



Paediatric Research
and Child Health in Canada

La recherche pédiatrique
et la santé des enfants au Canada

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Programme



Health Research Caucus May 9, 2016

Hosted by

John Oliver, MP (Oakville) and

Chair of the Health Research Caucus

Co-hosted by the Past Chair of the Health Research Caucus,

**The Honorable Kelvin K. Ogilvie, Senator,
the NDP Representative,**

Ms. Carol Hughes, MP (Algoma-Manitoulin-Kapuskasing),

and the Chair of Research Canada, Dr. Ryan Wiley

Advances in paediatric health research improve the way we understand child and adolescent health and development and how they are influenced by various factors such as the environment and education. Paediatrics became a medical specialty in the mid-nineteenth century. Before that time, the care and treatment of childhood diseases were included within such areas as general medicine, obstetrics, and midwifery.

Paediatrics broadly encompasses a number of research areas including neonatology, paediatric psychiatry, allergy and dermatology, neurology, oncology, cardiology, ophthalmology, pulmonology, infectious diseases in infants, nephrology, neonatal critical care and neonatal nursing among other areas.

There are a number of reasons why research in children is so important:

- Children's brains and musculoskeletal systems are developing.
- Medicines, devices, and treatments are often not tested in children.
- To continue to do research in children says to us as a society that children are important, are valued, and that we value their health.

1. Genetics of Rare Disease

New technologies like stem cells in paediatric disorders and how these relate to areas such as ethics and commercialization.



Francois Bernier, MD, FCCMG, FRCPC, is a Clinical Geneticist and Head of Medical Genetics at the University of Calgary. His research involves the discovery of novel genes for rare heart and brain disorders, deciphering the genetic basis of neurodevelopmental disorders and the impact of genes and environment on fetal and childhood development. He is also involved in the development of clinically and fiscally responsible models of Precision Medicine that harness new genomic opportunities. Dr. Bernier's recent work focuses on the genetics of childhood neurodevelopmental disorders including developmental coordination disorder and autism.



Kym Boycott, PhD, MD, FRCPC, is a Medical Geneticist at the Children's Hospital of Eastern Ontario (CHEO), Clinician Scientist at the CHEO Research Institute and Professor of Pediatrics at the University of Ottawa. Dr. Boycott's research, bridging clinical medicine to basic research, is focused on elucidating the molecular pathogenesis of rare genetic diseases using next-generation sequencing approaches. She is Chair of the Diagnostics Committee of the International Rare Disease Research Consortium.



Alex MacKenzie, MD, PhD, is a pediatrician at the Children's Hospital of Eastern Ontario (CHEO) and professor of pediatrics at the University of Ottawa, has served as the CEO of CHEO Research Institute, VP Research for both CHEO and Genome Canada and founding scientist of the AeGera biotech company. Dr. MacKenzie studied the rare pediatric disorder spinal muscular atrophy over the past 25 years. In recent years as co-lead for Care for Rare, he is searching for therapeutics for a wider number of rare genetic diseases.



Clara van Karnebeek, MD, PhD, FCCMG, is an Assistant Professor in the Department of Pediatrics at the University of British Columbia, and works as a certified pediatrician and biochemical geneticist at BC Children's Hospital in Vancouver. She is a Scientist at the Centre for Molecular Medicine and Therapeutics, Child & Family Research Institute and a Michael Smith Foundation for Health Research Scholar. Dr. van Karnebeek's research is aimed at discovering new inborn errors of metabolism, a class of genetic diseases that is particularly amenable to treatment. She established two large collaborative efforts aimed at discovering genetic defects in children who present with intellectual disabilities and providing clinicians the tools for early recognition and management.



Wyeth W. Wasserman, PhD, is the Executive Director, Child & Family Research Institute/BC Children's Hospital and Associate Dean for Research, Faculty of Medicine University of British Columbia. He is Senior Scientist, Centre for Molecular Medicine and Therapeutics and Professor, Department of Medical Genetics at the University of British Columbia. Dr. Wasserman's genetics research produces applied biomedical impacts. His computational biology laboratory develops algorithms for the analysis of DNA sequences. Dr. Wasserman's team discovers mutations responsible for rare diseases. He is the head of research at BC Children's Hospital.

2. Child and Youth Mental Health Research

Child and youth mental health research will feature research on suicidal ideation, also known as suicidal thoughts and concerns and/or an unusual preoccupation with suicide.



Penny Corkum, MA, PhD, is a Registered Psychologist with a background in School and Child Clinical Psychology. She is a Professor in the Department of Psychology and Neuroscience at Dalhousie University, as well as being cross-appointed in Psychiatry and Pediatrics. She is the Director of the Colchester East Hants ADHD Clinic. Dr. Corkum conducts clinical research in child psychopathology (particularly ADHD) and pediatric sleep. She has received CIHR funding through the eHIPP program, to develop, evaluate and disseminate the Teacher Help program which focuses on helping teachers meet the needs of students with attention-deficit/hyperactivity disorder, learning disabilities, and autism spectrum disorder.

Joanna Henderson, PhD, CPsych, is Director of the Margaret and Wallace McCain Centre for Child, Youth and Family Mental Health at the Centre for Addiction and Mental Health (CAMH) and Associate Professor of Psychiatry at the University of Toronto. Dr. Henderson leads four federally-funded projects to develop innovative approaches to understanding and addressing youth substance use and mental health concerns through collaborative research and service integration. Dr. Henderson's research focuses on improving access to care for youth and families, stakeholder-informed research and collaborative models of service delivery.



