of Eastern Ontario Research Institute

### **Biography**

Dr. Adamo is a Research Scientist with a multi-disciplinary background and is a founding member of the HALO Research Group. She currently directs HALO's metabolic research lab for which she led the planning and development through CFI/ORF funding. Kristi's research program, *Power of Prevention in the Early Years*, focuses on early intervention and upstream prevention of childhood obesity (i.e., pregnancy obesity management). Dr. Adamo is a Canadian Institutes of Health Research New Investigator and the 2012 recipient of the CHEO Research Institute's Award of Excellence for Outstanding Investigator. Kristi's most successful experiments have resulted in the birth of her daughters Kysia in 2007 and Mallea in 2009.

### **Research, Clinical, Professional and Scholarly Focus and Service**

Current research interests include: i) intergenerational cycle of obesity, ii) child obesity prevention, iii) lifestyle contributors to maternal-fetal health, iv) critical periods of growth and development, v) maternal-placental-fetal dialogue

- Associate Editor, *Applied Physiology, Nutrition & Metabolism* (official journal of the Canadian Society for Exercise Physiology and the Canadian Nutrition Society)
- Guest Editor, *International Journal of Environmental Research and Public Health* (special issue: Childhood Obesity: Prevention and Treatment)
- Member, Research Institute Joint Health and Safety Committee
- Member, Research Institute Biosafety Committee
- Committee Member, Champlain Cardiovascular Disease Prevention Network, Healthy School Age Children
- Member, Scientific Advisory Board; Start2Finish: Running and Reading Clubs
- Member, Dietitians of Canada; EaTracker reference group
- Lead writer, Best Start Resource Centre; Obesity in the Preconception and Prenatal Period
- Member, Advisory Board; CHEO's Centre for Healthy Active Living
- Committee Member, SOGC Clinical Guideline on the Nutritional Needs of Women through the Lifespan
- Lead, Obesity Prevention from Conception: pan Canadian trial team
- Reviewer for many scholarly journals, conference abstracts, granting agencies (CIHR, MRC- South Africa, Canada Foundation of Innovation, Alberta Heritage Foundation, the Physicians' Services Incorporated Foundation etc.), and academic organizations

### **Graduate Students, Supervision and Training**

- Zachary Ferraro (University of Ottawa) – Ph.D. Supervisor (2008-2012)
- Kendra Brett (University of Ottawa) – Ph.D. Supervisor (2010-2014)
- Kevin Belanger (University of Ottawa) – M.Sc. Supervisor (2011-2013)
- Yannick Molgat-Seon (University of Ottawa) – MSc. Committee (2009-2012)
- Angela Alberga (University of Ottawa) – Ph.D. Committee (2008-2012)
- Marie-Eve Rioux (University of Ottawa) – Ph.D. Committee (2009-2013)
- Nathan Morris (University of Ottawa) – M.Sc. Committee (2010-13)
- Martine Belliveau (University of Ottawa) – M.Sc. Committee (2011-13)
- Brittany Beauchamp (University of Ottawa) – Ph.D. Committee (2010-14)
- Shalane Ha (University of Ottawa) – M.Sc. Committee (2011-2013)

### **Memberships**

- Canadian Obesity Network
- Canadian Society for Exercise Physiology
- The Obesity Society
- Society of Obstetricians and Gynecologists of Canada
- North American Society for Pediatric Exercise Medicine
- Ontario Society for Health & Fitness
- Treatment and Research of Obesity in Pediatrics in Canada
- Reality Coalition Canada



### Education and Academic Appointments

- Postdoctoral Fellow, Department of Human Nutrition, University of Copenhagen (2010)
- PhD in Kinesiology, Department of Kinesiology, Laval University (2008)
- MSc in Kinesiology, Faculty of Physical Education and Sport, University of Sherbrooke (2004)
- BSc in Biology, Faculty of Sciences, University of Sherbrooke (2003)
- Assistant Professor, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Cross-appointed to the School of Human Kinetics, University of Ottawa
- Junior Research Scientist, Children's Hospital of Eastern Ontario Research Institute

### Biography

Dr. Chaput currently holds a Junior Research Chair in Healthy Active Living and Obesity. His research focuses mainly on obesity prevention and the adoption of a healthy lifestyle. He is also interested in new determinants of obesity such as lack of sleep and mental stress. Dr. Chaput has published more than 90 peer-reviewed scientific articles and has contributed to a large number of conferences around the world. He recently received several awards for his research, including the New Investigator Award from the Canadian Obesity Network (2011), the New Investigator Award from the International Association for the Study of Obesity (2010) and the Ethan Sims Young Investigator Award from The Obesity Society (2005).

### Research, Clinical, Professional and Scholarly Focus and Service

Current research interests include: i) childhood obesity; ii) sleep; iii) physical activity, sedentary behaviour and health; and iv) the promotion of a healthy lifestyle

- Lead Guest Editor, Special Issue on Exercise Physiology and Nutrition, Bioenergetics
- Editorial Board Member, Bioenergetics
- Editorial Board Member, Journal of Sleep Disorders & Therapy
- Steering and Scientific Committee Member, Chronic Disease Prevention Alliance of Canada (CDPAC) Fourth Pan-Canadian Conference
- Early-Career Investigator Committee Board Member – The Obesity Society
- Faculty Representative – Canadian Obesity Network – Students & New Professionals (CON-SNP) University of Ottawa Chapter
- Research Work Group Member, Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth
- National Advisory Committee Board Member for the Dieticians of Canada on the Training Program for Primary Health Care Practitioners on the Use and Interpretation of the WHO Growth Charts Adapted for Canada
- Peel Public Health Obesity Strategy Expert Panel Board Member on the Strategic priority titled Supportive Environments and Healthy Weight
- Expert Advisory Committee Board Member for the Canadian Institute of Child Health overseeing development of the Child and Youth Healthy Lifestyles module
- Reviewer for many scholarly journals and granting agencies

### Graduate Students, Supervision and Training

- Jessica McNeil (University of Ottawa) – Ph.D. Co-supervisor (2012-2016)
- Mads Fiil Hjorth (University of Copenhagen) – Ph.D. Co-supervisor (2010-2014)
- Lars Klingenberg (University of Copenhagen) – Ph.D. Co-supervisor (2009-2012)
- Michael Borghese (University of Ottawa) – M.Sc. Supervisor (2012-2014)
- David Thivel (HALO) – Post-Doctoral Fellow (2012)
- Joseph Abdulnour (University of Ottawa) – Ph.D. Committee (2010-2013)
- Nazia Darvesh (University of Alberta) – M.Sc. Committee (2011-2013)
- Kevin Belanger (University of Ottawa) – M.Sc. Committee (2011-2013)
- Sébastien Cadieux (University of Ottawa) – M.Sc. Committee (2011-2013)

### Memberships

- Canadian Obesity Network
- The Obesity Society
- International Association for the Study of Obesity
- Canadian Sleep Society
- World Association of Sleep Medicine
- Pediatric Sleep Interest Group
- Canadian Sleep and Circadian Network
- Sedentary Behaviour Research Network



**Education, Credentials, Academic appointments**

- PhD, School of Human Kinetics, Queensland University of Technology, Brisbane, Australia
- BSc and BPHE, Queen's University
- Canadian Society for Exercise Physiology – Certified Exercise Physiologist
- Assistant Professor, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Cross-appointed to Department of Human Kinetics, University of Ottawa
- Member, Faculty of Graduate and Postgraduate Studies, University of Ottawa
- Junior Research Chair, Children's Hospital of Eastern Ontario Research Institute
- Scientific Officer, Active Healthy Kids Canada

**Biography**

Dr. Colley holds a Junior Research Chair position with HALO at the Children's Hospital of Eastern Ontario Research Institute and is appointed as an Assistant Professor of Pediatrics in the Faculty of Medicine, University of Ottawa. She is the Scientific Officer of Active Healthy Kids Canada and a consultant analyst on the Canadian Health Measures Survey at Statistics Canada. Dr. Colley has published 29 peer-reviewed papers and 33 conference abstracts. Dr. Colley's research is focused on the measurement of physical activity and sedentary behaviour with a particular focus on objective measurement tools. She is currently studying the impact of motor skill development on physical activity engagement in overweight children and is developing a consensus statement on pre-exercise screening for children and youth.

**Research, Clinical, Professional and Scholarly Focus and Service**

Current research interests include: i) physical activity epidemiology ii) objective measurement of physical activity and sedentary behavior iii) motor skill development and obesity in children iv) early life determinants of childhood obesity v) behavior compensation vi) knowledge translation

- Scientific Officer, Chair of the Research Working Group and Spokesperson for the release of the 8<sup>th</sup> Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth
- Awarded the Outstanding New Investigator Award by the CHEO Research Institute, October 24, 2012
- Co-Chair of the Scientific Committee for the 2014 Global Summit on Physical Activity for Children and Youth
- Principal Investigator on a CIHR-funded Project (Planning Grant 2012): PAR-Q 4 KIDS: An ethical approach for encouraging children to participate in higher intensity or maximal effort physical activity
- Developed an analytical support tool to support researchers working with accelerometer data in SAS: The Actical Accelerometer Data Analysis Support Tool (Accel+)
- Co-Investigator on an AHSC AFP Innovation Funded Study: Assessment of Activity Intensity in Children and Adolescents with Inherited Arrhythmia Syndromes by Combined Heart Rate and Accelerometer Monitoring
- Co-Investigator on a study funded by the Lung Association: Co-Existent Obstructive Sleep Apnea and Obesity: Finding NEAT Targets for Intervention
- Reviewer for many scholarly journals

**Graduate Students, Supervision and Training**

- Peter Breithaupt (University of Ottawa – M.Sc. Co-Supervisor (2009-2011))
- Allana Leblanc (University of Ottawa – Ph.D. Co-Supervisor (2012-2016))
- Angela Alberga (University of Ottawa) – Thesis Examiner (2013)
- Jessica McNeil (University of Ottawa) – Ph.D. Committee Member (2012-2016)
- Michael Hopkins (University of Ottawa) – M.Sc. Committee Member (2011)

**Memberships**

- NASPEM
- CSEP
- Canadian Obesity Network
- Ontario Society for Health & Fitness
- Sedentary Behaviour Research Network

**Education, Credentials, Academic appointments**

- MA and PhD, Department of Psychology, Carleton University
- Post-Doctoral Fellowship, Behavioural Medicine, State University of New York (SUNY) at Buffalo
- Registered Clinical Psychologist – College of Psychologists of Ontario
- Associate Professor, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Cross-appointed to Department of Psychology, University of Ottawa
- Cross-appointed to Department of Human Kinetics, University of Ottawa
- Adjunct Research Professor, Department of Psychology, Carleton University
- Senior Research Scientist, Children's Hospital of Eastern Ontario Research Institute

**Biography**

Dr. Goldfield is a Clinical Scientist in HALO and an Associate Professor of Pediatrics, Human Kinetics, and Psychology at the University of Ottawa. He is also a registered clinical psychologist practicing in the community and sees children, adolescents and adults. Dr. Goldfield began the childhood obesity research program at the CHEO Research Institute 12 years ago and is a founding member of HALO. He has held an Endowed Scholar Award from the CHEO Volunteer Association Board and a New Investigator Award from the Canadian Institutes of Health Research. Dr. Goldfield's main research interests are in the role that physical activity and health behavior change play in the treatment and prevention of child obesity. He has published over 50 peer reviewed papers and has over 100 conference presentations and published abstracts.

**Research, Clinical, Professional and Scholarly Focus and Service**

Current research interests include: i) childhood obesity treatment and prevention ii) psychological determinants and consequences of child obesity iii) Effects of physical activity and sedentary behavior on body composition and mental health; iv) determinants of the rewarding value of food and eating behavior.

- Member, Fellowship Awards Grant Review Committee, Canadian Institutes of Health Research (CIHR)
- Member, Fellowships Awards Grant Review Committee, Alberta Innovates Health Solutions (AIHS)
- Member, Science Grant Review Committee, CHEO Research Institute
- Member, Health Behavior Change Committee, American Heart Association
- Member, Child Obesity treatment Recommendations Committee, Registered Nurses of Ontario.
- Registered clinical psychologist, College of Psychologists of Ontario
- Member Treatment and Research of Obesity in Pediatrics in Canada (TOPIC)
- Member, Advisory Board and Program Evaluation Committee, Centre for Healthy Active Living (CHAL) at CHEO
- Member, Canadian Psychological Association
- Member, American Psychological Association
- Member, Canadian Obesity Network (CON)
- Member of numerous Dissertation Committees, University of Ottawa
- Reviewer for many scholarly journals and granting agencies, and external examiner on Master's theses and Dissertations.

**Graduate Students, Supervision and Training**

- Stephanie Leclair (University of Ottawa) – Ph.D. Co-supervisor (2006-2012)
- Angela Wilson (University of Ottawa) – Ph.D. Supervisor (2010-2016)
- Marisa Murray (University of Ottawa) – Ph.D. Supervisor (2011-2017)
- Danijela Maras (Carleton University) – M.A. Supervisor (2011-2013)
- Jakub Racek (Carleton University-MA practicum), Supervisor, 2012

**Memberships**

- College of Psychologists of Ontario
- Canadian Psychological Association
- American Psychological Association
- Canadian Obesity Network
- The Obesity Society
- Sedentary Behaviour Research Network


**Education, Credentials, Academic appointments**

- MSc, Department of Community Health, University of Toronto
- PhD, Institute of Medical Sciences, University of Toronto
- Post-Doctoral Fellowship, Labatt Family Heart Centre, SickKids, Toronto
- Canadian Society for Exercise Physiology – Certified Exercise Physiologist
- Assistant Professor, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Assistant Professor, Department of Physical Therapy, Faculty of Medicine, University of Toronto
- Research Scientist, Children's Hospital of Eastern Ontario Research Institute

**Biography**

Dr. Longmuir is a Scientist in the Healthy Active Living and Obesity Research Group at the Children's Hospital of Eastern Ontario Research Institute. Dr. Longmuir's research interests are the promotion of physical activity to children with medical conditions and disabilities, and the use of physical activity to prevent and/or treat morbidity. Her undergraduate, Masters and Ph.D. theses examined the impact of interventions to increase physical activity among children with heart defects or cystic fibrosis. Dr. Longmuir's post-doctoral fellowship was a community health promotion initiative implemented through the Hospital for Sick Children, Toronto. Dr. Longmuir has published more than 35 papers and 6 book chapters in the peer-reviewed literature. She has delivered over 80 scholarly conference presentations, and more than 50 invited and keynote addresses.

**Research, Clinical, Professional and Scholarly Focus and Service**

Current research interests include: i) pediatric exercise science ii) role of physical activity in physical and mental health of children with cardiac conditions iii) physical literacy and health iv) physical activity among children with medical conditions and disabilities v) motor and active lifestyle development in young children vii) knowledge translation and mobilization.

- Member of the Champlain Cardiovascular Disease Prevention Network Healthy School-aged Children Expert Task Group
- Invited member of the Canadian Society for Exercise Physiology Physical Activity and Lifestyle Appraisal Strategic Planning Committee
- Invited member of the Ontario Physical and Health Education Association Physical Literacy Advisory Think Tank
- Member of the Writing Committee on the Promotion of Physical Activity Participation in Children and Adults with Congenital Heart Disease of the American Heart Association
- Member of the City of Toronto Department of Parks, Forestry and Recreation Disability Advisory Committee
- Peer reviewer for funding applications submitted to the Social Sciences and Humanities Research Council of Canada Insight Grants
- Peer reviewer for grant applications submitted to the Nuffield Foundation
- Reviewer for many scholarly journals, including European Physical Education Review and Perceptual and Motor Skills
- Reviewer for Public Health Agency of Canada Health Literacy Model
- Faculty and course development for many post-graduate education courses related to recreation and fitness access, inclusion of people with disabilities, accessibility of natural environments, and accessibility of public rights of way

**Graduate and Undergraduate Students, Supervision and Training**

- Kathryn McClelland (University of Ottawa) – M.Sc. Co-supervisor (2012-2013)
- Emily Bray (University of Ottawa) – B.Sc. Supervisor (2012-2013)
- Makenzie Weekes (University of Ottawa) – B.Sc. Supervisor (2012-2013)

**Clinical Students, Supervision and Internships**

- Anastasia Alpous (University of Ottawa) – M.A. (2012)

**Memberships**

- North American Society for Paediatric Exercise Medicine
- Canadian Society for Exercise Physiology
- American College of Sports Medicine
- American Heart Association
- Canadian Cardiovascular Society
- North American Federation of Adapted Physical Activity
- Active Living Alliance for Canadians with a Disability

**Education, Credentials, Academic appointments**

- MSc and PhD, Department of Community Health, University of Toronto
- Canadian Society for Exercise Physiology – Certified Exercise Physiologist
- Full Professor, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Cross-appointed to Department of Epidemiology & Community Medicine, University of Ottawa
- Cross-appointed to Department of Human Kinetics, University of Ottawa
- Faculty appointment in Ph.D. Program in Population Health, University of Ottawa
- Senior Research Scientist, Children's Hospital of Eastern Ontario Research Institute
- Adjunct Professor, School of Graduate Studies, University of Toronto
- Visiting Professor, Kenyatta University, Nairobi, Kenya
- Chief Scientific Officer, Active Healthy Kids Canada

**Biography**

Dr. Tremblay is the Director of HALO at the Children's Hospital of Eastern Ontario Research Institute and Professor of Pediatrics in the Faculty of Medicine, University of Ottawa. He is a Fellow of the American College of Sports Medicine, Chief Scientific Officer of Active Healthy Kids Canada, Chair of the Canadian Physical Activity Guidelines Project, Chair of the Canadian Health Measures Survey Expert Advisory Committee and former Dean of Kinesiology at the University of Saskatchewan. Dr. Tremblay has published more than 170 papers and book chapters in the peer-reviewed literature. He has delivered over 500 scholarly conference presentations, including more than 130 invited and keynote addresses, in 16 different countries. Dr. Tremblay received an honorary doctorate from Nipissing University for his leadership contributions to healthy active living in Canada.

