Perinatal Perspectives

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Maternal Health Clinic at Kingston General Hospital

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Background

Women's cardiovascular health is a key national priority according to recent Canadian studies, public opinion polls, the 2009 *Canadian Heart Health Strategy and Action Plan*[1] and the 2007 and 2010 Heart & Stroke Foundation annual reports on Canadians' health[2, 3]. This priority should be addressed through improving cardiovascular awareness and prevention, and reducing care inequities for women in general and younger women in particular. Given the challenges and costs of both screening for and treating cardiovascular disease (CVD), innovative ways to identify women who should undergo cardiovascular risk (CVR) screening are critical to achieve this goal. For the majority of Canadian women of reproductive age, pregnancy and the postpartum period provide a new and early window of opportunity for primary disease prevention by identifying risk factors and implementing screening and intervention strategies to improve long-term health.

Pregnancy has been liked to a cardiovascular stress test that can predict a woman's health in later life[4]. The development of common complications in pregnancy, namely, pre-eclampsia (PE) and gestational hypertension (GH), gestational diabetes (GDM) or gestational impaired glucose intolerance, placental abruption, idiopathic preterm delivery and/or fetal growth restriction (IUGR), have been shown to predict a woman's risk of premature CVD and CVD-related mortality[1]. The number of times and the degree to which a woman "fails" the pregnancy stress test likely reflect not only the woman's risk for future CVD, but the time frame over which it develops. Furthermore, excess weight gain during pregnancy and weight retention/ weight gain postpartum are linked to the development of obesity which is also a CVR indicator. We have coined the term "pregnancy-related cardiovascular risk indicators" for these conditions that have been linked to future CVD. The 2011 update for the American Heart Association's evidence -based guidelines for the prevention of CVD in women[5], identifies these complications of pregnancy relevant in the determination of CVD risk.

Program Partners

Almonte General Hospital

Brockville General Hospital

Consortium national de formation en santé (CNFS)

Children's Hospital of Eastern Ontario

Ottawa Public Health

Community Health Centres of Eastern Ontario

Cornwall Community Hospital

Eastern Ontario Health Unit

Faculties of Medicine and Health Sciences, University of Ottawa

Faculty of Health Sciences, Queen's University

Hastings and Prince Edward Counties Health Unit

Hawkesbury and District General Hospital

Hôpital Montfort

Kingston, Frontenac, Lennox and Addington Public Health (KFL&A)

Kingston General Hospital

Midwifery Practice Groups in Eastern and Southeastern Ontario

Pembroke Regional Hospital

Perth and Smiths Falls District Hospital

Queensway Carleton Hospital

Quinte Health Care

Renfrew County and District Health Unit

Renfrew Victoria Hospital

St. Mary's Home and the Young Single Parent Support Network

The Ottawa Hospital

Winchester District Memorial Hospital

Inside:

- *The 2011- 2012 BORN Program Report is ready!* p.3

Maternal Health Clinic

The Kingston General Hospital (KGH) and Queen's University have developed and run the Maternal Health Clinic (MHC) [6] since November 2011 with the sole purpose of CVR identification and lifestyle modification for postpartum women. Too much of our health care system is "reactive" and very little is approached from a "prevention" point of view. The goal of the Maternal Health Clinic is geared to health preservation and disease prevention. Primary prevention is always much more effective than secondary prevention after a disease has become well established. Women receiving care at KGH and who have one or more of the following conditions are automatically referred to the MHC: pre-eclampsia, gestational hypertension, gestational diabetes, gestational impaired glucose tolerance, clinically significant placental abruption, idiopathic preterm birth or delivery of a growth restricted baby. Referrals from elsewhere in the region would be considered but most women with these high risk complications would deliver at KGH for the South East LHIN.

