Reproductive Care Program of Nova Scotia

RCP

NEWSLETTER

FALL/WINTER 2009

THERAPEUTIC HYPOTHERMIA & HIE

IT'S COOL FOR YOU, BABY!

DR. DOUGLAS MCMILLAN &
DR. KRISTA JANGAARD

"Ensure the overhead radiant warmer is on" is commonly heard when preparing for newborn resuscitation[1]. The Acute Care of at-Risk Newborns (ACoRN) program teaches that the baby's axillary temperature should be 36.3 to 37.2°C[2].

Why would we consider anything different?

Hypoxemic Ischemic Encephalopathy (HIE) is common in many birth settings affecting 1-2 per 1000 term newborns of whom 10-20% will die and an additional 25% of survivors will have permanent neurologic sequelae[3]. Although stages of neonatal encephalopathy have been described in relation to fetal distress and outcome[4], specific criteria for intrapartum asphyxia have been defined[5] with the pathogenesis of hypoxemic-ischemic brain injury and cerebral responses summarized[6], until recently we have largely been limited to providing supportive care for affected babies and hoping for a good outcome. With therapeutic hypothermia we may now have a more specific treatment available for these babies.

Why might therapeutic hypothermia work?

When HIE occurs the baby often is depressed at birth (sometimes unexpectedly) and requires resuscitation including assisted ventilation. The baby may initially improve only to deteriorate several hours later with seizures and worsening neurologic signs often accompanied by abnormalities in other organ systems including the kidneys, heart, liver and blood. The presence of this "honeymoon period" supports the theory that HIE initiates a chain of chemical events in the brain, which, if prevented or minimized, might result in a better outcome[7].

Fifty years ago Miller suggested a therapeutic benefit of hypothermia with asphyxiated newborn animals[8]. Newborn guinea pigs, rabbits and rats have been shown to decrease body temperature with hypoxia and preferentially seek a cooler environment[9-11].

Gunn reported the first therapeutic use of hypothermia in human newborns in 1969[12]. Twenty years later randomized controlled trials of therapeutic hypothermia for term newborns with moderate to severe HIE demonstrated a reduction in the combined outcomes of death and neuro-developmental disability in patients who were cooled compared to conventionally treated controls[13-17]. Cerebral lesions were reduced[18] while side-effects of such treatment appeared relatively mild and transient[19].

In 2005, the National Institute of Child Health and Human Development in the United States held a workshop to evaluate the status of knowledge regarding the safety and efficacy of hypothermia as a neuro-protective therapy for neonatal HIE. It was

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concluded that therapeutic hypothermia was a promising therapy which should be still considered investigational until efficacy and safety had been better determined, noting that other large randomized controlled trials were in progress[20].

Subsequently the Committee on Fetus and Newborn of the American Academy of Pediatrics indicated that there remained unanswered questions related to the method, degree of cooling, duration, patient selection and long-term effects[21]. This led to debate in the literature (which continues) about how long one should wait to initiate promising therapy when the long-term outcome using conventional therapy was often very poor[22-24]. Subsequently, reports of additional trials have shown promising results[25, 26]. Following information at the December 2008 Hot Topics meeting in Washington, DC including presentation of the most recently reported trial (TOBY) [27], the IWK Health Centre, like many other Canadian NICUs, has developed a program for neonatal therapeutic hypothermia.

Who should receive therapeutic hypothermia?

Infants ≥ 35 weeks gestation with HIE as evidenced by at least two of the following:

- Apgar score < 5 at 10 minutes after birth.
- Cord pH or postnatal blood gas pH < 7.0 within one hour after birth.
- Base Excess of > -16 mmol/L (cord arterial or arterial blood gas, if available, within one hour after birth).
- Evidence of moderate to severe encephalopathy.

While amplitude integrated EEG has been utilized for selection of patients in some studies, presence of low voltage (and or seizures) is not currently a requirement of the IWK Health Centre (although amplitude integrated EEG will be utilized during the cooling period). This position is supported in the literature by others[28].

Some infants who meet the above criteria may not benefit from therapeutic hypothermia and therefore would be excluded:

- Presence of known chromosomal anomaly.
- Presence of major congenital anomalies.
- Babies for whom no intensive care therapy will continue to be offered (after discussion with parents).
- Infants > 6 hours after birth (not absolute).

How would we implement therapeutic hypothermia?

Cooling should begin within 6 hours after birth (prior to irreversible changes in the brain). The baby's body temperature is kept at 33 to 34°C for a period of 72 hours after which the baby must be re-warmed slowly. Two methods had been reported - Cool Cap and Total Body Cooling. The Cool Cap technique utilizes a cap that fits over the scalp cooling the brain and secondarily the body; Total Body Cooling usually utilizes a temperature-controlled mattress (or cool packs during transport). Both methods have shown similar reductions in brain temperature, global cerebral blood flow and O_2 uptake in an asphyxiated newborn animal model[29]. In both methods, temperature is monitored by an indwelling rectal (or esophageal) temperature probe that is servo-controlled to the cooling system. Effects on multi-organ dysfunction are similar[30]. Cost and ease of use have led the IWK Health Centre to select whole body cooling; this is as effective as head cooling and there are more babies in reported trials with this method.

What else needs to be monitored/considered?

The baby should have continuous cardio-respiratory monitoring including continuous blood pressure monitoring utilizing an arterial catheter. Heart rate is significantly lower than normal (80-90 beats per minute) reducing cardiac output by 67%[31].

Amplitude integrated EEG, indwelling urinary catheter and one or more intravenous infusions are utilized.