**Research, Clinical, Professional and Scholarly Focus and Service**

Current research interests include: i) pediatric exercise science ii) childhood obesity iii) physical literacy and health iv) physical activity, fitness and health measurement v) sedentary physiology vi) health surveillance vii) knowledge translation and mobilization.

- Editorial Board, African Journal of Applied Human Sciences
- Invited member of the CBC "Live Right Now" Advisory Board
- Visiting Professor, Kenyatta University, Nairobi Kenya
- Spokesperson for the release of the 8th Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth
- Chief Scientific Officer, Active Healthy Kids Canada
- Chair, Canadian Physical Activity Guidelines Committee, Canadian Society for Exercise Physiology
- Research Affiliate with the Alberta Centre for Active Living
- Editorial Board member of Acta Kinesiologicae Universitatis Tartuens
- Chair, Scientific Advisory Committee and Steering Committee for the Canadian Assessment of Physical Literacy Project
- Member of the Steering Committee for Treatment and Research of Obesity in Pediatrics in Canada (TOPIC)
- Chair, ParticipACTION Research Advisory Group
- Member of the Champlain Cardiovascular Disease Prevention Network Coordinating Committee
- Member, Board of Directors, Active Healthy Kids Canada
- Co-Chair, Expert Advisory Committee of the Canadian Health Measures Survey, Statistics Canada
- Reviewer for many scholarly journals, granting agencies, and tenure and promotion applications

**Graduate Students, Supervision and Training**

- Megan Carter (University of Ottawa) – Ph.D. Co-supervisor (2008-2012)
- Cynthia Colapinto (University of Ottawa) – Ph.D. Supervisor (2008-2012)
- Richard Larouche (University of Ottawa) – Ph.D. Supervisor (2009-2013)
- Allana Leblanc (University of Ottawa) – Ph.D. Supervisor (2012-2016)
- Stella Muthuri (University of Ottawa) – Ph.D. Supervisor (2010-2014)
- Travis Saunders (University of Ottawa) – Ph.D. Supervisor (2009-2013)
- Samantha Stephens (University of Toronto) – Ph.D. Committee (2008-2012)
- Lucy Joy Wachira (Kenyatta University, Kenya) – Ph.D. Committee (2010-13)
- Timo Jaakkola (University Jyväskylä, Finland) – Ph.D. Committee (2011-14)
- Francis Okinda (Kenyatta University, Kenya) – M.Sc. Co-Supervisor (2011-13)
- Valerie Carson (HALO) – Post-doctoral Fellow (2012-2013)

**Memberships**

- NASPEM
- CSEP
- ACSM
- Canadian Obesity Network
- Physical and Health Ed. Canada
- Ontario Society for Health & Fitness
- Int. Society for PA and Health
- ISPAH PA and Obesity Council
- ISPAH Global Advocacy PA Council
- ISPAH PA Measurement and Surveillance Council
- Sedentary Behaviour Research Network (Founder)





**JOEL BARNES** earned an MSc in 2003 from the University of Saskatchewan. In 2010, Joel joined HALO as Knowledge Synthesis and Analysis Manager. His main responsibility has been managing the annual *Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth*. Joel also maintains the HALO website ([www.HaloResearch.ca](http://www.HaloResearch.ca)) and provides web programming service to HALO research projects that use web-based technology. Outside of work, Joel enjoys reading, playing guitar and hanging out with his young daughter, Tessa.



**PRISCILLA BÉLANGER** completed her MSc in Community Health at the Université de Montréal in fall 2012 and joined the HALO research team in September 2012 as a research assistant for the International Study for Childhood Obesity, Lifestyle and Environment (ISCOLE). Prior to this, she obtained her BSc with honours in Human Kinetics from the University of Ottawa in 2006 and put her knowledge and skills into practice as a personal trainer and martial arts instructor in Ottawa and Mont-Tremblant. She is also a Certified Exercise Physiologist with the Canadian Society for Exercise Physiology. Her research and career interests focus on the determinants of health, chronic disease prevention, as well as promoting and supporting healthy environments and lifestyles. Outside of work, she enjoys running, hiking, snowboarding, practicing yoga, training in the gym, and experiencing just about every outdoor sport!



**MICHAEL BORGHESE** completed his Honours Bachelor of Sciences in Health Sciences (minor in Life Sciences), at the University of Ottawa in 2011. His undergraduate research project used a needs assessment approach to evaluate the current and future state of cycling in two Ottawa neighborhoods. Mike joined the HALO team as a summer student in 2010 and 2011, and worked as a research assistant from January 1<sup>st</sup> – August 31<sup>st</sup> with Dr. Rachel Colley of HALO primarily on the Physical Activity Engagement (PAE) study, and Dr. Rob Gow of CHEO's division of Cardiology on the Activity Intensity in Inherited Arrhythmias study. Mike also works with Prof. Wilma Jelley at the University of Ottawa's Department of Physiotherapy, investigating the essential competencies for interdisciplinary collaboration among medical professionals. Mike has been supervising the Rideau Canal's First Aid Skate Patrol team for 5 years; continues to tutor undergraduate students in organic chemistry, biochemistry, and anatomy and physiology; has taught English as a second language to children of families who have recently immigrated to Canada; and has worked as a Blood Typer for Canadian Blood Services' blood donation promotional events. He enjoys staying active, reading, and learning something new each day.



**CHARLES BOYER** has a BSc and MA in Human Kinetics from the University of Ottawa. Charles's masters work involved understanding the situational factors leading to injury in youth hockey. Charles joined the HALO team in February 2011 as a Research Assistant for the Canadian Assessment of Physical Literacy (CAPL) and the International Study of Childhood Obesity, Lifestyle and the Environment (ISCOLE) research projects. Charles enjoys several active pursuits outside of HALO which include running, weight lifting, hockey, and golf.



**DR. ANNICK BUCHHOLZ** is a clinical psychologist, and lead in outcomes management and research at the Centre for Healthy Active Living (CHAL). Dr. Buchholz was previously involved in the development of the eating disorder day treatment and inpatient programs at CHEO; and, along with her colleagues in eating disorders, implemented outcomes measurement for both these programs. Dr. Buchholz has also been involved in the development and evaluation of the prevention program 'BodySense'; a program aimed at promoting healthy body image in athletes. She is a co-investigator on the REAL study, 'Research on Eating and Adolescent Lifestyles, an Ottawa-based longitudinal study examining shared risk factors between eating disorders and obesity in youth. Her research interests include psychosocial risk factors related to body image, stigma, disordered eating, and weight regulation in children and youth, as well as treatment outcomes.



**KIMBERLY GRATTAN** conferred her Master of Arts in Applied Health Sciences degree at Brock University in the fall of 2009. Preceding this she completed a Bachelor of Honours in Kinesiology in the fall of 2007, also at Brock. Under the guidance of Dr. Philip M. Wilson, she focused her graduate thesis on the role of motivation and goal setting on physical activity and healthy eating behaviours for people enrolled in commercial weight loss programs. Kimberly came to HALO initially as a volunteer in January of 2011 and then was fortunate to join the team as a Research Assistant in February of that same year. She is now a Research Coordinator for Dr. Kristi Adamo and her main responsibilities pertain to the Activity Begins in Childhood trial, an intervention aimed at increasing the moderate to vigorous physical activity of preschool aged children. Outside of work Kimberly is a member of the women's National underwater hockey team who competed in the Elite Underwater Hockey World Championships in Portugal (2011) and will compete at the next World Championships in Hungary (summer 2013). She also enjoys weight training, kayaking, biking, skiing, and reading.



**DR. STASIA HADJIYANNAKIS** received her medical degree from the University of Toronto (1996) and completed her pediatric residency at Queen's University with an endocrine fellowship at McGill University. She worked as a Visiting Professor at the University of California San Francisco (2003) where she received more in-depth training in the area of pediatric obesity and lipid disorders. Stasia is the Medical Director of the Center for Healthy Active Living. She is an assistant Professor of Pediatrics at the University of Ottawa and has been an active member of the Department of Pediatrics at CHEO in the division of endocrinology since November 2001. Her clinical, advocacy and research interests are in the area of pediatric obesity and related co-morbidities such as metabolic syndrome, dyslipidemia, Type 2 diabetes and polycystic ovarian syndrome. Her research interests are in examining the interplay between behavioural/psychosocial, genetic, and intrauterine factors in predicting risk for obesity related co-morbidities.



**ALYSHA HARVEY** has an Honours B.Sc. in Kinesiology and Health Sciences from York University, is a certified Personal Trainer, and a certified Project Manager (PMP). At the age of 21, while completing her Bachelor of Science, she started her own business in health and fitness, working with elite athletes as well as the general population, including children. In addition to personal training and conducting fitness assessments, Alysha worked as a Kinesiologist in a clinical environment, aiding patients in rehabilitation. Alysha continued her interest in sport via sports event management, working on projects with Hockey Canada, the Canadian Hockey League, the OHL, the IIHF, and the OWHA, including: National Junior Hockey Team Selection Camps, pre-Olympic tour of the Women's Olympic Hockey Team of the People's Republic of China, and bidding for the Memorial Cup on behalf of several OHL teams. Alysha also broadcasted on the Fan Radio Network for the National Women's Hockey TSN Challenge, Team Canada vs. Team USA. In developing her business acumen, Alysha pursued additional project management work in the private and not-for-profit sector for several years, while still maintaining her connection to health, fitness, and sport. Alysha has recently joined HALO as a Research Coordinator, assisting Dr. Kristi Adamo and Dr. Gary Goldfield with research in childhood obesity, including studies in physical activity intervention amongst preschoolers and maternal obesity management.



**DR. ANNE MARIE HOSPOD** completed her undergraduate training at McGill University, earning a Bachelor of Science with Distinction in Physiology, and a minor in the History of Medicine. She completed additional undergraduate work at the Pierre et Marie Curie Faculty of Sciences at the Sorbonne University in Paris, and earned her medical degree at the Collegium Medicum of Jagiellonian University in Krakow, Poland. Dr. Hospod joined HALO in April 2011 to develop and direct the CALIBRATE program, a series of interdisciplinary educational workshops that teach health professionals and Early Childhood Educators about healthy weight management, and the promotion of healthy active lifestyles among children and youth. Dr. Hospod is also a proponent of dedicated Type 1 Diabetes self-management, and volunteers her time leading experiential and transitional care programming for the Type 1 adolescent population. She is an avid runner, having completed numerous marathons, half marathons and even a 24 hour relay. Anne Marie's contract with HALO ended March 31, 2012.



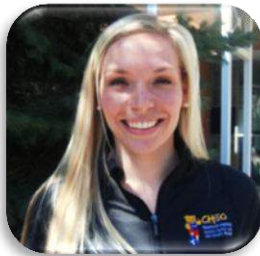
**SONIA JEAN-PHILIPPE** decided to pursue a degree in nutritional sciences due to her interest in a healthy lifestyle and growing up in her father's boutique, a Maître Chocolatier-Confiseur who gives importance to good food. She was also involved in track and field for over 15 years, competing at the provincial and national level, and later as part of the McGill University varsity track team. She participated at CIS three years running. Sonia came on-board after completing a Montreal wide study assessing vitamin D and iron status of daycare children at McGill University. She completed a BSc Nutritional Sciences to become a Registered Dietitian to then work in Dr. Hope Weiler's research group and in counseling for weight loss and management. She was involved in several projects relating to vitamin D supplementation in the first years of life, helping educate new mothers and assessing habits and knowledge. She then went abroad to Loughborough University to complete a MSc in Sport and Exercise Nutrition, her dissertation focused on vitamin D status of elite female athletes in comparison to their sedentary counterparts. Her research interests include female athlete's health and challenges, dietary measurements and interventions, healthy lifestyle education. Outside of work, Sonia still runs regularly, she has participated in events such as the Spartan race and the Mitsubishi City chase as well as running half marathons. She is an avid traveler, having been to over a dozen countries and lived in Europe.



**ALLANA LEBLANC** completed her B.Sc. at Acadia University with a double major in Biology (honours) and Kinesiology, her M.Sc. at Queen's University in Kinesiology and Health Studies, and is a Certified Exercise Physiologist with the Canadian Society for Exercise Physiology. Her graduate work focused on epidemiology and physical activity in children and youth. She grew up in Ottawa and returned in January 2010 to join the HALO team as a Research Coordinator. She is currently working in partnership with the Canadian Society for Exercise Physiology and ParticipACTION to update Canadian Physical Activity Guidelines for all age groups and aid in the development of Canadian Sedentary Behaviour Guidelines for children and youth. Outside of work, Allana has always loved being outdoors and has played various sports including rugby and competitive hockey. Current interests include cycling, running, yoga, skiing and photography.



**GENEVIÈVE LEDUC** is the project manager of the ISCOLE research project with the HALO Group. She moved to Ottawa after completing a Doctoral Degree in nutrition at Université Laval in Quebec City. During her graduate studies, she looked into the environmental influences on elementary school-aged children's weight status, adiposity and fitness. She also contributed to the implementation of pilot interventions to teach healthy nutrition and to enhance physical activity participation in fun and interactive ways in elementary schools and summer day camps in Quebec City. She was thrilled to join HALO and to be involved in the ISCOLE project which principal aim is to determine the relationship between lifestyle characteristics, obesity and weight gain in 10 year-old children, and to investigate the influence of behavioral settings and physical, social and policy environments on these relationships. Outside of work, Geneviève has been a group fitness instructor for over 10 years and is still a regular participant in all sorts of fitness classes. She also loves to cook and tries to incorporate the components of a healthy lifestyle to her family by being active and preparing meals with her 3-year-old son every day!



**ALLISON MCFARLANE** is currently completing her BSc. in Food and Nutrition from Acadia University. Prior to this, she completed her B.Sc. in Kinesiology from the University of Ottawa. She ultimately wants her career to focus on food policy and mesh her passion for physical activity to assist people in making healthier lifestyle choices. Allison worked with HALO as a research assistant last year on an active video gaming review and position stand, as well as the Canadian Assessment of Physical Literacy project. Outside of work, Allison enjoys playing practically any sport, cooking up new recipes, baking, and traveling.



**KATIE MCCLELLAND** completed her BKIN at Acadia University in Spring 2008. Her time at Acadia included a position as a Research Assistant on a study that examined proxy-led exercise as a means of promoting independent exercise among older adults in terms of relationally inferred self-efficacy beliefs. Other initiatives at Acadia included Katie's involvement in a multidisciplinary project that led to the design and delivery of a series of health and wellness seminars at a local elementary school focused on the promotion of healthy active lifestyles. Katie's interest in youth development led her to pursue an MA in sport psychology at the University of Ottawa under the supervision of Dr. Terry Orlick. Her interest in physical literacy led to her involvement with HALO as a Research Assistant on the Canadian Assessment of Physical Literacy in January 2012. She is currently working to complete her Master's thesis, in the spring of 2013, focused on the role of motivation in the development of physical literacy in youth. When Katie isn't busy with school and work she enjoys spending time sailing, swimming, running and bicycling with family and friends at her cottage in Sundridge Ontario. She also enjoys softball, volleyball, snowboarding, and yoga.





**KASEY PARKER** holds a Master of Science in Human Kinetics from the University of Ottawa in collaboration with The Cleveland Clinic, Biomechanics Department. Kasey's graduate work focused on biomechanics in runners and the effects of different types of running shoes. In her studies she had opportunities to work on projects related to space flight and exercise science with The Cleveland Clinic's Center for Space Medicine (NASA Biomechanics site). Kasey has been involved in research for almost 12 years (at the clinical and systematic review level) studying various populations but her true research interests are in the management and conduct of trials and systematic reviews as well as policy related to physical activity in young children. Kasey joined the HALO team in September 2012 as a Research Coordinator to manage Dr. Kristi Adamo's project related to preschool children and their gross motor development and physical activity behaviour. Outside of work, Kasey enjoys long distance running and playing volleyball.