We have published a review[7] to provide practitioners with an approach to setting up and running a similar Maternal Health Clinic in their community. The results[8] from the first year and a half of the clinic's operations have recently been accepted for publication. Over half of the women were found to be at high risk of future CVD and 20% met the criteria for metabolic syndrome. This is in comparison to a previous low risk control group followed at the same time point postpartum. Our conclusion is that the above-mentioned pregnancy complications can accurately identify postpartum women who have underlying cardiovascular risks which make them susceptible to CVD, and that a Maternal Health Clinic may serve as an innovative and effective primary prevention strategy. While the Maternal Health Clinic at the Kingston General Hospital was initially internationally unique, clinics have now been established in Edmonton and Ottawa and plans are in place for clinics in Montreal, Toronto and Calgary and many centres in the U.S.

References

1. Smith, E. R. (2009). *Canadian Heart Health Strategy and Action Plan: Building a Heart Healthy Canada.* Retrieved from http://www.chhs.ca/sites/default/files/Document%20Links/Reports/English/CHHS%20-%20Building%20a%20Heart%20Healthy%20Canada%20-%20EN%20-%20Feb%202009.pdf
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5. Mosca, L., Benjamin, E. J., Berra, K., Bezanson, J. L., Dolor, R. J., Lloyd-Jones, L., …Wenger, N. K. (2011). Effectiveness-based guidelines for the prevention of cariovascular disease in women – 2011 Update: A guidelines from the American Health Association. *Circulation, 123*, 1243-1262. doi: 10.1161/CIR.0b013e31820faaf8
6. Smith, G. N. (2009). Development of pre-eclampsia provides a window of opportunity for early cardiovascular risk screening and intervention. *Expert Review of Obstetrics & Gynecology, 4*(4), 355-357.
7. Smith, G. N., Pudwell, J., & Roddy, M. (2013). The Maternal Health Clinic: A new window of opportunity for early heart disease risk screening and intervention for women with pregnancy complications. *Journal of Obstetrics and Gynaecology Canada, 35*(9), 831–839.
8. Cusimano, M. C., Pudwell, J., Roddy, M., Cho, C.-K. J., & Smith, G. N. (2013). The Maternal Health Clinic: An initiative for cardiovascular risk identification in women with pregnancy-related complications. *American Journal of Obstetrics and Gynecology* (ePub ahead of print) doi:10.1016/j.ajog.2013.12.001

KGH KINGSTON GENERAL HOSPITAL

Queen's UNIVERSITY

Views, opinions and advertisements in the Perinatal Perspectives are not necessarily endorsed by the editorial staff. Comments are welcomed.

142,376

Ontario births were captured in the BORN Information System in 2011-12.

43.3

Percent of women who gave birth in Ontario were first-time mothers.

91.6

Percent of Live Births in Ontario Occurred at Term.

63.2

Percent of Term Infants dis-charged from hospital were exclusively breastfed.

The 2011-2012 BORN Program Report is ready!

http://bornontario.ca/en/publications/reports/born-annual-reports

Find Information on…

Pregnancy

- First Trimester Visit
- Prenatal Screening
- Mental Health Issues
- Smoking During Pregnancy
- Ontario Antenatal Record (A1A2) Pilot Project
- H1N1 Project

Birth

- LHIN Regional Reports
- Maternal Newborn Dashboard

Children

- Supporting the Baby-Friendly Initiative
- Newborn Screening
- 18-Month Enhanced Well-Baby Visit Pilot Project

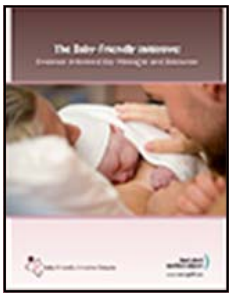
Also available are the ***LHIN Regional Reports*** which provide updated data related to maternal-newborn care and the provision of obstetrical health services by Local Health Integration Network (LHIN)

http://www.bornontario.ca/en/publications/reports/lhin-regional-reports/

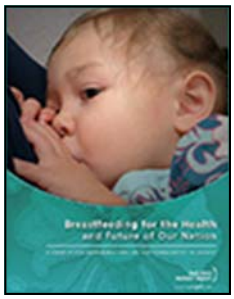
NEW BREASTFEEDING SUPPORTS IN ONTARIO!

