

CANADIAN PAEDIATRIC SURVEILLANCE PROGRAM

What do we know about microcephaly in Canada?

Following the recent outbreak of Zika virus, microcephaly has garnered a lot of international attention. In light of this global crisis, the Canadian Paediatric Surveillance Program is asking: What is known about microcephaly in the Canadian context? Is Canada prepared to respond to a Zika outbreak, should the virus affect Canadians, either as a result of travel exposure, or following a dramatic shift in the current epidemiology?

A new CPSP study is designed to determine the minimum incidence of severe microcephaly in Canada and to explore the current etiologies of such cases. Research Ethics Board approval for this study was granted by Health Canada and the Public Health Agency of Canada's Research Board.

"Cases of the virus have been detected in Canadians following travel to Zika endemic areas, including cases of Zika virus in pregnant Canadian women. We must be vigilant in educating Canadians about the rapidly changing geographic presence of the virus, risks associated with travel to endemic areas, modes of transmission, as well as signs and symptoms of the condition," said Dr. Charlotte Moore Hepburn, a co-investigator of the study and CPSP Medical Affairs Director.

Microcephaly is the result of abnormal brain development in the womb or after birth. Risk factors can include genetic disorders, exposure to drugs or toxins, hypoxic injury and congenital infections. Infants with microcephaly have a noticeably

smaller head circumference in comparison to infants of the same age and sex. As they grow, many will experience developmental delays and may have other serious health concerns, which can require life-long support.

The rate of microcephaly in Canada is currently monitored by the Canadian Congenital Anomalies Surveillance System (CCASS), a system that relies on retrospective hospitalization data. Well known issues related to the precision, depth and timeliness of administrative data prompted further research. Accurate baseline data on microcephaly is critical to effectively monitor for and respond to the current Zika threat. In addition, accurate minimum incidence information is valuable to all international jurisdictions facing a Zika outbreak.

Thanks to the support of the Public Health Agency of Canada, as a part of this study, the CPSP is also preparing to disseminate best practice guidelines to detect and evaluate congenital Zika syndrome in infants. A CPS practice point on Zika virus, which includes a detailed diagnostic algorithm, will be sent to all CPSP participants who report a case of severe microcephaly.

The goal is to ensure that all Canadian paediatricians who care for infants with possible Zika exposure have current, evidence-based recommendations, enabling the highest possible quality of care in the setting of this emerging pathogen.

This study will run from June 2016 to May 2018, during which investigators expect to find approximately 250 cases of microcephaly in Canada, based on the best available international incidence estimates.

The CPSP is also working with its surveillance partners in the United Kingdom, Australia, and New Zealand, through the International Network of Paediatric Surveillance Units (INOPSU) network, to promote consistency in data definitions, with an eye to performing international comparison work in the future.

"We felt strongly that Canada, working together with international surveillance partners in the U.K., Australia and New Zealand, could contribute valuable information to the global community, if a reliable minimum population incidence for severe microcephaly could be determined," said Dr. Moore Hepburn. 🌟

Case definition

Report any new patient less than 12 months of age, with a head circumference measurement less than three standard deviations below the mean (0.13th centile) for gestational age and sex, based on the sex-specific World Health Organization growth parameters:

- Female term infant with a head circumference of less than 30.3 cm.
- Male term infant with a head circumference of less than 30.7 cm.
- Preterm infant (less than 38 weeks' gestation), as per appended INTERGROWTH-21st study standards.

Hats Off!

Dr. Thérèse Côté-Boileau of Sherbrooke, Que. received the Prix Letondal 2016 from l'Association des pédiatres du Québec.

Dr. Sarah Gander of Saint John N.B. received the 2016 Women of Distinction Award for Health & Wellness from YWCA Saint John.

Dr. Richard B. Goldbloom of Halifax, N.S. and **Dr. F. Estelle R. Simons** of Winnipeg, Man. have been inducted into the Canadian Medical Hall of Fame. The induction ceremony will take place May 4, 2017.

Dr. Moyez Ladhani of Hamilton, Ont. has been named the International Conference on Residency Education's 2016 Program Director of the Year.

Dr. Shoo K. Lee of Toronto, Ont. has received the Doug Richardson Perinatal and Pediatric Healthcare Award from the Society for Pediatric Research, as well as the 2016 Contribution to Child Health Award from the Canadian Association of Pediatric Health Centres.

Dr. Andrew Lynk of Sydney, N.S., has been appointed the department head for the Department of Pediatrics, Faculty of Medicine, Dalhousie University, and Chief of Pediatrics at the IWK Health Centre. Dr. Lynk is a past president of the Canadian Paediatric Society.

Dr. Harriet MacMillan of Toronto, Ont. has been named a Member of the Order of Canada.

Dr. Catherine Pound of Ottawa, Ont. received the Education, Innovation and Discovery Award from the Children's Hospital of Eastern Ontario.

Dr. Michael J Rieder of London, Ont. has received the 2016 Paediatric Academic Leadership - Clinician Investigator Award from the Paediatric Chairs of Canada. Dr. Rieder has also been appointed Interim Chair/Chief of the Department of Paediatrics at the Schulich School of Medicine & Dentistry at Western University.

Dr. Sunita Vohra of Edmonton, Alta. received the 2016 Pioneer in Integrative Medicine Award from the American Academy of Pediatrics Section on Integrative Medicine. 🌟