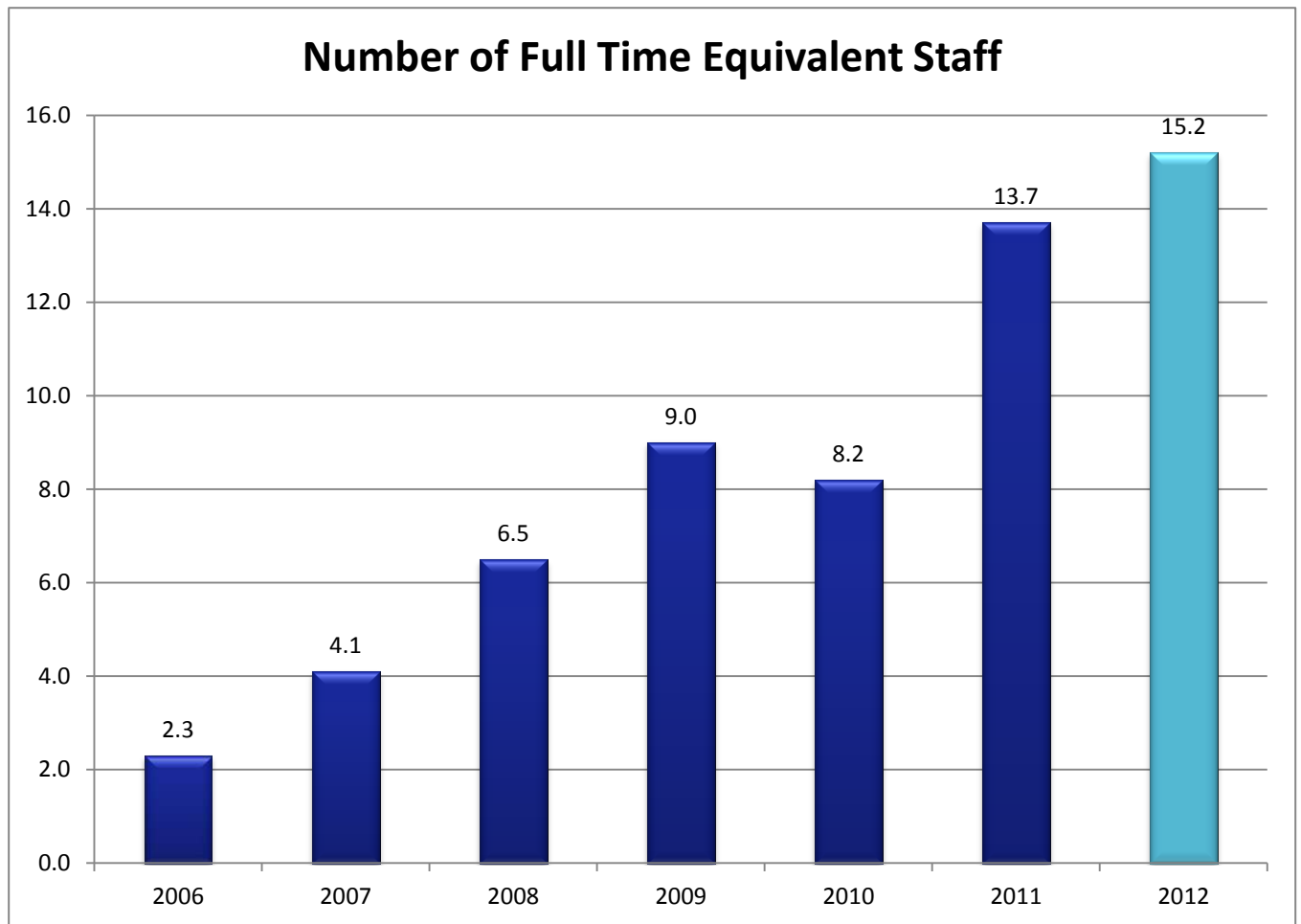
**JANE RUTHERFORD** completed a BSc. in Nutritional and Nutraceutical Sciences and a MSc. in Nutrition, Exercise and Metabolism from the University of Guelph. Jane is the Exercise Specialist for CHEO's Centre for Healthy Active Living which works to help manage the health of children and youth with complex severe obesity and their families. Jane's previous work experience includes working in cardiac and musculoskeletal injury rehabilitation as an Exercise Physiologist, Lifestyle coach with the YMCA/YWCA's Y Kids Fit program, and Research Coordinator with the Healthy Active Living and Obesity Research Group. Leading by example, Jane is an avid marathon runner, fitness instructor, and field hockey player.



**HÉLÈNE SINCLAIR** is a Certified Administration Professional – specializing in Organizational Management (CAP-OM® - International Association of Administrative Professionals - IAAP) who joined the HALO team in November 2010. She provides administrative, human resource and financial services assistance to the Director and the HALO team. Originally from Northern Ontario (Sudbury), she brings over 25 years of experience in office administration. She is an active volunteer and Past-President (2010/2011) of the Ottawa Chapter of the IAAP. Beyond her role with HALO, Hélène's passion and interest for healthy active living includes her long time (>6 years) participation as a Community Team Member and Team Leader with an online weight loss and healthy living program (SparkPeople). Other areas of interest include reading and writing, walking/hiking, swimming, dancing, and traveling.



**SHANNA WILSON** completed her Honours BSc degree in Biochemistry at the University of Guelph in April 2010. She then pursued a Master of Bioinformatics at the University of Guelph to combine her passion for complex, automated data analysis and biological sciences. Shanna has previous experience working with children through teaching swimming and skiing. She has also been involved in a math and reading teaching program for children. In May 2012, Shanna joined the HALO team as a Research Assistant. Shanna is contributing to the HALO initiative through a combination of her experiences working with children and her knowledge of biological sciences/informatics. In 2012, Shanna worked on variety of projects, including maternal obesity management and appetite signaling proteins in obese adolescents with subclinical binge eating disorder, under the supervision of Dr. Kristi Adamo as well as the ReACH study under the supervision of Dr. Pat Longmuir. Outside of work, Shanna likes to stay active by walking, swimming and participating in fitness classes. She also enjoys reading, baking, and knitting in her spare time.



**Figure 1: Number of Full Time Equivalent (FTE) positions in HALO Research Group from 2006 to 2012. Between 2006 and 2012, there was a 561% increase in FTE, and between 2011 and 2012, there was an 11% increase in FTE.**



## GRADUATE STUDENTS

HALO proudly displays the names of recent Graduate Students on a plaque in the main office. Those honoured to date:

- Peter Breithaupt (M.Sc. 2011)
- Stephanie Prince Ware (Ph.D. 2012)
- Zachary Ferraro (Ph.D. 2012)
- Stephanie Leclair (Ph.D. 2012)



**KEVIN BELANGER**

*M.Sc. Student*

**Supervisor:**

*Dr. Kristi Adamo*

**Research Program:**

*M.Sc. Human Kinetics, University of Ottawa*

**Thesis Topic:**

*The importance of risk stratification and cardiorespiratory fitness in pediatric obesity*



**MICHAEL BORGHESE**

*M.Sc. Student*

**Supervisor:**

*Dr. Jean-Philippe Chaput and Dr. Eric Doucet*

**Research Program:**

*M.Sc. Human Kinetics, University of Ottawa*

**Thesis Topic:**

*The influence of Weight Status on the Link between Television Viewing and Food Intake in Children*



**KENDRA BRETT**

*Ph.D. Student*

**Supervisor:**

*Dr. Kristi Adamo*

**Research Program:**

*Ph.D. Human Kinetics, University of Ottawa*

**Dissertation Topic:**

*The Impact Of Maternal Obesity And Physical Activity On The Expression Of Placental Fatty Acid Transporters*



**MEGAN CARTER**

*Ph.D. Student*

**Supervisor:**

*Dr. Lise Dubois and Dr. Mark Tremblay*

**Research Program:**

*Population Health, University of Ottawa*

**Dissertation Topic:**

*The influence of place on body weight and food insecurity during childhood: a longitudinal study of young children living in Québec, Canada*



**CYNTHIA COLAPINTO**

*RD, Ph.D. Candidate, CIHR Health Professional Fellow in Public Health; Statistics Canada Tom Symon's Fellow (2009-2010); University of Ottawa Excellence Scholar*

**Supervisor:**

*Dr. Mark Tremblay*

**Research Program:**

*Ph.D. in Population Health, University of Ottawa; Graduate Diploma in Health Services and Policy Research, University of Ottawa/Ontario Training Centre in Health Services and Policy Research*

**Dissertation Topic:**

*Examining the folate status of Canadians, in particular women of childbearing age, using the Canadian Health Measures Survey*



**ZACHARY FERRARO**

*Ph.D. Candidate*

**Supervisor:**

*Dr. Kristi Adamo and Dr. Denis Prud'homme*

**Research Program:**

*Ph.D. Human Kinetics, University of Ottawa*

**Dissertation Topic:**

*Maternal predictors and potential modifiers of fetal growth during pregnancy*



**RICHARD LAROUCHE**

*Ph.D. Candidate, CIHR Banting and Best Doctoral Scholar*

**Supervisor:**

*Dr. Mark Tremblay*

**Research Program:**

*Ph.D. Human Kinetics, University of Ottawa*

**Dissertation Topic:**

*Relationship between active transportation, physical activity, body composition and cardiovascular fitness in children and adolescents*





**ALLANA LEBLANC**

*Ph.D. Candidate,*

**Supervisor:**

*Dr. Mark Tremblay*

**Research Program:**

*Ph.D. Human Kinetics, University of Ottawa*

**Dissertation Topic:**

*Relationship between active transportation, physical activity, body composition and cardiovascular fitness in children and adolescents*



**STEPHANIE LECLAIR**

*Ph.D. Candidate, CIHR Doctoral Clinical Scholar*

**Supervisor:**

*Dr. Gary Goldfield*

**Research Program:**

*Ph.D. Clinical Psychology, University of Ottawa*

**Dissertation Topic:**

*Delivering behavioural intervention for obese children via the Internet*



**DANIJELA MARAS**

*M.A. Student, Ontario Graduate Scholar*

**Supervisor:**

*Dr. Gary Goldfield*

**Research Program:**

*M.A. Experimental Psychology, Carleton University*

**Thesis Topic:**

*Examining mediators of the relationship between attachment style and body mass index in a community-based sample of youth in Ontario*



**MARISA MURRAY**

*Ph.D. Candidate*

**Supervisor:**

*Dr. Gary Goldfield*

**Research Program:**

*Ph.D. Clinical Psychology, University of Ottawa*

**Dissertation Topic:**

*Delivering behavioural intervention for obese children via the Internet*



**STELLA MUTHURI**

*Ph.D. Candidate, Queen Elizabeth II – Graduate Scholarship in Science and Technology*

**Supervisor:**

*Dr. Mark Tremblay*

**Research Program:**

*Ph.D. in Population Health, University of Ottawa*

**Dissertation Topic:**

*Comparative study of physical activity trends and the prevalence of obesity in school aged children in Canada and Kenya*



#### **STEPHANIE PRINCE WARE**

*Ph.D. Candidate, SSHRC Scholar, Ontario Graduate Scholar, University of Ottawa Excellence and Research Scholar*

#### **Supervisor:**

*Dr. Denis Prud'homme and Dr. Mark Tremblay*

#### **Research Program:**

*Ph.D. Population Health, University of Ottawa*

#### **Dissertation Topic:**

*Neighbourhood built and social environments and individual physical activity, overweight & obesity: A multi-method assessment*



#### **TRAVIS SAUNDERS**

*Ph.D. Candidate, CIHR and CDA Doctoral Clinical Scholar*

#### **Supervisor:**

*Dr. Mark Tremblay*

#### **Research Program:**

*Ph.D. Human Kinetics, University of Ottawa*

#### **Dissertation Topic:**

*The relationship between sedentary time and metabolic health in children and youth*



#### **ANGELA WILSON**

*Ph.D. Student*

#### **Supervisor:**

*Dr. Gary Goldfield*

#### **Research Program:**

*Ph.D. Clinical Psychology, University of Ottawa*

#### **Dissertation Topic:**

*Identifying mediators and moderators of the obesity-depression link in children and adolescents*

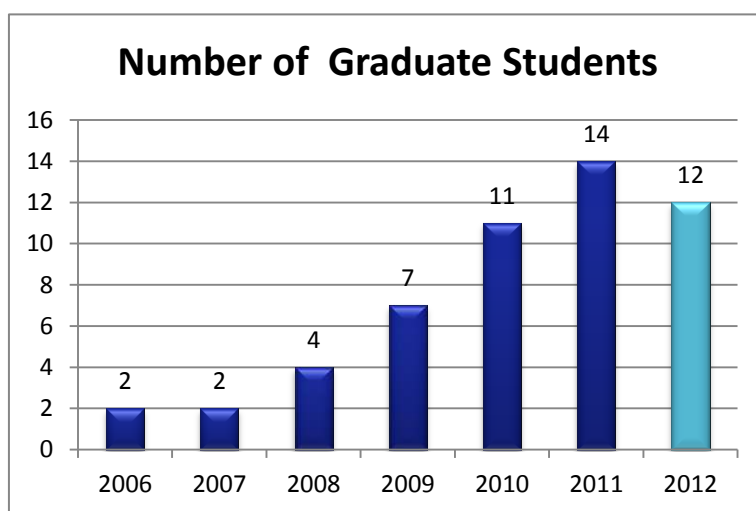


Figure 2: Number of Full Time Equivalent (FTE) graduate students in the HALO Research Group from 2006 to 2012. Between 2006 and 2012, there was a 500% increase, and between 2011 and 2012, there was a 14% decrease in the number of students. A total of 3 students graduated in 2012.



**DR. VALERIE CARSON** started a postdoctoral fellowship in the Healthy Active Living and Obesity Research group at the Children's Hospital of Eastern Ontario Research Institute in November, 2012. Prior to this position she completed a short postdoctoral fellowship at Deakin University in Australia under the supervision of Dr. Jo Salmon. Her graduate training was from the Queen's University where she completed her PhD under the supervision of Dr. Ian Janssen and University of Alberta where she completed her Master's degree under the supervision of Dr. John Spence. After her time in Ottawa she will begin an Assistant Professor position at the University of Alberta in the Faculty of Physical Education and Recreation. Dr. Carson's research thus far has primarily focused on the relationship between physical activity, sedentary behaviour, obesity, and related health outcomes as well as the determinants and measurement of physical activity and sedentary behaviour among young people. To date, she has published more than 20 peer-reviewed papers and made over 25 presentations in this research area.



**CLAIRE FRANCIS** completed her BSc (hons) Sport and Exercise Science from the University of Bath in July 2012. During her four year degree she spent a year working for the Institute of Youth Sport at Loughborough University, evaluating a physical activity promotion programme in adolescent children and examining the influence of breakfast and exercise on cognition in adolescents. She joined the HALO team in September 2012 as a research volunteer to assist in the ISCOLE and CAPL projects. Outside of work, Claire enjoys hiking, swimming, travelling, reading and baking.



**DAVID THIVEL** completed a post-doctoral fellowship in the Healthy Active Living and Obesity Research Group (HALO) in 2012 under the guidance of the Dr. Jean-Philippe Chaput, exploring the impact of physical activities and sedentary behaviors on subsequent nutritional adaptations (energy intake, macronutrient preferences, and appetite feelings) in lean and obese youth. David previously completed a first post-doctoral position at the Columbia University of New-York City (Nutrition Obesity Research Center) and obtained his PhD in Exercise physiology, Nutrition and health Sciences at the French National Institute for Agronomic Research and Blaise Pascal University (Clermont-Ferrand, France), in July 2011. He actually holds an academic position at the Blaise Pascal University (France) and keeps focusing his research on the nutritional adaptations to exercise and sedentary behaviors in youth in collaboration with the Dr. Jean-Philippe Chaput. David is also member of the European Childhood Obesity Group. He enjoys traveling, listening to music, cinema and sport.

- Dr. Jodie Dodd (MD-Maternal Fetal Medicine Specialist) and Andrea Deussen (Senior Clinical Research Coordinator, LIMIT Trial). Women's and Children's Hospital; Obstetrics & Gynaecology, Adelaide, Australia.
- Simony Lira Nascimento (PhD) Department of Obstetrics and Gynecology, UNICAMP Medical School, Campinas, Brazil.

In May 2012, Dr. Kristi Adamo and her research team hosted a CIHR funded planning meeting in Ottawa entitled: 'Obesity Prevention from Conception: a workshop to guide the development of a pan Canadian trial targeting the gestational period'. This workshop, funded through CIHR's Institute of Nutrition, Diabetes and Metabolism (INMD), brought together a set of Canadian maternal, fetal and pediatric health experts and relevant knowledge users, as well as international collaborators from Australia and Brazil. The objective of the workshop was to enhance national research collaborations prioritizing the development and implementation of a pan-Canadian randomized control trial focusing on maternal obesity management with the intent of minimizing downstream offspring obesity. This meeting not only provided a venue for attendees to share their collective expertise, but also served as a means to identify future trial sites, facilitators and teams of investigators to participate in the development of a pan Canadian trial targeting the gestational period. Overall, the meeting was a great success, generated many novel ideas for study implementation and reinforced collaborations that will serve to benefit a pan-Canadian lifestyle intervention during pregnancy.