As part of Ontario's Healthy Kids Strategy, the government is investing more than $2.5 million in the following initiatives:

- Providing 24-hour telephone access to expert support for breastfeeding mothers, beginning in early 2014.
- Supporting Ontario's hospitals and community health care organizations with training, tools, guidance and resources to help them meet and achieve the World Health Organization's Baby-Friendly Initiative designation.
- Targeted support for mothers who find it difficult to access breastfeeding services.
- Providing new resources to support breastfeeding through Best Start: Ontario's Maternal Newborn and Early Child Development Resource Centre. New resources will include:



Baby-Friendly Initiative: Evidence-Informed Key Messages and Resources
Best Start Resource Center and BFI Ontario, 2013
This resource provides key supports for agencies that are implementing or maintaining the standards of the *Baby-Friendly initiative (BFI)*. It highlights the key points regarding each of the *10 Steps to Successful Breastfeeding* and the *WHO Code of Marketing of Breastmilk Substitutes* and explains them with evidence-informed language. The additional online, linked resources can be used when implementing each of the 10 Steps or requirements of the Code, make this resource practical and user-friendly. It is equally applicable in hospital and community settings. This resources is available in PDF format at http://www.beststart.org/resources/breastfeeding/Baby_Friendly_Resource_linked_final.pdf



Breastfeeding for the Health and Future of Our Nation
Best Start Resource Centre, 2013
This booklet was created to support Aboriginal women with the art of breastfeeding. The Medicine Wheel is used to symbolize the balance needed to support breastfeeding women. This resource is available in PDF format at http://www.beststart.org/resources/breastfeeding/BFHFN_sept26.pdf

New collaboration between
CMNRP and Southwestern Ontario Maternal, Newborn, Child and Youth Network

3 options to participate: In person (by videoconference), live (by webcast) or archived sessions

The 2013-2014 Schedule for The Learning Café Sessions is available on the CMNRP website:
http://www.cmnrp.ca/en/cmnrp/The_Learning_Caf_p553.html

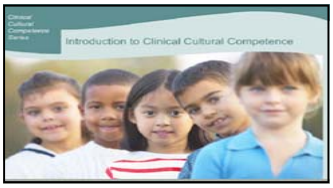
Southwestern Ontario Maternal, Newborn, Child and Youth Network

Resources

How to Reach Francophones – Maternal and Early Years Programs

Best Start Resource Centre, Updated 2013

A manual for service providers describing the challenges of reaching francophones in minority settings and offering strategies to overcome these. Many program examples are described. This resource is available in print and PDF format at www.beststart.org/resources/howto.



The Cultural Competence E-learning Series

The Hospital for Sick Children, 2013

Through this series, participants will learn about the importance of health equity, and how to provide culturally competent care to enhance the quality and accessibility of health care and services.

The series is comprised of six modules and covers the following topics: Introduction to Cultural Competence; Valuing Diversity in the Workplace; Refugee and Immigrant Health; Cross-Cultural Communication; Health Literacy in Clinical Practice; Parenting Across Cultures.

This online resource is available at http://www.sickkids.ca/tclhinculturalcompetence/.

Bugs, Drugs & Shots: Neonates

MDcme.ca, 2013

This online module contains cases and tutorials related to neonatal infections. After completing this module, the participant will:

- Recognize signs and symptoms of common neonatal infections.
- Identify what diagnostic investigations to order in neonates with infections.
- Describe management of common neonatal infections.
- Become familiar with preferred antibiotic choices for common neonatal infections.

This online resource is available at www.mdcme.ca/courseinfo.asp?id=117

How to Survive Morning Sickness Successfully

Motherisk with support from the Best Start Resource Centre, 2013

This booklet contains information about morning sickness for women who are planning a pregnancy and women who are currently pregnant. The content includes topics such as: the causes of morning sickness; food, lifestyle, medication and other approaches to managing morning sickness; and when to get help.