Srividya Iyer, PhD, has research and clinical interests in youth mental health and early intervention, which is known to improve long-term outcomes, including in serious mental illnesses like psychosis. She is the Scientific-Clinical Director of ACCESS Open Minds, a CIHR project focused on providing young Canadians faster, more direct access to appropriate mental health services. At 12 sites in seven provinces and one territory, ACCESS Open Minds targets urban, rural, Indigenous and vulnerable youth.



Johanne Renaud, MD, MSc, FRCPC, is a Clinician-Scientist and Associate Professor, Youth Suicide and Suicidal Behaviours, and Depressive Disorders at Douglas Mental Health University Institute, Department of Psychiatry, McGill University. Dr. Renaud strives to improve preventative and treatment measures by implementing research protocols on innovative interventions for depressed youth and their families. This includes epigenetic and brain neuroimaging studies in depressive adolescents, as well as research into mental health services and interventions for youth at risk of suicide.



3. Healthy Active Living and Obesity

The 2015 Report Card on the Physical Activity of Children and Youth will be featured along with research that advances prevention and the care of childhood obesity.

Geoff Ball, PhD, RD, is the Founding Director of the Pediatric Centre for Weight and Health, an inter-professional obesity management clinic at the Stollery Children's Hospital in Edmonton. His research program in the Department of Pediatrics (University of Alberta) applies several research methods, including clinical trials, qualitative inquiry, epidemiology, and literature reviews that are designed to generate, translate, and apply new knowledge that can optimize obesity prevention and management for children and families.



Jason Gilliland, PhD, is Professor of Geography, Health Studies, and Paediatrics at Western University and Scientist with the Children's Health Research Institute and Lawson Health Research Institute. His research examines environmental influences on children's health issues such as physical inactivity, poor nutrition, obesity, and injury. His aim is to identify interventions to public policy and neighbourhood design to promote children's health. He is supported by the Children's Health Foundation, Lawson Foundation, Canadian Cancer Society, and CIHR.



4. Acute Care/Trauma

Paediatric research, assessment and management of acute head trauma among children.

James Drake BSE, MB, BCh, MSc, FRCSC, is Professor of Surgery, Division Chief of Pediatric Neurosurgery at the Hospital for Sick Children and holds the Harold Hoffman Shoppers Drug Mart Chair. He is a Senior Associate Scientist in the Sickkids Research Institute, and leads the Centre of Image Guided Innovation and Therapeutic Intervention (CIGITI) and is co-lead of the Centre of Excellence in Image Guided Care. He is also Co-Director of the Centre of Mathematical Medicine at the Fields Institute at the University of Toronto.





Roger Zemek, MD, is a Pediatric Emergency Physician at the Children's Hospital of Eastern Ontario (CHEO) and an Associate Professor at the University of Ottawa. He is Director of Clinical Research at CHEO, and is Vice-Chair of Pediatric Emergency Research Canada (PERC). He led the largest concussion study in the world examining the predictors for persistent post-concussion symptoms in children suffering a concussion, and led an international team to create guidelines for pediatric concussion.

5. Children Requiring Complex Care

Children with complex health needs (CCHN) are a vulnerable and growing group of children who have multiple health needs, requiring multiple services from many sectors in a number of locations. Research focused on this diverse group of children with diagnostic conditions that are individually rare, but collectively common, will be presented.



Natalie Major-Cook, MD, FRCPC, is Assistant Professor with the University of Ottawa and Medical Director for the Champlain Complex Medical Care Program at the Children's Hospital of Eastern Ontario (CHEO). As Co-Chair for the Community of Practice for Complex Care with the Canadian Association of Pediatric Health Centres, she works on national and provincial initiatives advising on integrated care models. Her research interest is on models of care coordination for children with complex chronic conditions.



Julia Orkin, MSc, MD, FRCPC, is a staff paediatrician at the Hospital for Sick Children. She is Medical Director of the complex care program for children with medical fragility and technology dependence. Dr. Orkin is a project investigator at the SickKids Research Institute and an Associate Scientist at the Center for Research on Inner City Health, Li Ka Shing Research Institute, Keenan Research Center at St Michael's Hospital. She is an Assistant Professor in the Department of Paediatrics at the University of Toronto. Her research interests include children with medical complexity and health outcomes related to the social determinants of health and poverty.

6. Chronic Care

Chronic care paediatric research and child health including asthma and diabetes.



Anthony Otley, MD, MSc, FRCPC, is a pediatric gastroenterologist and is Head, Division of Gastroenterology and Nutrition at the IWK Health Centre and Professor, Department of Pediatrics and Medicine, at Dalhousie University. His major research interests include clinical trials, in particular the development and evaluation of outcome measures. He has developed a web-based disease self-management program, the Mission is Remission, for teens with inflammatory bowel disease (IBD) and disease-specific health related quality of life questionnaires for children with IBD (IMPACT) and Post-liver Trans-plant (PeLTQL). He is conducting pan-Canadian research with the pediatric IBD Network funded through a CIHR-CHILD partnership.



Teresa To, PhD, is an epidemiologist and Director of the Ontario Asthma Surveillance Information System that monitors asthma morbidity in children and adults in Ontario. Dr. To is the lead investigator of the Environmental Health Platform of the Canadian Respiratory Research Network where she measures the impact of air pollution and climate on children's lung health. Her research aims to identify populations at risk for interventions to reduce disease morbidity, improve health outcomes and quality of life.