**Attendees** (left to right) Front: Laura Gaudet, Dawn Stacey, Helena Piccinini-Vallis, Kristi Adamo, Pat Vanderkooy, Michelle Mottola, Simony Lira, Mary Duggan, Amy McGee, Kendra Brett, Sonia Jean-Philippe, Alysha Harvey Back: Sonja Wicklum, Nick Barrowman, Garry Shen, Ann Sprague, Sandra Dunn, Sandy Davidge, Radha Chari, Andrea Deussen, Jodie Dodd, Graeme Smith, Denis Prud'homme, Christy Woolcott, Patricia McNiven, Ariane Godbout, Julie Robitaille (hidden), Marie Brisson (hidden), Melissa Rossiter, Asha Gajaria, Linda McCabe, Zach Ferraro  
**Missing from picture**: Stephanie Atkinson, Elisabeth Fowler, Andrée Gruslin, Tanya Horsley, , Sarah McDonald

## ADJUNCT INVESTIGATORS



**DR. VINCENT O. ONYWERA**

Senior Lecturer  
 Director, Center for Linkages and International Programs (CLIP)  
 Kenyatta University  
 P.O BOX 43844-00100  
 Nairobi-KENYA



**DR. A. WILLIAM SHEEL**

Professor  
 School of Kinesiology  
 The University of British Columbia  
 6108 Thunderbird Blvd  
 Vancouver, BC, Canada, V6T 1Z3



## STUDENTS AND VOLUNTEERS

- **Anastasia Alpous**, Master's level clinical intern (Dr. Pat Longmuir supervisor at CHEO and Dr. Kristi Adamo)
- **Quinton Barry**, BSc student Interdisciplinary School of Health Science- University of Ottawa (volunteer with Dr. Kristi Adamo)
- **Nina Azoug-Boneault**, Health Science, Carleton University (Dr. Jean-Philippe Chaput – BSc supervisor)
- **Alicia Biafore**, Honour's thesis student, Department of Psychology, Carleton University, (Dr. Gary Goldfield and Dr. Annick Buzhholz Co-Supervisors)
- **Kristi Billard**, Department of Biomedical Science, Ottawa University (practicum student with Dr. Kristi Adamo)
- **Kate Boehm**, Summer fellowship- Medical Student University of Ottawa (Dr. Kristi Adamo)
- **Emily Bray** (volunteer with Dr. Pat Longmuir on the physical activity, energy and growth in children with heart conditions study)
- **Andrew DiMillo**, BSc.-Honours student Biopharmaceutical Sciences, Genomics Option, University of Ottawa (volunteer with Dr. Kristi Adamo)
- **Heather Dunlap**, Summer Student- Arts & Science Student- McMaster University (Dr. Kristi Adamo)
- **Alison Flett**, Undergraduate research practicum student and volunteer, Department of Psychology, Carleton University, (Dr. Gary Goldfield – Supervisor)
- **Sophia Gran-Ruaz**, B.Sc. – Honours student in Biomedical Sciences, University of Ottawa (volunteer with Dr. Kristi Adamo)
- **Laura Harding** (volunteer with Dr. Pat Longmuir on the Canadian Assessment of Physical Literacy study)
- **Shalane Ha**, MSc- student Interdisciplinary School of Health Science, University of Ottawa (volunteer with Dr. Kristi Adamo)
- **Genevieve Hayden**, Summer Student, Department of Psychology, University of Ottawa, (Dr. Gary Goldfield Supervisor)
- **Jasmin Lim**, MSc - Human Kinetics University of Ottawa, (volunteer with Dr. Kristi Adamo)
- **Kathryn McClelland**, Master's level thesis, School of Human Kinetics, University of Ottawa (Dr. Pat Longmuir, thesis advisor, Dr. Terry Orlick, Supervisor)
- **Jakub Racek**, Master's Level research practicum, Department of Psychology, Carleton University (Dr. Gary Goldfield-Supervisor)
- **Niko Tzakis**, Integrated Science, Carleton University (Dr. Jean-Philippe Chaput – BSc supervisor)
- **Hadiza Amedu-Ode**, Integrated Science, Carleton University (Dr. Jean-Philippe Chaput – BSc supervisor)
- **Victoria Peck**, BSc. HK honours student, University of Ottawa (volunteer with Dr. Kristi Adamo)
- **Jessica Visentin**, BSc Honours student in Biomedical Sciences, (volunteer with Dr. Kristi Adamo)
- **Makenzie Weekes** (volunteer with Dr. Pat Longmuir on the study of mental health in adolescents with inherited arrhythmias and with Dr. Rachel Colley on study of Co-Existent Obstructive Sleep Apnea and Obesity: Finding NEAT Targets for Intervention)





***HALOites receive 3 of 5 CHEO RI Awards***

***From left to right: Dr. Kristi Adamo (Outstanding Investigator), Dr. Mark Tremblay (Outstanding Research Mentor), and Dr. Rachel Colley (Outstanding New Investigator).***













**ACTIVITY BEGINS IN CHILDHOOD: A RANDOMIZED CONTROLLED TRIAL TO INSPIRE HEALTHY ACTIVE BEHAVIOUR IN PRESCHOOLERS**

**BACKGROUND:** Today's children are more overweight than previous generations and physical inactivity is a contributing factor. Modeling and promoting positive behaviour in the early years is imperative for the development of lifelong health habits. Research indicates that preschool aged children are not active enough to accrue health benefits and social and physical environments where children spend their time have a powerful influence on behaviour. The majority of preschool children spend time in care outside of the home thus providing an ideal setting to examine the ability of an intervention to enhance the movement skills and modify PA behaviour.

**PRIMARY OBJECTIVE:**

- To evaluate the efficacy of the 6-month ABC intervention protocol delivered in licensed daycare settings alone (intervention- DC) or in combination with a parent-driven home PA-promotion (DC + HOME) component on preschoolers overall PA levels and specifically time spent in moderate to vigorous PA (MVPA)

**SECONDARY OBJECTIVES:**

- To evaluate the efficacy of the ABC intervention arms to decrease the amount of time spent in sedentary behaviour
- To evaluate the effects of the ABC intervention arms on fundamental and gross motor skills in preschoolers attending daycare
- To evaluate the effects of the ABC intervention arms on preschool children's anthropometrics, such as height, weight, body mass index, lean body mass, fat mass, and percent body fat
- To assess the effects of the ABC intervention on daycare providers' attitudes, control beliefs, perceived competency and intentions toward incorporating PA into the daycare curriculum, and examine whether these social-cognitive variables impact PA in children

**STUDY DESIGN:** This study is single centre, three-arm, cluster-randomized controlled trial design with Daycare Centre as the unit of measurement (clusters). All Daycare Centres in the National Capital region, that serve children between the ages of 3 and 5, expressing an interest in receiving the ABC intervention will be invited to participate. Those who agree will be randomly assigned to one of 3 groups: i) ABC program delivered at Daycare Centre only (DC), ii) ABC program delivered at Daycare with home/parental component (DC + HOME) or, iii) regular daycare curriculum (CON). This study will recruit 18 Daycare Centres: 6 DC, 6 DC + HOME and 6 CON. The intervention will last approximately 6 months, with baseline assessment prior to ABC implementation and follow-up assessment at 3 and 6 months.

**HYPOTHESIS:** We hypothesize that MVPA (min/d) will be greater in the combined DC + HOME compared to the DC-only but that MVPA will be greater in both groups vs. CON group. We believe both intervention arms will show larger reductions in sedentary behaviour and greater improvements in fundamental and gross motor skills, and body composition at 6-month follow-up compared to controls, with the combined intervention (DC + HOME) being superior. We predict that the ABC intervention will enhance providers' and parents' attitudes, control beliefs, perceived competency and intentions to increase children's pa in the daycare setting and home environment immediately following the training workshop, and consistent with the theory of planned behaviour, these process measures will predict children's pa at follow-up evaluations.

**RELEVANCE:** Opportunities for physical activity (PA) and motor development in early childhood may, over the lifespan, influence health behaviours contributing to the maintenance of health body weight and reduction of cardio-metabolic disease risk.



From Left to Right: Priscilla Bélanger, Mike Borghese, Allana Leblanc, Jessica McNeil, Charles Boyer, Claire Francis

The primary aim of the ISCOLE is to determine the relationships between lifestyle behaviours and obesity in a multi-national study of 10-year old children, and to investigate the influence of higher-order characteristics such as behavioural settings, and the physical, social and policy environments, on the observed relationships within and between countries. The targeted sample included 6000 children from 12 countries (500 children per site) in five major geographic regions of the world (Europe, Africa, the Americas, South-East Asia, and the Western Pacific). The physical characteristics of the children are directly measured in order to classify their body weight and adiposity status, and physical activity and dietary patterns are measured with the most objective techniques currently available.

Staff from the HALO group recruited more than 500 children from Ottawa's French and English, public and catholic schools to participate in the ISCOLE. The support they are receiving from parents and school staff during the recruitment period and the ongoing testing process is tremendous. In total, 26 schools are taking part in the study with more than 50 teachers involved. Drs Mark Tremblay and Jean-Philippe Chaput are the principal investigators of this study in Canada, and 4 research professionals, 3 graduate students and 2 undergraduate students are currently working on the study.

The results of the ISCOLE will provide a robust examination of the correlates of obesity in children, focusing on both sides of the energy balance equation (energy in and energy out). The results will also provide important new information that will inform the development of lifestyle, environmental, and policy interventions to address and prevent childhood obesity that may be culturally adapted for implementation around the world, and specifically within a school context.

The Active Healthy Kids Canada's Report Card on Physical Activity for Children and Youth ("Report Card") is a research-based communications and advocacy piece designed to provide insight into Canada's "state of the nation" each year on how, as a country, we are being responsible in providing physical activity opportunities for children and youth.



**Active Play – The ‘Business of Childhood’:** The 2012 Report Card marked the 8<sup>th</sup> annual overview of the many factors impacting physical activity for children and youth in this country. The 2012 Report Card highlights the importance of active play: the freely chosen, spontaneous, self-directed activity that seems to have disappeared in a single generation in the lives of Canadian kids. Play has been shown to improve: motor function, creativity, decision-making, executive functions, social skills and speech development. Unfortunately, the structure and demands of modern Canadian life may be engineering play out of our children's lives. Perhaps in a misguided bid to protect and direct them at all times, Canadian kids have lost the freedom to throw open the doors and go play.

**The Decline of Outdoor Time:** Outdoor activity, once a key source of active play for kids, is on the decline.

- The proportion of Canadian kids who play outside has dropped 14% over the last decade
- 46% of Canadian kids get 3 hours or less of active play per week, including weekends
- Canadian kids are not playing actively in their free time. At lunch and after school, kids are getting only 24 minutes of moderate-to-vigorous physical activity out of a possible 4 hours!

**How to Press Play - Recommendations** The 2012 Report Card provides focused recommendations on how to increase opportunities for active play. During the early years (0-4 years), children need access to safe, open areas where toys and balls are available to encourage creativity and games. To counter safety concerns in allowing school-aged children out the door to play, parents and caregivers should consider taking turns supervising kids at the park or on their street and encourage their kids to play outside with friends so they are not alone. Youth need inviting spaces where they can hang out and direct their own activities. If 'no time' is the barrier, then consider reducing the number of organized activities for your child.

**Advocacy and Exposure:** The influence of the Report Card continues to be far-reaching. The publication is now considered a "must-read" in the sector that informs policy-makers and practitioners working in healthy child development. The 2012 Report Card received over 150 million media impressions.

## THE PRESCHOOLERS ACTIVITY TRIAL (PAT)

*Principal Investigator:* **Dr. Gary Goldfield**

*Co-Investigator:* **K. Adamo, R. Colley, N. Barrowman**

*Collaborators:* V. Temple, PJ. Naylor

*Funding Source:* Heart & Stroke Foundation of Ontario (\$140,000)

**BACKGROUND:** The current physical activity guidelines for preschoolers by the North American Society for Physical Education (2002) call for children aged 2-5 years old to accumulate at least 60 minutes of structured physical activity and 60 minutes of unstructured (spontaneous) physical activity per day, and not be sedentary for more than 60 minutes at one time. However, recent research has found that most pre-school children (aged 2-5 years) in North America engage in very little physical activity and only a small fraction meet the physical activity guidelines. Many preschool children spend the majority of their time in day care settings, making this environment an ideal place to promote daily physical activity in fun and safe ways and reduce time that children spend in sedentary behaviour.

### **OBJECTIVES:**

The primary aims of the Preschoolers Activity Trial are to test whether Day Care providers can increase their children's physical activity and reduce time spent in sedentary behaviour when they are provided with appropriate training and tools to do so. We also want to see if the children whose day care providers got physical activity training show improvements in body composition and motor skill development.

### **DESIGN:**

To test our study objectives, we will use a randomized controlled design. We will "randomly" (like flipping a coin) assign 2 day cares to the Intervention group whereby the day care providers are given training on how to get children under their care more active or to 2 day cares to a Control group in which day care providers do not receive training and implement their normal curriculum. Providers in day cares assigned to the intervention group will receive two, 3-hour workshops before the study period, delivered by a Master Trainer experienced in promoting physical activity in preschoolers. They will also be provided with a manual and resource kit. The Master Trainer will also provide two "booster" sessions per month in the intervention day cares that will involve facilitating physical activities with the children.

Measurement of physical activity and sedentary behaviour (objectively assessed by a motion sensor –"Actical" accelerometer), body composition and motor skill development will take place in the day cares before the study, at 3-months and 6-months post study initiation. After the study is completed, care providers assigned to the control group will receive the full training and resource kit but we will not evaluate the effects on the children.

### **SIGNIFICANCE**

This study is important in that establishing a healthy active lifestyle must start early while children's health behaviours are very malleable, and this may help prevent obesity and other chronic diseases such as Type 2 diabetes or cardiovascular disease later in life.

**Status:** *We have completed data collection and are currently analyzing data and preparing papers for publication and other knowledge translation activities*



The goal of Healthy Lifestyles for Children with Complex Heart Problems is to enable children with complex heart problems to lead healthy, active lives within their own community. The top priority is to promote physical activity, because the physical and mental health benefits of activity are very important for these children. Children with complex heart problems have a higher risk for obesity, diabetes, acquired heart disease and mental health problems than their healthy peers. The physical health benefits of physical activity are well known, but physical activity is also key for children's mental health. Physical activity enables children to socialize with peers and create bonds and friendships. Physical activity participation also directly elevates mood through the release of brain chemicals. Children with complex heart problems are also known to experience fear and anxiety related to physical activity. Physical activity uncertainty can create tremendous psychological/emotional stress.

This project will also develop strategies to promote healthy eating and improved emotional health, and prevent physical activity-related injuries to these children and their families. Children with complex heart problems are often fed energy dense food in infancy to enable proper growth and provide sufficient calories for the additional work being done by the malformed heart. After the heart problem is improved through surgery, these patterns of eating energy dense food leave these children at higher risk of overweight and obesity in adolescence. With their already compromised heart function, the negative health impacts of obesity are magnified. We also know that children with complex heart problems are much more likely to experience emotional health problems, including anxiety, depression and post-traumatic stress disorder, than healthy children. Children with complex heart problems also face unique injury risks related to physical activity. Children who have pacemakers or other devices implanted near their heart are at risk of device damage or muscle injury through body impact. Similarly, many children take medications to reduce the likelihood of stroke, but these medications also leave them at increased risk for internal bleeding or severe bleeding injuries from falls or other impacts.

During the initial phase of this project, we completed extensive consultations with children (n=11) and adults (n=2) with congenital heart problems and their parents (n=18), doctors (n=8), nurses (n=8), social workers (n=2) and psychologists (n=2) caring for those with heart problems and recreation professionals (n=16) to gather their input and recommendations for each of our health promotion priorities. During each interview/focus group discussion we specifically asked how "healthy lifestyle" was defined, and about supports, barriers and desired resources related to physical activity, healthy eating, mental health and injury prevention. The goal of these consultations was to understand what is working well, what obstacles are encountered, and recommendations for change/improvements that would enable children with complex heart problems to more easily adopt and maintain a healthy, active lifestyle. We learned that a healthy lifestyle is more than treatment of the heart problem, it is easier for children to be active if they can have fun with their friends, that it is sometimes difficult to be healthy because the word "cardiac" scares people, that physical activity counseling can be really helpful, and that children and families need good information so that they can understand and make good choices.



On October 27, 2012 key stakeholders, representing parents and children, health care providers, mental health professionals and recreation professionals, were invited to a "Solutions" meeting. At this one-day meeting, the consultation results were reviewed and plans for addressing the identified concerns were developed and prioritized. The four key foci requiring new and innovative solutions of highest priority were: a) Enhancing outreach and connections between hospital and community, b) Creating a health "safety net" of clinic information and resources for families that is based on a holistic definition of health (not just heart function), c) Providing opportunities for children and parents to network, and d) Creating clinic resources to enable health care providers to systematically follow and give meaningful feedback on physical activity, healthy eating, mental health and injury prevention. New resources and supports to address each of the four priority foci are currently being developed. The new resources will be evaluated in the spring of 2013.