This resource is available in print and PDF format at http://beststart.org/resources/rep_health/index.html. It is also available as an App at www.motherisk.org/women/morningSickness.jsp

Playing it Safe: Service Provider Strategies to Reduce Environmental Risks to Preconception, Prenatal and Child Health

Best Start Resource Centre in collaboration with the Canadian Partnership for Children's Health and Environment (CPCHE), 2013

This manual offers service providers promising strategies to address environmental risks to preconception, prenatal and child health. This resource is available in PDF format at www.beststart.org/resources/env_action/pdf/envirostrategies_rev.pdf

Interesting Articles

White-Corey, S. (2013). Birth plans: Tickets to the OR? *MCN, American Journal of Maternal Child Nursing, 38*(5), 268-273. doi: 10.1097/NMC.0b013e31829a399d

Although some nurses and physicians might suggest that women who write birth plans are at greater risk of a cesarean birth, research has not supported this myth. The research studies on this topic have suggested that women who write birth plans do not have higher cesarean rates or worse obstetric outcomes. Birth plans have been shown to inform and empower women, and lead to more satisfaction with their birth experiences. The purpose of this article is to present the existing evidence on perinatal outcomes in women with birth plans and to explore the phenomenon of divergent perceptions among care givers.

Miklush, L., & Connelly, C. (2013). Maternal depression and infant development: Theory and current evidence. *MCN, American Journal of Maternal Child Nursing, 38*(6), 369-374. doi: 10.1097/NMC.0b013e3182a1fc4.

Maternal depression (MD) is a condition that has wide-ranging effects on the woman, her family and the broader global society. It is generally agreed that MD is associated with untoward effects on the developmental trajectory of offspring. The aim of this article is to review the historical and theoretical underpinnings informing current thought linking MD with infant development and to highlight some of the neuroendocrine and epigenetic processes related to MD and its sequelae. A broad understanding of the association between MD and infant developmental outcomes can inform nursing care of the childbearing family.

George, D., Rovniak, L., & Kraschnewski, J. (2013). Dangers and opportunities for social media in medicine. *Clinical Obstetrics & Gynecology, 56*(3), 453-462. doi: 10.1097/GRF.0b013e318297dc38

Health professionals have begun using social media to benefit patients, enhance professional networks and advance understanding of individual and contextual factors influencing public health. However, discussion of the dangers of these technologies in medicine has overwhelmed consideration of positive applications. This article summarizes the hazards of social media in medicine and explores how changes in functionality on sites like Facebook may make these technologies less perilous for health professionals. Finally, it describes the most promising avenues through which professionals can use social media in healthcare, improving patient communication, enhancing professional development and contributing to public health research and service.

Test your Knowledge!

1. Newborn exposed to maternal SSRI's (anti-depressants) in utero are frequently at increased risk of:
   A. Hypoglycemia and seizures
   B. Tachypnea and jitteriness
   C. Major congenital malformation

2. Which of the following postpartum complications are most common after a cesarean birth?
   A. Blood loss and infection
   B. Infection and urinary retention
   C. Post-op fever and dehydration

3. Risk factors for the development of severe hyperbilirubinemia include:
   A. Prematurity, visible bruising and hypoglycemia
   B. Asian or European background, male gender and formula feeding
   C. Previous sibling with severe jaundice advanced maternal age and cephalohematoma

Answers are posted on the CMNRP website via the following link: http://www.cmnrp.ca/en/cmnrp/Perinatal_Perspectives_p3183.html

Check out these App!

Breastfeeding Solutions

Nancy Mohrbacher, IBCLC, FILCA

This new app covers every stage of breastfeeding, from birth to weaning. It helps mothers meet their personal breastfeeding goals by providing straightforward solutions to the 30 most common breastfeeding problems.

- Breastfeeding Solutions for iPhone: https://itunes.apple.com/us/app/breastfeeding-solutions/id720156246?ls=1&mt=8
- Breastfeeding Solutions for Androids: https://play.google.com/store/apps/details?id=com.nancymohrbacher.solutions

M + B 2B (Mom & Baby to Be)

Niagara Region Public Health

The M+B 2B app is a credible, easy-to-use, fact-based resource that includes everything you want to know about planning a pregnancy through to birth. Some of the features include a planning ahead checklist, prenatal care tracking tools, weight gain calculator, physical activity planner, finding your closest emergency department, and receiving personal messages based on the stage of pregnancy.