## CANADIAN PHYSICAL ACTIVITY AND SEDENTARY GUIDELINES FOR THE EARLY YEARS (AGED 0-4 YEARS)

### Canadian Physical Activity Guidelines for the Early Years (aged 0-4 years)

In 2011, we obtained a knowledge synthesis grant from the Canadian Institutes of Health Research to develop Canadian Physical Activity Guidelines for the Early Years. The Canadian Society for Exercise Physiology (CSEP), with assistance from multiple partners, stakeholders, and researchers, developed the first Canadian Physical Activity Guidelines for the Early Years (aged 0–4 years). These national guidelines were created in response to an urgent call from public health, health care, child care, and fitness practitioners for healthy active living guidance for the early years. The guideline development process was informed by the Appraisal of Guidelines for Research Evaluation (AGREE) II instrument and the evidence assessed using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) system. The recommendations are informed by evidence from a systematic review that examined the relationships between physical activity and health indicators (healthy body weight, bone and skeletal health, motor skill development, psychosocial health, cognitive development, and cardio-metabolic disease risk factors) for three age groups (infants aged <1 year; toddlers aged 1–2 years; preschoolers aged 3–4 years). The new guidelines include a preamble to provide context, followed by the specific recommendations. The final guidelines benefitted from an extensive on-line consultation process with input from over 900 domestic and international stakeholders, end-users, and key informants. The final guideline recommendations state that for healthy growth and development, infants (aged <1 year) should be physically active several times daily – particularly through interactive floor-based play. Toddlers (aged 1–2 years) and preschoolers (aged 3–4 years) should accumulate at least 180 min of physical activity at any intensity spread throughout the day, including a variety of activities in different environments, activities that develop movement skills, and progression toward at least 60 min of energetic play by 5 years of age. More daily physical activity provides greater benefits.

### Canadian Sedentary Behaviour Guidelines for the Early Years (aged 0-4 years)

Following the same process described above, a separate and distinct project was completed for the development of the first Canadian Sedentary Behaviour Guidelines for the Early Years (aged 0–4 years). The final guidelines state: for healthy growth and development, caregivers should minimize the time infants (aged <1 year), toddlers (aged 1–2 years), and preschoolers (aged 3–4 years) spend being sedentary during waking hours. This includes prolonged sitting or being restrained (e.g., stroller, high chair) for more than 1 h at a time. For those under 2 years, screen time (e.g., TV, computer, electronic games) is not recommended. For children 2–4 years, screen time should be limited to under 1 h per day; less is better.

In March 2012, we launched the Canadian Physical Activity Guidelines for the Early Years and the Canadian Sedentary Behaviour Guidelines for the Early Years (see image below and [www.csep.ca/guidelines](http://www.csep.ca/guidelines)). These guidelines form the basis of public health communications, social marketing and clinical practice counseling and therefore directly impact millions of people.

### Canadian Physical Activity Guidelines

FOR THE EARLY YEARS - 0 – 4 YEARS

**Guidelines:**

For healthy growth and development:

- Infants (aged less than 1 year) should be physically active several times daily – particularly through interactive floor-based play.
- Toddlers (aged 1–2 years) and preschoolers (aged 3–4 years) should accumulate at least 180 minutes of physical activity at any intensity spread throughout the day, including:
  - A variety of activities in different environments;
  - Activities that develop movement skills;
  - Progression toward at least 60 minutes of energetic play by 5 years of age.
- More daily physical activity provides greater benefits.

### Canadian Sedentary Behaviour Guidelines

FOR THE EARLY YEARS - 0 – 4 YEARS

**Guidelines:**

- For healthy growth and development, caregivers should minimize the time infants (aged less than 1 year), toddlers (aged 1–2 years) and preschoolers (aged 3–4 years) spend being sedentary during waking hours. This includes prolonged sitting or being restrained (e.g., stroller, high chair) for more than one hour at a time.
- For those under 2 years, screen time (e.g., TV, computer, electronic games) is not recommended.
- For children 2–4 years, screen time should be limited to under one hour per day; less is better.

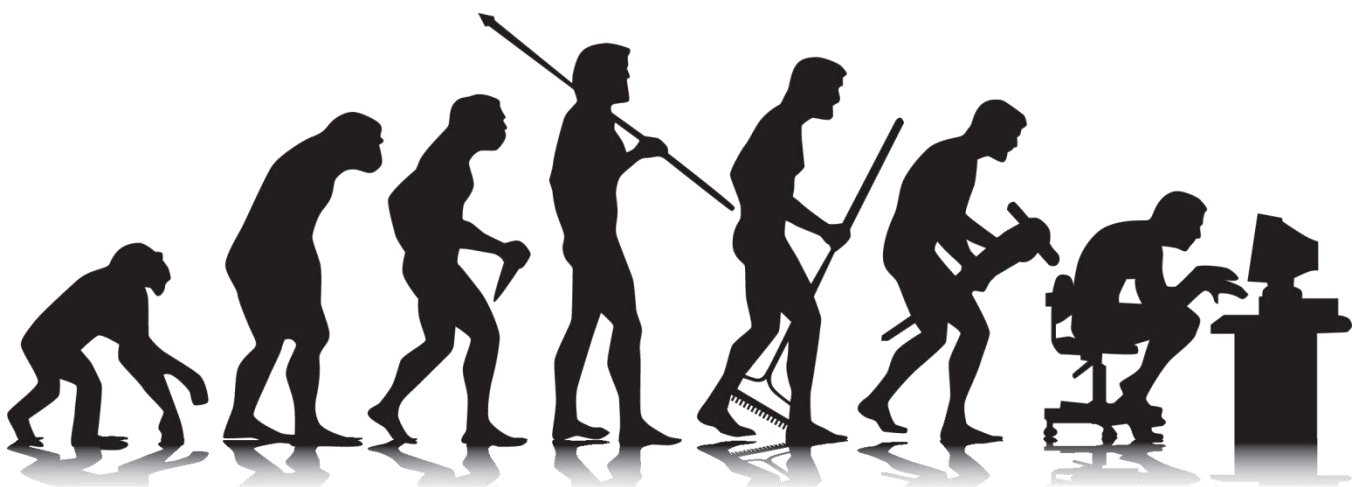


Although the health impact of regular physical activity is well established, a growing body of evidence suggests that the amount of time a person spends engaging in sedentary behaviour (e.g., sitting) is strongly associated with increased health risk, independent of their level of physical activity. For example, research performed in our group suggests that sedentary behaviour is associated with increased risk of obesity and metabolic syndrome as well as reduced aerobic fitness, self-esteem, pro-social behaviour, and academic achievement among children and youth.

While sedentary behaviour research is underway in fields of study ranging from sociology and psychology to medicine, physiology and health policy, to date there has been very little opportunity for interaction between researchers from different disciplines. Thus, there was a need for a network connecting sedentary behaviour researchers across disciplines in order to synthesize current knowledge, develop collaborations for future research, disseminate knowledge to practitioners and policy-makers, and advocate for public health interventions to reduce sedentary behaviour.

In response to this need, members of the Healthy Active Living and Obesity Research Group performed a needs assessment survey which founded the Sedentary Behaviour Research Network ([www.sedentarybehaviour.org](http://www.sedentarybehaviour.org)) – an online community bringing together researchers and clinicians interested in the health impact of sedentary behaviour.

To date the Network has created a rapidly expanding list-serve for sedentary behaviour researchers, and the world's large online database of sedentary behaviour research. The Network has grown to include nearly 500 members, including prominent researchers in the areas of physiology, epidemiology, psychology, and ergonomics. Further, the Network's membership has also published a letter promoting a standardized and more robust definition of sedentary behaviour that can be applied consistently across research domains, which has been co-published in both French and English in 3 separate journals. The Network's members have also organized in-person meetings at conferences in Europe, North America, and Australia. The inaugural formal SBRN meeting, hosted by HALO (Mark Tremblay and Travis Saunders), was held October 31 in Sydney Australia in conjunction with the International Conference on Physical Activity and Public Health.



## WEB STATISTICS

The current size of the HALO website ([www.haloresearch.ca](http://www.haloresearch.ca)) is 480 web pages (68% above 2011). The statistics presented below are based on web activity across these web pages in the last year.

### Overall Statistics

In 2012, there were approximately 3,500 unique visitors to [www.haloresearch.ca](http://www.haloresearch.ca) every month (29% above 2011). These visitors viewed HALO web pages almost 59,000 times per month (22% above 2011). More than 87,000 items were sent from [www.haloresearch.ca](http://www.haloresearch.ca) to web users (37% above 2011). Figure 1 shows overall statistics for 2011 and 2012.

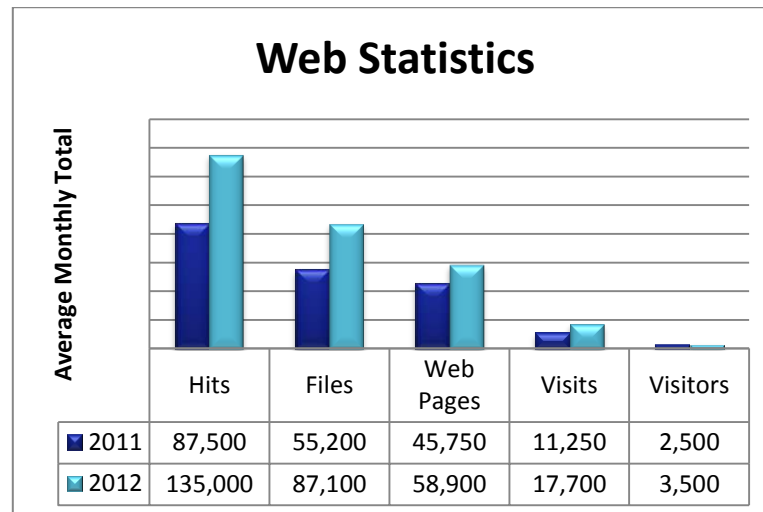


Figure 3: Average Monthly Totals for Select Web Statistics for [www.haloresearch.ca](http://www.haloresearch.ca), 2011-12.

### Dictionary for Figure 1

**Hits:** the total number of items on all web pages (e.g., images, audio clips) that are requested. For example, a web page with 3 graphics and some text will usually result in 4 hits when the web page is requested.

**Files:** the total number of hits (requests) that actually result in something being sent back to the user. This is useful since not all hits will send data.

**Web Pages:** the actual web pages requested and not all of the individual items that make up the web pages (e.g., images, audio clips).

**Visits:** the total number of websites making requests within a given timeout period (default is 30 minutes). Remote websites that link to images and other non-web page addresses are not counted.

**Visitors:** the total number of unique IP address that makes requests to [www.haloresearch.ca](http://www.haloresearch.ca).

### Most Popular Web Pages

In 2012, 74 new web pages about new peer-reviewed publications by HALO researchers were published (57% above 2011); an additional 36 new web pages about media coverage of HALO research were published (10% below 2011). The most popular web pages as measured by total views were:

- [Director's Message](#) (12,970 views)
- [Dr. Pat Longmuir Develops Kids Fitness Test](#) (8,991 views)
- [Kimberly Grattan Prepares for Underwater Hockey World Championships in Portugal](#) (6,025 views)
- [Mark Tremblay Invited Participant in McMaster Health Forum Dialogue on Promoting Healthy Weight](#) (4,616 views)
- [Study Participants Needed](#) (3,587 views)



### Website Usage by Country

The greatest percentage of users who accessed [www.haloresearch.ca](http://www.haloresearch.ca) in 2012 came from Canada and the United States (49%; 17% below 2011). See Figure 2 for a breakdown by country.

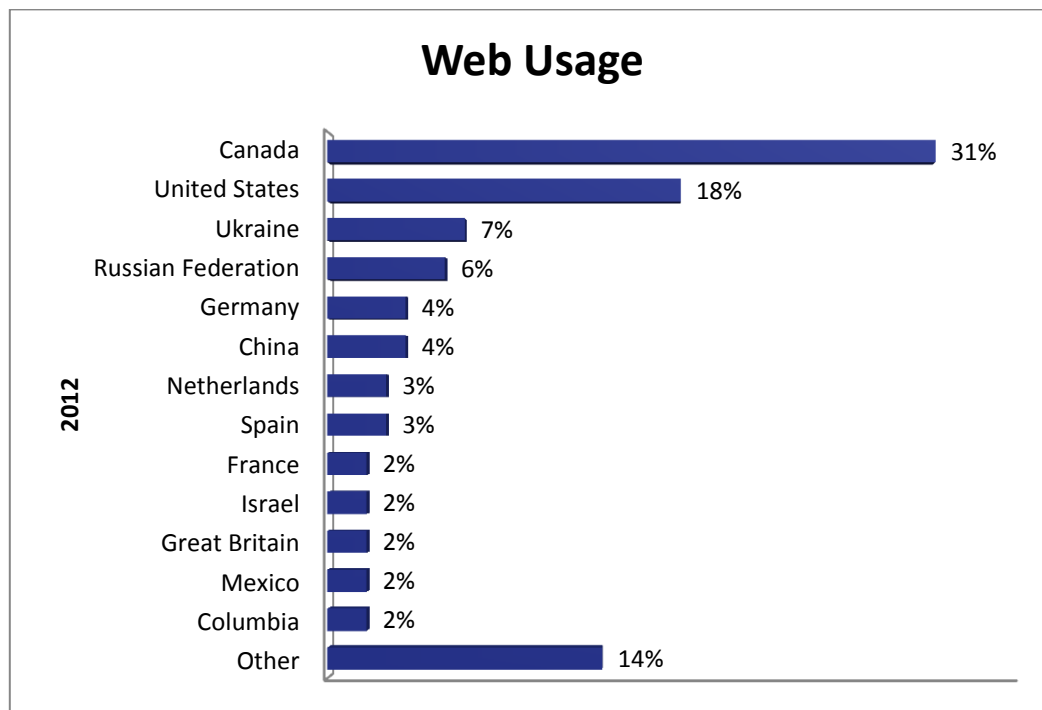


Figure 4: Website Usage by Country (January-December 2012)

### Website Usage by HALO Researchers

[www.haloresearch.ca](http://www.haloresearch.ca) continues to be used to facilitate various research activities within HALO (e.g., database management services, online questionnaires). This year the website also became home to [Accel+](#) (the Actical Accelerometer Data Analysis Support Tool). This software was developed by Dr. Rachel Colley to assist researchers wanting to derive physical activity and sedentary behaviour variables from Actical accelerometer data in a way that is consistent with the Canadian Health Measures Survey.

### Web Awards

In July 2012, three editors of Healthline published a list of their favorite obesity blogs of 2012 and [www.haloresearch.ca](http://www.haloresearch.ca) was included. The blogs run by PhD students Travis Saunders (Obesity Panacea) and Megan Carter (Verdant Nation) were also on the list.



## SUMMARY OF RESEARCH FUNDING AND GRANTS

NAME OF THE PI(s)	ORGANIZATION/AGENCY	TITLE OF PROJECT	AMOUNT (YEAR)
Adamo	W. Garfield Weston Foundation	<i>The effects of obesity and excessive gestational weight gain (GWG) on placental lipid transport and fetal growth</i>	\$20,000 (2012)
Adamo	CIHR	<i>Activity Begins in Childhood (ABC)- a randomized controlled trial to inspire healthy active behaviour in preschoolers</i>	\$153,000 (2012-2014)
Adamo	CIHR – INMD bridge funding	<i>Activity Begins in Childhood (ABC)- a randomized controlled trial to inspire healthy active behaviour in preschoolers</i>	\$100,000 (2012-2013)
Adamo	CIHR	<i>Obesity Prevention from Conception: a workshop to guide the development of a panCanadian trial targeting the gestational period</i>	\$21,600 (2012)
Adamo	HSFC	<i>Activity Begins in Childhood (ABC)- a randomized controlled trial to inspire healthy active behaviour in preschoolers</i>	\$78,000 (2012) <b>*Awarded but declined</b>
Adamo	Ottawa Dragon Boat Foundation	<i>Maternal Obesity Management 'MOM' Trial</i>	\$30,000 (2010-2014)
Adamo	Canada Foundation for Innovation – IOF	<i>Infrastructure Operating Fund: HALO Research Lab</i>	\$8,000 (2010-2013)
Adamo	Ministry of Research and Innovation	<i>Tackling the childhood obesity epidemic- starting with MOM</i>	\$30,000 (2009-2014)
Adamo	CIHR Team grant	<i>The maternal obesity management (MOM) trial: a lifestyle intervention during pregnancy to minimize downstream obesity</i>	\$60,000 (2009-2013)
Adamo	CIHR	<i>Critical Periods of Body Weight Regulation: A Women's Health Perspective. SOMET: Sherbrooke-Ottawa-Montreal Emerging Team</i>	\$300,000 (2008-2013)
Chaput	CIHR	<i>Effects of active video games on energy balance: a randomized crossover study in adolescents</i>	\$100,000 (2012-2013)
Chaput	CHEO-RI	<i>Sedentary time and markers of cardiometabolic risk in children and youth: a randomized crossover study</i>	\$30,000 (2011-2012)

NAME OF THE PI(s)	ORGANIZATION/AGENCY	TITLE OF PROJECT	AMOUNT (YEAR)
<b>Chaput</b>	Nordea Foundation	<i>Effects of impaired sleep on energy balance: a randomized, 2-condition, crossover study in adolescents</i>	\$750,200 (2009-2012)
<b>Colley/Longmuir</b>	CIHR	<i>PAR-Q 4 KIDS: An ethical approach for encouraging children to participate in higher intensity or maximal effort physical activity</i>	\$25,000 (2012)
<b>Goldfield</b>	Heart & Stroke Foundation	<i>The Preschoolers Activity Trial</i>	\$140,000 (2010-2012)
<b>Golfield</b>	CHEO-RI/Faculty Health Sciences	<i>Effects of Methylphenidate (Ritaline) on Energy Balance in Obese Adolescents</i>	\$15,000 (2010-2012)
<b>Golfield</b>	Heart & Stroke Foundation	<i>Family-Based Behavioural Treatment of Childhood Obesity Via Internet: A Randomized Controlled Trial</i>	\$100,000 (2007-2012)
<b>Longmuir</b>	Heart and Stroke Foundation of Ontario Spark Advocacy Development Grant	<i>Physical literacy for Ontario children: Creating an advocacy action plan to prevent heart disease and stroke through physical literacy screening in paediatric health care</i>	\$4,990 (2012-2013)
<b>Longmuir</b>	Ontario Ministry of Health Promotion and Sport, Healthy Communities Fund	<i>Healthy lifestyles for children with complex heart problems</i>	\$63,950 (2011-2013)
<b>Tremblay</b>	The Borealis Foundation	<i>Healthy Active Living and Obesity Research</i>	\$25,000 (2012-2013)
<b>Tremblay</b>	ParticipACTION	<i>CAPL Development</i>	\$10,000 (2012)
<b>Tremblay/Chaput</b>	Pennington Biomedical Research Center (co-ordinating center)	<i>International Study of Childhood Obesity, Lifestyles and the Environment (ISCOLE) Canadian Site</i>	\$420,000 (2011-2015)
<b>Tremblay/Onywera</b>	Pennington Biomedical Research Center (co-ordinating center)	<i>International Study of Childhood Obesity, Lifestyles and the Environment (ISCOLE) Kenya Site</i>	\$144,500 (2011-2014)
<b>Tremblay</b>	CIHR Knowledge Synthesis	<i>Development of Canadian physical activity guidelines for preschool aged children</i>	\$100,000 (2011-2012)
<b>Tremblay</b>	PHAC Innovation Strategy	<i>Calibrating early lifestyles to manage obesity: a health and education practitioner intervention approach</i>	\$248,333 (2011-2012)
<b>Tremblay</b>	Ontario Ministry of Health Promotion and Sport	<i>Canadian Assessment of Physical Literacy Development</i>	\$40,000 (2011-2012)

NAME OF THE PI(s)	ORGANIZATION/AGENCY	TITLE OF PROJECT	AMOUNT (YEAR)
<b>Tremblay</b>	ParticipACTION	<i>Canadian Assessment of Physical Literacy Development</i>	\$30,000 (2011-2012)
<b>Tremblay</b>	Borealis Foundation	<i>Healthy Active Living and</i>	\$200,000
	CHEO Foundation (matching)	<i>Obesity Research</i>	\$200,000 (2009-2012)
<b>Tremblay</b>	The Lawson Foundation	<i>HALO Junior Research Chair</i>	\$508,250
	The CHEO Foundation (matching)	<i>Program</i>	\$508,250 (2010-2015)
<b>Tremblay</b>	Trevor Doyle	<i>Healthy Active Living and</i>	\$500,000
	CHEO Foundation (matching)	<i>Obesity Research</i>	\$500,000 (2010-2015)

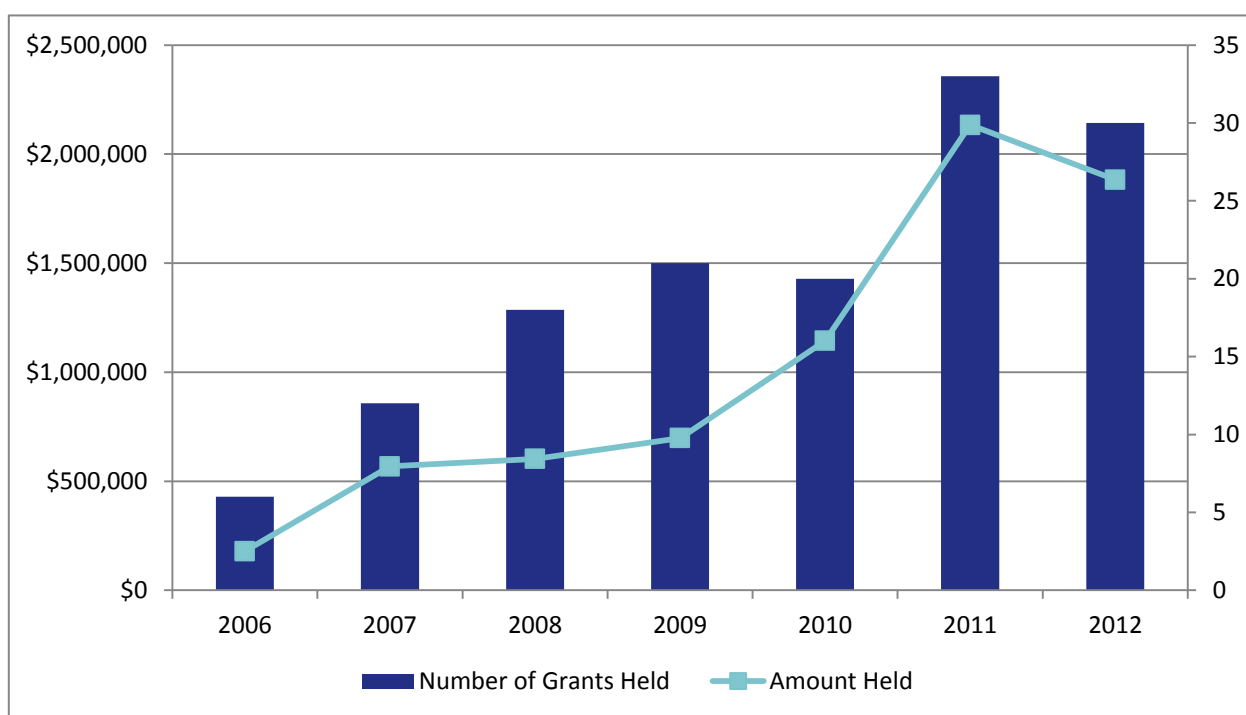


Figure 5: Number of grants held and amount of funds held as principal or co-principal investigator (attributed to 2012) by HALO Research Group from 2006 to 2012. Between 2006 and 2012, there was a 400% increase in the number of grants held and a 949% increase in the amount held. Between 2011 and 2012, there was a 9% decrease in the number of grants held and a 12% decrease in the amount held.



## STAFF AWARDS 2012

NAME	ORGANIZATION/AGENCY	GRANT/AWARD
Adamo	CIHR	New Investigator
Adamo	CHEO-RI	Award of Excellence - Outstanding Investigator
Colley	CHEO-RI	Award of Excellence - Outstanding New Investigator
Longmuir	CIHR	Institute of Circulatory and Respiratory Health, New Investigator Forum Travel Award
Sinclair	International Association of Administrative Professionals	Member of Excellence
Tremblay	University of Guelph Department of Family Relations and Applied Nutrition	Harshman Lecturer
Tremblay	CHEO-RI	Award of Excellence - Outstanding Research Mentor

## STUDENT FUNDING, SCHOLARSHIPS AND AWARDS 2012

STUDENT NAME	ORGANIZATION/AGENCY	GRANT/AWARD
Borghese	University of Ottawa	Admission Scholarship
Borghese	Healthy Active Living and Obesity Research (ISCOLE)	Graduate Student Bursary
Ferraro	Canadian Obesity Network	Rising Star Award
Ferraro	University of Ottawa Governor General	Thesis Prize Nominee
Ferraro	University of Ottawa	Women's Health Research Day - (first runner up)
Ferraro	CIHR Sherbrooke-Ottawa-Montreal Emerging Team (SOMET) Annual Research Day	Best PhD presentation
Ferraro	Ontario Ministry of Training, Colleges and Universities	Ontario Graduate Scholar – Doctoral Research Award
Ferraro	University of Ottawa	Dean's Scholarship
Ferraro	University of Ottawa Faculty of Graduate and Postdoctoral Studies	Travel Award
Hayden	CHEO-RI	Endowment Scholarship
Larouche	CIHR	Banting and Best Doctoral Scholar Excellence Scholarship and Doctoral Research Award
Larouche	University of Ottawa	Doctoral Clinical Scholar
Leclair	CIHR	Ontario Graduate Scholar
Maras	Ontario Ministry of Training, Colleges and Universities	Teaching Assistantship
Maras	Carleton University	Ontario Graduate Scholar
Murray	Ontario Ministry of Training, Colleges and Universities	Excellence Scholarship and Doctoral Research Award
Murray	University of Ottawa	Teaching Assistantship
Murray	University of Ottawa	Ontario Graduate Scholarship in Science and Technology
Muthuri	Government of Ontario	Excellence Scholarship and Doctoral Research Award
Muthuri	University of Ottawa	Dean's Scholarship (for the completion of a PhD in 4 years or less)
Prince Ware	University of Ottawa	Excellence Scholarship and Doctoral Research award
Saunders	University of Ottawa	Doctoral Research Award
Saunders	Canadian Diabetes Association	Ontario Graduate Scholar
Wilson	Ontario Ministry of Training, Colleges and Universities	

In recognition of all the great work done by all HALO students and staff (some of which may have occurred outside of HALO) this report includes all publications from 2012).

1. **Adamo KB, Ferraro ZM, Brett KE.** Pregnancy is a critical period for prevention of obesity and cardiometabolic risk. *Canadian Journal of Diabetes* 36: 133-141, 2012.
2. **Adamo KB, Langlois KA, Brett KE, Colley RC.** Young Children and Parental Physical Activity Levels: Findings from the Canadian Health Measures Survey. *American Journal of Preventive Medicine* 43(2): 168-175, 2012.
3. **Adamo KB, Ferraro ZM, Brett KE.** Changing the intrauterine environment to halt the intergenerational cycle of obesity. *International Journal of Environmental Research and Public Health*. 9: 1263-1307, 2012.
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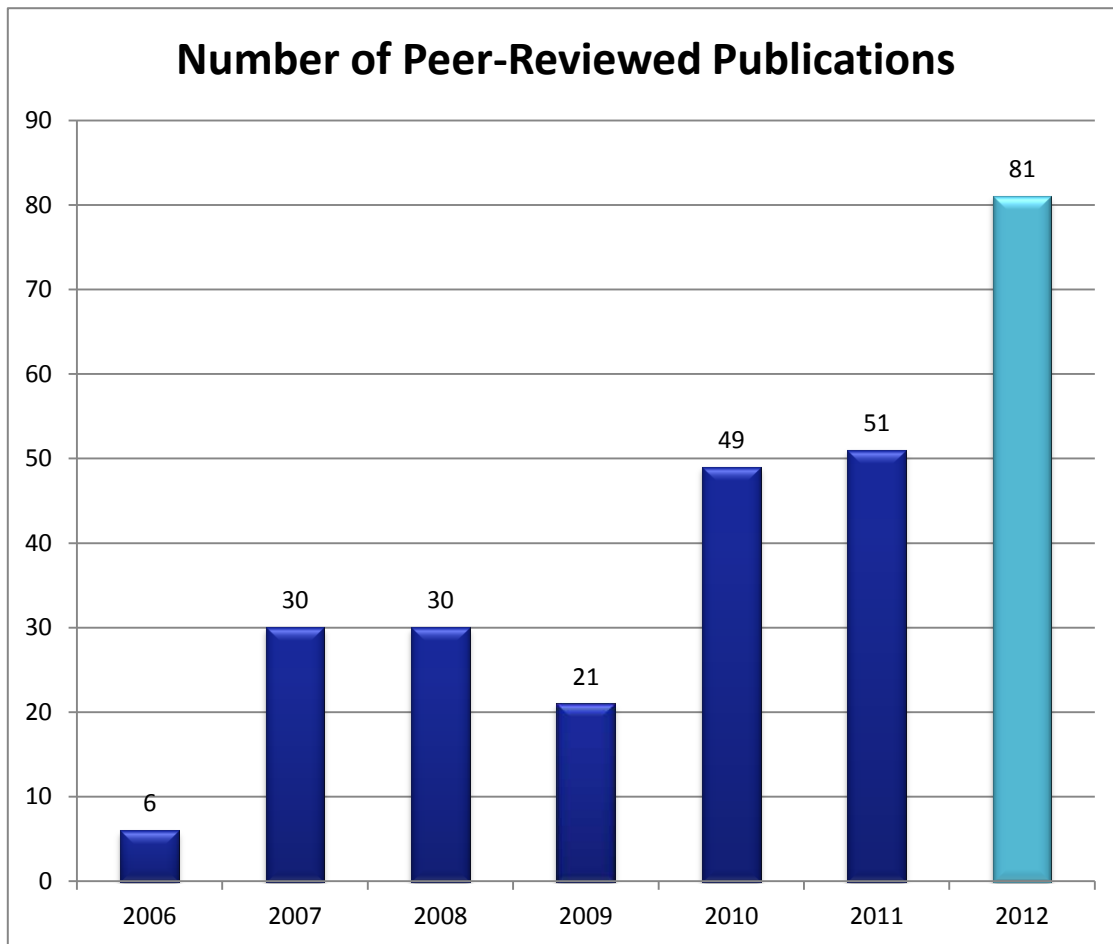


Figure 6: Number of peer-reviewed, refereed publications by HALO Research Group from 2006 to 2012. Between 2006 and 2012 there was a 1250% increase in number of publications; between 2011 and 2012, there was a 59% increase.





## NON-PEER REVIEWED PUBLICATIONS

1. **Adamo KB.** Evaluation of the “Freggie Fridays” Program (Newsletter).
2. **Adamo KB.** Obesity Prevention from Conception: a workshop to guide the development of a pan Canadian trial targeting the gestational period, *CSEP Communiqué*; Aug 2012.
3. **Chaput JP.** La rentrée universitaire et le gain de poids... est-ce vraiment lié? *La Gazette* 2012 [online]. Available at: <http://www.gazette.uottawa.ca/fr/2012/09/la-rentree-universitaire-et-le-gain-de-poids-est-ce-vraiment-lie/>
4. **Chaput JP, Tremblay A.** Obesity at an early age and its impact on child development. In: Tremblay RE, Boivin M, Peters RDeV, eds. *Encyclopedia on Early Childhood Development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development and Strategic Knowledge Cluster on Early Child Development; 2012: 1-8. Available at: <http://www.child-encyclopedia.com/documents/Chaput-TremblayANGxp2.pdf>
5. **Colley RC, Barnes JD, Tremblay MS** (Active Healthy Kids Canada). Is Active Play Extinct? – Canada’s Report Card on Physical Activity for Children & Youth. Toronto: Active Healthy Kids Canada, 2012.
6. **Colley RC.** Canadian Physical Activity and Sport Data: Matrix of Surveillance Needs and Existing Data Sources. Report Submitted to the Public Health Agency of Canada, 2012.
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8. **Ferraro ZM.** Natural (re)connections: how outdoor play and community greenness improve childhood physical activity levels. *Active Healthy Kids Canada*. Canada’s Annual Report Card on Physical Activity for Children and Youth (Nature and physical activity section), 2012.
9. **Larouche R, Faulkner GEJ, Tremblay MS.** Toward a FITT formula for quantifying active school transport. [e-letter] *Pediatrics*. 2012 [http://pediatrics.aappublications.org/content/130/2/e296.abstract/reply#pediatrics\\_el\\_54575](http://pediatrics.aappublications.org/content/130/2/e296.abstract/reply#pediatrics_el_54575)
10. Neiderer I, **Chaput JP**, Johnson R, Nicklas T, Provencher V. Emerging perspectives on cardiometabolic health. Proceedings of the 11<sup>th</sup> Annual Nutrition and Health Symposium. *Medical Post* 2012: 1-4.
11. **Prince S.** Morbidity and Mortality in Ottawa, 2012. Ottawa, ON: *Ottawa Public Health*, 2012.
12. **Prince S**, Butler LA, Russell K, Ali A. Healthy Eating, Active Living, Health Weights, 2012. Ottawa, ON: *Ottawa Public Health*, 2012.
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14. **Prince S**, Willmore J, Ali A. Mental Health, School Climate and Bullying among Youth. Ottawa, ON: *Ottawa Public Health*, 2012.
15. **Prince S**, Willmore J, Ali A. Youth Tobacco Use. Ottawa, ON: *Ottawa Public Health*, 2012.
16. **Prince S**, Willmore J, Ali A. Gambling among Youth. Ottawa, ON: *Ottawa Public Health*, 2012.