This is the first mobile app of its kind in Ontario and is Niagara-specific but provincially friendly. The M+B 2B app is free and available through the App Store via the following link:
http://itunes.apple.com/WebObjects/MZStore.woa/wa/viewSoftware?id=560579312&mt=8

Nuunest

Cindy Leclerc & Jana Stockham

Nuunest is a genuine application that focuses on supporting parents as they settle in with their newborns. It is a one-stop shop for any questions that parents may have. Some of the features include : 452 tips based on your baby's age; "What to Expect" for baby's weight and diapers; option to receive "notices" if the data entered is not what we would expect based on your baby's age; detailed feeding information with links to trusted online information; "All About Mom" section answers the questions most commonly asked by women recovering from childbirth (fatigue, post-natal depression, c-section healing, sore breasts, etc.

The app is designed for both iPhone and iPad and is available through the App Store via the following link:
https://itunes.apple.com/us/app/nuunest/id643396455?ls=1&mt=8&utm_source=buffer&utm_medium=twitter&utm_campaign=Buffer:%2BiCollegeMobile%2Bon%2Btwitter&buffer_share=9cdc6

DID YOU KNOW...

CMNRP's Family Advisory Committee created a list of useful Canadian on-line perinatal resources for childbearing families. This resource includes useful and practical information about topics ranging from preconception through the first years of a child's life. The list is available at:
http://www.cmnrp.ca/en/cmnrp/For_Families_p4065.html

MARK YOUR CALENDARS!

CMNRP's Annual Maternal Newborn Conference

May 26th & 27th, 2014

Hellenic Banquet Centre in Ottawa

Upcoming CMNRP Workshops

Late Preterm Infant
- April 7, 2014 in Ottawa

Breastfeeding Fundamentals
- January 22, March 21 & 28, 2014 in Ottawa
- February 10, 2014 in Kingston

Fetal Health Surveillance in Labour: Fundamentals
- January 20 & March 20, 2014 in Ottawa
- January 14 & April 15, 2014 in Kingston

Fetal Health Surveillance in Labour: Instructor
- March 21, 2014 in Ottawa

Neonatal Resuscitation Program: Provider
- January 9, February 7, March 28 & April 25, 2014 in Ottawa
- April 28, 2014 in Kingston

Neonatal Resuscitation Program: Instructor
- January 10, 2014 in Ottawa
- April 29, 2014 in Kingston

Labour Support
- January 28, 2014 in Ottawa
- February 12, 2014 in Kingston

Soutien pendant le travail
- February 28, 2013 in Ottawa

Perinatal Loss ***NEW***
- February 6, 2014 in Ottawa

Deuil perinatal ***NEW***
- April 8, 2014 in Ottawa

* *All workshops are open to interprofessional perinatal care providers.*

Registration form on the CMNRP website:
http://www.cmnrp.ca/en/cmnrp/Workshops_p550.html

For more information, please contact
Ariane Cloutier at 613-737-2660 ext. 2660
or by email acloutier@cmnrp.ca

Upcoming Conferences

Canadian National Perinatal Research Meeting
February 12-15, 2014
Banff Centre
Banff, Alberta
For more information: http://www.cnprm.org/

Healthy Mothers and Healthy Babies: New Research and Best Practice Conference
February 21-22, 2014
Coast Coal Harbour
Vancouver, British Columbia
For more information: http://www.interprofessional.ubc.ca/Perinatal2014

Best Start Resource Centre 2014 Annual Conference
February 26-28, 2014
Hilton Toronto Airport & Suites
Mississauga, Ontario
For more information: http://www.beststart.org/events/2014/bsannualconf14/program.htm

Association of Ontario Midwifves (AOM) Conference 2014
Celebrating Twenty Years of Regulated Midwifery in Ontario
May 5-7, 2014
Hockley Valley Resort
Orangeville, Ontario
For more information: http://www.aom.on.ca/Continuing_Education/AOM_Annual_Conference/

SOGC's 70th Annual Clinical and Scientific Conference
June 10-13, 2014
Niagara Falls, Ontario
Scotiabank Convention Centre
For more information: http://sogc.org/events/annual-clinical-and-scientific-conference-acsc-2014

91st CPS Annual Conference
June 25-28, 2014
Montreal, Quebec
For more information: http://www.annualconference.cps.ca

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