## PUBLISHED ABSTRACTS

In recognition of all the great work done by all HALO students and staff (some of which may have occurred outside of HALO) this report includes all abstracts from 2012.

1. **Adamo KB, Colapinto C, Harvey A, Grattan K, Barrowman N, Goldfield GS.** Evaluation of “Freggie Friday” program to promote fruit and vegetable consumption in Canadian elementary school-aged children. *Archives of Disease in Childhood* 97 (Suppl. 2):A409, 2012.
2. **Adamo KB, Harvey A, Grattan K, Goldfield GS.** Evaluation of “Freggie Friday” program to promote fruit and vegetable consumption in Canadian elementary school-aged children. Poster presentation at the 4<sup>th</sup> Congress of the European Academy of Pediatrics (Istanbul, Turkey), 2012.
3. **Alberga AS, Prud’homme D, Kenny GP, Goldfield GS, Hadjiyannakis S, Malcolm J, Sigal RJ.** Do Canadian Obese Adolescents who Meet the Screen Time Guidelines Have a Better Metabolic Profile than those who Do Not Meet the Guidelines? *Canadian Journal of Diabetes* 36 (Suppl2):236, 2012.
4. **Barnes JD, Colley RC, Borghese M, Janson K, Fink A, Tremblay MS** on behalf of the Active Healthy Kids Canada Research Work Group. Results from the Active Healthy Kids Canada 2012 Report Card on Physical Activity for Children and Youth. *Applied Physiology, Nutrition, and Metabolism* 37(suppl 1):S20, 2012.
5. **Barnes JD, Colley RC, Tremblay MS.** Results and recommendations from The 2011 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth. Proceedings of the *International Conference on Diet and Activity Methods* (Rome, Italy), 2012.
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7. **Borghese M, Colley RC, Lloyd M.** Self-efficacy is an important factor in the physical activity levels of 8 to 10 year old children. North American Society for Paediatric Exercise Medicine 2012 Biannual Conference (Philadelphia), 2012.
8. **Cameron JD, GS Goldfield, E Doucet.** Deprivation by diet alone or by aerobic exercise alone: how modality of acute intervention can differentially impact olfaction, palatability, and ad libitum feeding. *Obesity Facts* (Suppl. 1):113-155. 2012
9. **Carson V, Tremblay MS, Spence JC, Timmons BW, Janssen I.** Adherence to the Canadian Sedentary Behaviour Guidelines for the Early Years (aged 0-4 years) among children from Kingston, Ontario. *Journal of Science and Medicine in Sport* 15(6 Suppl.):355, 2012.
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13. **Chaput JP, Després JP, Bouchard C, Tremblay A.** Short sleep duration preferentially increases abdominal adiposity in adults. *Obesity Facts* 5 (Suppl. 1):73, 2012.
14. **Colley RC, Garriguet D, Wong SL, Janssen I, Tremblay MS.** Patterns of Sedentary Behaviour and Physical Activity across the Day and Week in Children and Youth. Proceedings of the *International Society of Behavioral Nutrition and Physical Activity Conference* (Austin, Texas), 2012.

15. **Colley RC**, Wong SL, Garriguet D, Janssen I, Connor Gorber S, **Tremblay MS**. Comparing parent-report and directly measured physical activity, sedentary behaviour and sleep in Canadian children and their association with health. Proceedings of the *International Conference on Diet and Activity Methods* (Rome, Italy), 2012.
16. **Colley RC**, Barnes J, Leblanc A, Borghese M, Boyer C, **Tremblay MS**. Validity of the PiezoTM pedometer during treadmill walking and running. Proceedings of the *International Conference on Diet and Activity Methods* (Rome, Italy), 2012.
17. **Colley RC**, Garriguet D, Janssen I, Saunders T, Carson V, Wong SL, **Tremblay MS**. The pattern and timing of sedentary behaviour are related to body mass index in boys but not girls. Proceedings of the *International Conference on Diet and Activity Methods* (Rome, Italy), 2012.
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20. **Ferraro ZM**, Qiu Q, Gruslin, A, **Adamo KB**. Umbilical cord serum insulin-like growth factor binding protein-4 expression is decreased in normoglycemic obese pregnant women at term. *Reproductive Sciences* 19(3) supplement, 2012.
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25. **Goldfield GS**, Harvey A, Grattan K, **Colley RC**, Alberga A, Ferraro ZM, Temple VA, Naylor PJ, **Barrowman N**, **Adamo KB**. The Preschoolers Activity Trial: A Randomized Controlled Trial of Physical Activity in The Early Years. *Archives of Disease in Childhood* 97 (Suppl. 2):A114, 2012.
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32. **Longmuir PE.** Childhood Physical Activity After Fontan: Contradictory Recommendations and Limited Evidence. *Canadian Journal of Cardiology* 28(5):S100-S101, 2012.
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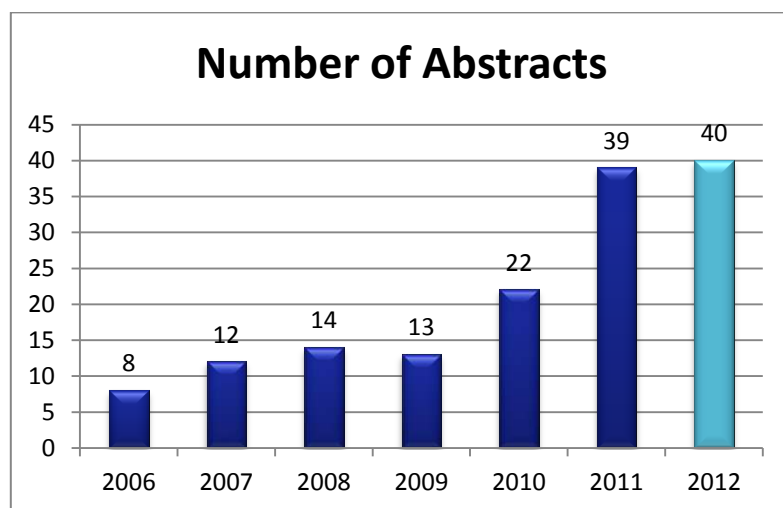


Figure 7: Number of published abstracts by HALO Research Group from 2006 to 2012. Between 2006 and 2012 there was a 400% increase in the number of published abstracts; between 2011 and 2012, there was a 3% increase.



## BOOK CHAPTERS

1. **Chaput JP**, Shields M, **Tremblay MS**. Statistics in Childhood Obesity. In N. Balakrishnan (Ed.) **Handbook of Behavioral and Social Sciences**. John Wiley & Sons, Newark, N.J. p. 385-399, 2012.
2. **Larouche, R.** (2012). The environmental and population health benefits of active transport: A review. In G. Liu (Ed.) *Greenhouse Gases – Emissions, Measurement and Management*, pp. 313-340. InTech: Rijeka, Croatia. [http://cdn.intechopen.com/pdfs/32358/InTech-The\\_environmental\\_and\\_population\\_health\\_benefits\\_of\\_active\\_transport\\_a\\_review.pdf](http://cdn.intechopen.com/pdfs/32358/InTech-The_environmental_and_population_health_benefits_of_active_transport_a_review.pdf)
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## CONFERENCES AND INVITED PRESENTATIONS

1. **Adamo KB, Harvey A, Grattan K, Goldfield GS**. Evaluation of “Freggie Friday” program to promote fruit and vegetable consumption in Canadian elementary school-aged children. *4<sup>th</sup> Congress of the European Academy of Pediatrics* (Istanbul, Turkey), 2012.
2. **Adamo KB**. Pregnancy- a critical period for intervention. *Canadian Perinatal Program Coalition* meeting (Ottawa), 2012.
3. **Adamo KB**. Pregnancy - the importance of gestational weight gain as a target for intervention. *CIHR team planning meeting* (Halifax, NS). 2012.
4. **Adamo KB**. Power of Obesity Prevention in the Early Years. *University of Heart Institute Prevention and Rehabilitation Centre Rounds* (Ottawa), 2012.
5. **Adamo KB**. Child Obesity: how big is the problem, what are the contributors and how do we intervene? *4th Annual Greco Gives Back Gala for the Foundation to Fight Obesity in Children* (Ottawa), 2012.
6. **Adamo KB**. Supporting and Promoting Healthy Active Living in children. *Health Active Living - Lakeview Public School Parent Information evening* (Ottawa), 2012.
7. **Adamo KB, Wilson SL, Ferraro ZM, Hadjiyannakis S**, Doucet E, **Goldfield GS**. Appetite signaling proteins, glucose and appetite sensations in obese adolescents with subclinical binge eating disorder. *CHEO Research Day* (Ottawa), 2012.
8. **Adamo KB**. Obesity Prevention Starts with Mom. *High risk antenatal nursing course* (Ottawa), 2012.
9. Adams S, **Boyer C**, Davey M, Green M, Smeltzer A, Robidoux MA. Comparative Descriptive Analysis of Injury in Competitive Pee wee and Bantam Hockey in Ontario and Quebec. *The Hockey Conference “Putting it on Ice III”* (Halifax), 2012.
10. Alberga AS, Prud’homme D, Kenny GP, **Goldfield GS, Hadjiyannakis S**, Malcolm J, Sigal RJ. Do Canadian Obese Adolescents who Meet the Screen Time Guidelines Have a Better Metabolic Profile than those who Do Not Meet the Guidelines? *15th Annual Canadian Diabetes Association/ Canadian Society of Endocrinology & Metabolism* (Vancouver), 2012.
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12. Alberga AS, Prud’homme D, **Goldfield GS**, Kenny GP, Sigal RJ. Top 10 practical lessons learned from physical activity interventions with children and adolescents. *3rd Canadian Obesity Student Meeting* (Alberta), 2012.

13. **Barnes JD, Colley RC, Borghese M**, Janson K, Fink A, **Tremblay MS** on behalf of the Active Healthy Kids Canada Research Work Group. Results from the Active Healthy Kids Canada 2012 Report Card on Physical Activity for Children and Youth. *Canadian Society for Exercise Physiology Annual Scientific Conference* (Regina), 2012.
14. **Barnes J, Colley RC, Tremblay MS**. Results and recommendations from the 2011 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth. *8<sup>th</sup> International Conference on Diet and Activity Methods* (Rome, Italy), 2012.
15. **Barnes J, Colley RC**, Rodriguez MP, Lopez Taylor J, **Tremblay MS**. Adapting a Canadian process for the synthesis and translation of physical activity knowledge in Mexico: The Mexican Report Card on Physical Activity for Children and Youth. *8<sup>th</sup> International Conference on Diet and Activity Methods* (Rome, Italy), 2012.
16. **Belanger K, Breithaupt P, Ferraro ZM, Barrowman N, Rutherford J, Hadjiyannakis S, Colley RC, Adamo KB**. Do obese children perceive submaximal and maximal exertion differently? *5<sup>th</sup> Annual CHEO Research Day* (Ottawa), 2012.
17. **Boyer C, McFarlane A, McClelland K, Barnes J, Borghese M, Larouche R, Saunders T, LeBlanc A, Hospod AM, Tremblay MS, Longmuir PE**. Children's physical activity self-efficacy is related to physical fitness, motor skill and perceived social support. *North American Society for Pediatric Exercise Medicine* (Philadelphia, PA), 2012.
18. Bremer E, **Saunders T**, Lloyd M, **Tremblay M**. A 20-year Follow-up of physical activity in children with and without movement difficulties. *North American Federation of Adapted Physical Activity Conference* (Alabama), 2012.
19. **Brett KE**. Exploring the impact of maternal obesity and exercise on placental fatty acid transporter expression. *4<sup>th</sup> Annual Human Kinetics Graduate Student Conference*, University of Ottawa (Ottawa), 2012.
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22. **Buchholz A**. Invited speaker. Lessons Learned from the Field of Eating Disorders. Hot Topic conference: Obesity and Mental Health. Hosted by *IASO, CON and CAMH* (Toronto), 2012.
23. **Buchholz A**. Invited speaker. Guiding Principles to Working with Children and their Families. *Pediatric Weight Management in Focus Workshop (Canadian Obesity Network - TROPIC)* (Vancouver), 2012
24. **Carson V, Tremblay MS**, Spence JC, Timmons BW, Janssen I. Adherence to the Canadian Sedentary Behaviour Guidelines for the Early Years (aged 0-4 years) among children from Kingston, Ontario. *International Congress on Physical Activity and Public Health* (Sydney, Australia), 2012.
25. **Chaput JP**. L'obésité en 2012: comment faire face au problème? *Mini Medical School*, University of Ottawa (Ottawa), 2012.
26. **Chaput JP, LeBlanc AG**, Cowie-Bonne J. Active Healthy Kids Canada's Position on Active Video Games, Information webinar to introduce the first Position Stand by Active Healthy Kids Canada (Ottawa), 2012.
27. **Chaput JP**. The Freshman 15: fact or fiction? *Canadian Obesity Network-Students & New Professionals (CON-SNP) University of Ottawa Chapter*, University of Ottawa, (Ottawa), 2012.
28. **Chaput JP**. Insufficient sleep as a contributor to obesity and metabolic comorbidities. *American Heart Association Annual Conference* (Los Angeles, CA), 2012.
29. **Chaput JP**. Physical inactivity and sedentary behaviours: action is needed! *The Conference Board of Canada's Centre for Chronic Disease Prevention and Management Meeting* (Ottawa), 2012.
30. **Chaput JP**. Beyond inactivity and unhealthy diet: how should we address obesity in 2012? *Target Meeting's Nutrition & Obesity Online Symposium* (Houston, TX), 2012.

31. **Chaput JP.** L'édition 2012 du Bulletin de l'activité physique chez les jeunes de Jeunes en forme Canada. *Healthy Eating Physical Activity Coalition of New Brunswick* (Moncton), 2012.
32. **Chaput JP.** Jeux vidéo, ordinateurs et obésité. *3<sup>rd</sup> Annual Symposium on Cardiovascular Prevention in Youth* (Montreal), 2012.
33. **Chaput JP.** Sleeping habits predict the magnitude of fat loss in adults exposed to moderate caloric restriction. *European Congress on Obesity* (Lyon, France), 2012.
34. **Chaput JP.** Evidence supporting the critical role of sleep in health. Workshop titled "Stop Dreaming! Integrating Pediatric Sleep into Health and Education Systems: Rationale, Barriers, and Facilitators" (Montreal), 2012.
35. **Chaput JP.** Beyond inactivity and unhealthy diet: how do we address obesity in 2012? *Perth & Smiths Falls District Hospital* (Perth), 2012.
36. **Chaput JP.** Au-delà de la sédentarité et de la malbouffe: comment prévenir l'obésité en 2012? CIHR Café Scientifique titled "L'obésité, un enjeu de taille!", *Université du Québec en Outaouais* (Gatineau), 2012.
37. **Chaput JP.** Élaboration des directives canadiennes en matière d'activité physique et de comportement sédentaire pour la petite enfance (enfants âgés de 0 à 4 ans). Information webinar to present the development of the new Canadian Physical Activity and Sedentary Behaviour Guidelines for the Early Years, (Ottawa) 2012.
38. **Chaput JP.** Aborder l'obésité juvénile dans un milieu Clinique. *CALIBRATE Workshop* (Moncton), 2012.
39. **Chaput JP.** Obesity: from prevention to promoting healthy weights. *Chronic Disease Prevention Alliance of Canada (CDPAC) Fourth Pan-Canadian Conference* (Ottawa, Canada), 2012.
40. **Chaput JP.** Longer sleep duration associates with lower adiposity gain in adult short sleepers . *CIHR's Institute of Nutrition, Metabolism and Diabetes (INMD) New Investigator Meeting* (Niagara-on-the-Lake), 2012.
41. **Chaput JP.** Increasing physical activity or decreasing sedentary behaviour: independent associations with adiposity in children. *4th Conference on Recent Advances in the Prevention and Management of Childhood & Adolescent Obesity* (Halifax), 2012.
42. **Chaput JP.** Insufficient sleep is not associated with a greater adaptive reduction in thermogenesis during weight loss in adults. *The Obesity Society Annual Scientific Meeting* (San Antonio, TX), 2012.
43. **Chaput JP.** Short sleep duration is associated with greater alcohol consumption in adults. *The Obesity Society Annual Scientific Meeting* (San Antonio, TX), 2012.
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45. **Colapinto CK, Tremblay MS, Aufreiter S, O'Connor DL.** An international comparison of Canadian and American red blood cell folate status to inform folic acid fortification and supplementation policy *CHEO Research Day* (Ottawa), 2012.
46. **Colley R, Garriguet D, Wong S, Janssen I, Tremblay MS.** Patterns of sedentary behaviour and physical activity across the day and week in children and youth. *International Society for Behavioral Nutrition and Physical Activity Annual Scientific Conference* (Austin, Texas), 2012.
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48. **Colley RC, Barnes J, LeBlanc A, Borghese M, Boyer C, Tremblay MS.** Validity of the Piezo™ pedometer during treadmill walking and running. *8<sup>th</sup> International Conference on Diet and Activity Methods* (Rome, Italy), 2012.

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51. **Colley RC**, Barnes J, Fink A, **Tremblay MS**. Focus on After School: The 2011 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth. *Chronic Disease Prevention Alliance of Canada Conference* (Ottawa), 2012.
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53. **Colley RC**. "Patterns of Sedentary Behaviour and Physical Activity across the Day and Week in Children and Youth". *International Society of Behavioral Nutrition and Physical Activity Conference* (Austin, Texas), 2012.
54. **Colley RC**. "Grad School, Now What". *University of Ottawa Human Kinetics Graduate Student Conference* (Ottawa), 2012.
55. Duggan M, Costas-Bradstreet C, Grundy S, Grantham A, Down J, Gabbani F, **Tremblay MS**. Active Canada 20/20: A Physical Activity Strategy and Change Agenda for Canada — Creating a Culture of an Active Nation. *Chronic Disease Prevention Alliance of Canada Conference* (Ottawa), 2012.
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57. **Ferraro ZM**, Qiu Q, Gruslin A, **Adamo KB**. Umbilical cord serum insulin-like growth factor binding protein-4 expression is decreased in normoglycemic obese pregnant women at term. *Society for Gynaecological Investigators* (San Diego, California), 2012.
58. **Ferraro ZM**. Preschoolers Activity Trial – Daycare provider workshop. *Children's Hospital of Eastern Ontario*. (Ottawa), 2012.
59. **Ferraro ZM**. Maternal obesity and altered expression of umbilical cord insulin-like growth factor binding protein-4: Implications for fetal programming? *CIHR Sherbrooke-Ottawa-Montreal Emerging Team (SOMET) Annual Research Day* (Montreal), 2012.
60. **Ferraro ZM**, Qiu Q, Gruslin A, **Adamo KB**. Characterization of the insulin-like growth factor axis in term pregnancies complicated by maternal obesity. *CHEO Research Day* (Ottawa), 2012.
61. Flament MF, Hill EM, Buchholz A, Henderson K, **Goldfield GS**. Internalization of the thin and muscular body ideal and disordered eating in adolescence: The mediation effects of body esteem. *International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP)* (Paris, France), 2012.
62. Fu M, Henderson K, Obeid N, **Maras D**, Mossière A, Spettigue W, Norris M. The utility of a clinician-rated measure in an intensive pediatric eating disorder program. *5<sup>th</sup> Annual CHEO Research Day* (Ottawa), 2012.
63. Gainforth HL, Berry T, Craig C, Faulkner G, Rhodes R, Spence J, **Tremblay MS**, Latimer AE. Evaluating the uptake of Canada's new Physical Activity Guidelines. *Society of Behavioral Medicine Conference* (New Orleans), 2012.
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67. **Goldfield, GS.**, Childhood Obesity in the 21<sup>st</sup> Century: Trends, Psychological Consequences and what we can do about it. *Ottawa Academy of Psychologists General Annual Meeting* (Ottawa), 2012.
68. **Hadjiyannakis S**, **Buchholz A**, **Rutherford J**, Aylett A. CALIBRATE: Calibrating Early Lifestyles to Manage Obesity. A Health and Education Practitioner Intervention. *Interdisciplinary team full-day workshops presented to health practitioners* (New Brunswick), 2012.
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70. Green M, Adams S, **Boyer C**, Davey M, Spivoch M, Robidoux MA. Comparing Injury in Youth Ice Hockey With and Without the 'Head Shot Rule'. *North American Society for the Sociology of Sport* (New Orleans), 2012.
71. Henderson KA, **Buchholz A**, **Goldfield GS**, Obeid N, Flament MF. Gender effects of coping in adolescents: A mediator relationship between stress and disordered eating. *International Association for Child and Adolescent Psychiatry and Allied Professions* (IACAPAP) (Paris, France), 2012.
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73. Henderson K, Obeid N, Fu M, **Maras D**, Mossière A, Spettigue W, Norris M. Outcomes of intensive pediatric eating disorder treatment programs using a clinician-rated measure. *3<sup>rd</sup> Biennial Conference of the Eating Disorder Association of Canada* (Halifax), 2012.
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75. Isacco L, **Thivel D**, Pelle A, Zouhal H, Duclos M, Duché P, Boisseau N. Oral contraception and energy intake in women: Impact on substrate oxidation during exercise. *17th European Congress on Sport Sciences* (Bruges, Belgium), 2012.
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78. **Larouche R**, **Boyer C**, **Longmuir PE**, **McFarlane A**, **McClelland K**, **Barnes J**, **LeBlanc AG**, **Borghese M**, **Saunders T**, **Tremblay MS**. Relationship between pedometer-determined physical activity, health-related fitness and motor skills: The Canadian Assessment of Physical Literacy. *International Congress on Enhancement of Physical Activity and Motor Skills* (Jyväskylä, Finland), 2012.

79. **Larouche R, Boyer C, Longmuir PE, McFarlane A, McClelland K, Barnes J, LeBlanc AG, Borghese M, Saunders T, Tremblay MS.** Associations between mode of transport to and from school, physical activity and health-related fitness. *North American Society for Pediatric Exercise Medicine* (Philadelphia), 2012.
80. **Larouche R, Saunders TJ, Faulkner GEJ, Colley R, Tremblay MS.** Cycling to and from school, physical activity, body mass index and cardiovascular fitness: a systematic review. *Velo-city Global Conference 2012* (Vancouver), 2012.
81. **LeBlanc AG, Chaput JP, McFarlane A, Colley RC, Thivel D, Biddle SJ, Maddison R, Baranowski T, Leatherdale ST, Tremblay MS.** Active video games and health indicators in children and youth: a systematic review. *CHEO Research Day* (Ottawa), 2012.
82. **LeBlanc AG, Chaput JP, McFarlane A, Colley RC, Thivel D, Biddle SJ, Maddison R, Baranowski T, Leatherdale ST, Tremblay MS.** Systematic review on the relationship between active video games and health indicators in children and youth (aged 0-17 years). *Canadian Society for Exercise Physiology Annual Scientific Conference* (Regina), 2012.
83. **LeBlanc A, Timmons B, Carson V, Connor Gorber S, Dillman C, Janssen I, Kho M, Spence J, Stearns J, Tremblay MS.** Systematic review of the relationship between physical activity and health in infants, toddlers, and preschoolers. *8<sup>th</sup> International Conference on Diet and Activity Methods* (Rome, Italy), 2012.
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85. **Longmuir PE, Boyer C, McClelland K, McFarlane A, Tremblay MS.** Physical activity attitudes and motivation: A fifth component of physical literacy for children 8 to 12 years of age. *International Congress on Enhancement of Physical Activity and Motor Skills* (Jyväskylä, Finland), 2012.
86. **Longmuir PE, Boyer C, McClelland K, Tremblay MS.** Waist circumference associated with healthy lifestyle knowledge and perceptions. *CHEO Research Day* (Ottawa), 2012.
87. **Longmuir PE, Boyer C, Barnes J, LeBlanc AG, Borghese M, Larouche R, Saunders T, Grattan K, Muthuri S, Tremblay MS.** Canadian Assessment of Physical Literacy reliability and validity: plank torso strength and motor skill obstacle course protocols. *North American Society for Pediatric Exercise Medicine* (Philadelphia), 2012.
88. **Longmuir P, Boyer C, Barnes J, LeBlanc A, Borghese M, Larouche R, Saunders T, Grattan K, Muthuri S, Tremblay MS.** Canadian Assessment of Physical Literacy: Summer 2011 reliability and validity testing. *Canadian Sport 4 Life National Summit* (Ottawa), 2012.
89. **Longmuir PE.** Games, Arts and Crafts as Research Methods: Enabling Young Children to Speak for Themselves. *Canadian Cardiovascular Congress* (Toronto), 2012.
90. **Longmuir PE.** Childhood Physical Activity After Fontan: Contradictory Recommendations and Limited Evidence. *Canadian Cardiovascular Congress* (Toronto), 2012.
91. **Longmuir PE.** Higher Waist Circumference and Body Mass Index Associated with Decreased Knowledge and Negative Perceptions of a Healthy Lifestyle Among Grade 4 to 6 Students and Their Teachers. *CHEO Research Day* (Ottawa), 2012.
92. **Longmuir PE.** Health for Children with Chronic Illnesses and Disabilities Through Physical Activity. *CHEO, Ambulatory Care Services Professional Development Session* (Ottawa), 2012.
93. **Longmuir PE.** Healthier CHEO Kids: Harnessing the Physical and Mental Health Benefits of Exercise and Physical Activity for Children with Chronic Medical Conditions and Disabilities. *CHEO Paediatric Grand Rounds* (Ottawa), 2012.
94. **Longmuir PE.** Physically Active Peer Play: The Health of Children with Heart Problems Depends on It, So Why Doesn't It Happen. *CHEO, Division of Cardiology Lunch and Learn Session* (Ottawa), 2012.

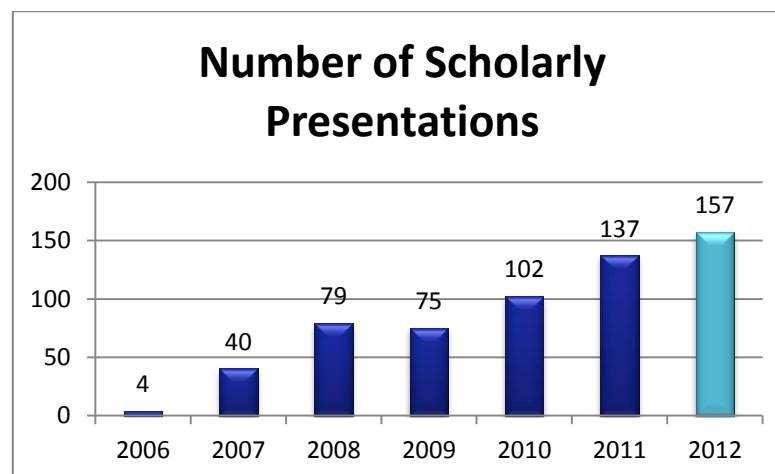
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131. **Tremblay MS**. Promoting Physical Literacy in Primary Grades: Why, What and How? *Rainbow District School Board Teachers* (Sudbury), 2012.
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135. **Tremblay MS**. Combating Inactivity: Getting People, Places, Processes and Practices Outside the Box. *Alberta School Boards Association National Conference* (Banff), 2012.
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137. **Tremblay MS**. Childhood Obesity and Sedentary Behaviour: What can be done? *Cross-sectoral initiatives from Canada. University of Cape Town and the Sport Science Institute of South Africa* (Cape Town, South Africa), 2012.
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142. **Tremblay MS**. Sedentary Behaviours – The New Pediatric Public Health Threat. *University of Guadalajara* (Guadalajara, Mexico), 2012.
143. **Tremblay MS**. Making Movement a Movement: Time to Think and Act Differently! *PLAY in Bruce Grey Celebration and Longest Day of Play Awards Ceremony* (Owen Sound), June 2012.
144. **Tremblay MS**. The Importance of Active Play. *Teachers and Students of Owen Sound Elementary Schools* (Owen Sound), 2012.
145. **Tremblay MS**. Assessment of Healthy Active Living Indicators Among Canadians: Findings from the Canadian Health Measures Survey. *Kellogg Nutrition Symposium at the Dieticians of Canada Annual Conference* (Toronto), 2012.
146. **Tremblay MS**. Is obesity a disease? *Canadian Institutes of Health Research Café Scientifique* (Ottawa), 2012.

147. **Tremblay MS.** Global Report Card on the Physical Activity of Children and Youth: A model for international harmonization, comparison and monitoring. *8<sup>th</sup> International Conference on Diet and Activity Methods* (Rome, Italy), 2012.
148. **Tremblay MS.** Canadian Sedentary Behaviour Guideline Development for Children and Youth *Australian Sedentary Behaviour Guideline Development Consensus Meeting* (Canberra, Australia), 2012.
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**Figure 8: Number of scholarly presentations by HALO Research Group from 2006 to 2012.** Between 2006 and 2012, there was a 3825% increase in the number of scholarly presentations; between 2011 and 2012, there was a 15% increase.

## STRATEGIC PARTNERSHIPS

The Healthy Active Living and Obesity Research Group is honoured to have the following organizations as strategic partners:

- Active Healthy Kids Canada
- Alberta Centre for Active Living
- Canada – Mexico Battling Childhood Obesity (CAMBIO)
- Canadian Fitness and Lifestyle Research Institute
- Canadian Society for Exercise Physiology
- Carleton University
- Champlain Cardiovascular Disease Prevention Network
- CHEO Foundation
- CHEO Research Institute
- Health Analysis Division, Statistics Canada
- Health Nexus: Best Start Resource Centre
- Kenyatta University, Nairobi, Kenya
- National Capital Region YMCA/YWCA
- The Ottawa Hospital
- Ottawa Public Health
- ParticipACTION
- Treatment and Research of Obesity in Pediatrics in Canada (TROPIC)
- University of Ottawa
- University of Ottawa Institute of Mental Health Research (IMHR)
- Women's and Children's Hospital; Obstetrics & Gynaecology, Adelaide, Australia



**Healthy Active Living and Obesity Research Group (HALO)  
Children's Hospital of Eastern Ontario, Research Institute  
401 Smyth Road, Ottawa, ON K1H 8L1**

**Please visit our HALO web site at [www.haloresearch.ca](http://www.haloresearch.ca)**

**Kristi Adamo**

Research Scientist  
613-737-7600, ext. 4190  
[kadamo@cheo.on.ca](mailto:kadamo@cheo.on.ca)

**Joel Barnes**

Knowledge Synthesis and Analysis Manager  
613-737-7600 ext. 4148  
[jbarnes@cheo.on.ca](mailto:jbarnes@cheo.on.ca)

**Priscilla Bélanger**

Research Assistant  
613-737-7600 ext. 4408  
[pbelanger@cheo.on.ca](mailto:pbelanger@cheo.on.ca)

**Charles Boyer**

Research Assistant  
613-737-7600 ext. 4408  
[cboyer@cheo.on.ca](mailto:cboyer@cheo.on.ca)

**Annick Buchholz**

Psychologist, CHAL  
613-260-1477 ext. 224  
[abuchholz@cheo.on.ca](mailto:abuchholz@cheo.on.ca)

**Jean-Philippe Chaput**

Junior Research Scientist  
613-737-7600, ext. 3683  
[jpchaput@cheo.on.ca](mailto:jpchaput@cheo.on.ca)

**Rachel Colley**

Junior Research Scientist  
613-737-7600, ext. 4118  
[rcolley@cheo.on.ca](mailto:rcolley@cheo.on.ca)

**Claire Francis**

Research Assistant  
613-737-7600, ext. 4191  
[cfrancis@cheo.on.ca](mailto:cfrancis@cheo.on.ca)

**Gary Goldfield**

Clinical Scientist  
613-737-7600, ext. 3288  
[ggoldfield@cheo.on.ca](mailto:ggoldfield@cheo.on.ca)

**Casey Gray**

Project Manager (A-TEAM)  
613-737-7600, ext. 4005  
[casgray@cheo.on.ca](mailto:casgray@cheo.on.ca)

**Kimberly Grattan**

Research Coordinator  
613-737-7600 ext. 4158  
[kgrattan@cheo.on.ca](mailto:kgrattan@cheo.on.ca)

**Stasia Hadjiyannakis**

Pediatric Endocrinologist, CHAL  
613-737-7600, ext. 3939  
[shadjiyannakis@cheo.on.ca](mailto:shadjiyannakis@cheo.on.ca)

**Geneviève Leduc**

Project Manager (ISCOLE)  
613-737-7600 ext. 4192  
[gleduc@cheo.on.ca](mailto:gleduc@cheo.on.ca)

**Pat Longmuir**

Junior Research Scientist  
613-737-7600 ext. 3908  
[plongmuir@cheo.on.ca](mailto:plongmuir@cheo.on.ca)

**Kasey Parker**

Research Coordinator  
613-737-7600 ext. 4158  
[kparker@cheo.on.ca](mailto:kparker@cheo.on.ca)

**Sonia Jean-Philippe**

Research Coordinator  
613-737-7600, ext. 3271  
[sjeanphilippe@cheo.on.ca](mailto:sjeanphilippe@cheo.on.ca)

**Jane Rutherford**

Exercise Specialist/Project Manager, CHAL  
613-260-1477, ext. 222  
[jrutherford@cheo.on.ca](mailto:jrutherford@cheo.on.ca)

**Hélène Sinclair**

Administrative Assistant  
613-737-7600, ext. 4102  
[hsinclair@cheo.on.ca](mailto:hsinclair@cheo.on.ca)

**Mark Tremblay**

Director, HALO  
613-737-7600, ext. 4114  
[mtremblay@cheo.on.ca](mailto:mtremblay@cheo.on.ca)

**Shanna Wilson**

Research Assistant  
613-737-7600, ext. 4191  
[shwilson@cheo.on.ca](mailto:shwilson@cheo.on.ca)