Most babies will be ventilated during hypothermia treatment and will not be fed enterally.

Although discomfort with hypothermia in adults is associated with shivering (unusual in newborns) analgesia should be provided for any sign of apparent pain. Care must be taken, as medication metabolism may be reduced[32].

A cranial Magnetic Resonance Image (diffusion-weighted image) is usually obtained at the conclusion of the cooling to help determine the extent of the cerebral injury.

What are the anticipated benefits?

The most recent meta-analysis (October 2007) indicates that therapeutic hypothermia is associated with a significant reduction in:

- The combined outcome of mortality or major disability at 18 months of age with a relative risk of 0.76 (95% confidence interval 0.65- 0.89)[34] due to:
  - A reduction in mortality (RR 0.74, 95% confidence interval 0.58-0.94)
  - A reduction in neuro-developmental disability in survivors (RR 0.68, 95% confidence interval 0.51-0.92).

This means that for every 7 to 8 babies treated with therapeutic hypothermia, one baby who might otherwise have died or had major neuro-developmental disability will survive without major neuro-developmental disability. In the most recently reported large multicentred trial, survival without neurologic abnormality increased from 28% to 44% with hypothermia[27]. However, this means that there are still 56% of asphyxiated newborn babies with poor outcome. Therefore, hypothermia does not reduce the need for prevention of perinatal asphyxia and the search for other effective therapies.

What does this mean for babies born outside the IWK?

Every hospital delivering newborn babies cannot set-up a program for neonatal hypothermia, although there are reports of feasibility of this in low resource settings[26]. However, all centres can:

- Endeavor to reduce risk through intrapartum management and effective neonatal resuscitation.

- When a baby is significantly depressed at birth, ensure that you have a cord arterial blood gas and call the Neonatologist at the IWK Health Centre (or the pediatrician on call at your regional site) early (remember the 6 hour window). Even though it may appear that the baby is initially improving, remember the honeymoon period.

- Avoid hyperthermia. Even a 1°C increase in temperature is associated with a significant increase in the chance of death or disability[35]. Hyperthermia may easily occur with prolonged resuscitation under a radiant warmer, especially when the servo-

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control probe is not attached. Therefore, with extensive resuscitation of term and near term babies, consider whether you should **turn off the overhead radiant warmer**.

- Hypotension is not uncommon (use of inotropes is not more common with hypothermia[36]) in asphyxiated babies, and they require care for other than hypothermia.

- It is possible to initiate hypothermia without a cooling blanket (or Cool Cap) by turning off the radiant warmer and selective use of cool packs[27, 37].

Until the transport team arrives, we would recommend keeping the baby's core temperature at 35-36°C if, after discussion with the IWK Neonatologist, it is determined that hypothermia will likely be initiated. The transport team will utilize cool packs and include continuous core body temperature monitoring during transport to the IWK Health Centre.

Are there special concerns for the parents and family?

A baby with hypoxic-ischemic encephalopathy is often unexpected at term and devastating to parents (and others). The concept of cooling is relatively new for many. Pamphlets describing the process will be made available to all centres delivering newborn babies in the Maritime region.

Where to from here?

Outcome based on history and condition at discharge may be different for babies treated with hypothermia[33]. All babies receiving therapeutic hypothermia at the IWK Health Centre are enrolled in the Perinatal Follow-Up Program. In addition to knowing the outcome for an estimated 4-6 babies with HIE each year treated at our centre, we will be able to compare results with other centers in the Canadian Neonatal Network. This exciting new program is part of our ongoing efforts to provide better outcomes for babies (and families) in the Maritime region.

References for this article may be found in the online newsletter at rcp.nshealth.ca

H1N1 UPDATES FOR PERINATAL CARE PROVIDERS

NOVA SCOTIA
Health Promotion and Protection

RCP and the Nova Scotia Department of Health Promotion & Protection are co-leading the development of targeted messages related to H1N1 for pregnant and postpartum women and for infant care and breastfeeding. A multi-disciplinary committee started meeting in late September. The committee's questions and recommendations are vetted through expert groups at HPP with national linkages.

Links to the most recent resources are readily available for perinatal care providers on the HPP and RCP websites:

http://rcp.nshealth.ca http://www.gov.ns.ca/hpp/h1n1/

New Campaign Takes Unique Approach to Increase Breastfeeding Rates

***Michelle Amero**, Coordinator, Healthy Eating*
***Laura Brennan**, Coordinator, Early Childhood Nutrition*
Nova Scotia Department of Health Promotion & Protection

Breastfeeding has multiple benefits for moms, babies, families, and communities. It can have a significant impact on early childhood development and improved health outcomes.

Despite this evidence, Nova Scotia has among the lowest breastfeeding initiation and duration rates in Canada. The breastfeeding initiation rate in Nova Scotia in 2008 was 75 per cent. Of these women who initiated breastfeeding, only 36 per cent were still breastfeeding exclusively at four months. Yet Nova Scotia's breastfeeding policy, created in 2005, recommends that all babies be exclusively breastfed until six months of age with continued breastfeeding for two years and beyond once family foods are introduced. This is in keeping with national and international research and recommendations.

Nova Scotia is only the second province in Canada to implement a Provincial Breastfeeding Policy. The provincial policy applies to all provincial government and health system funded providers including the district health authorities and the IWK Health Centre. A copy of the policy can be found at:

http://www.gov.ns.ca/hpp/publications/Provincial_Breastfeeding_Policy.pdf

To support one of the policy directives, the Nova Scotia Department of Health Promotion and Protection launched the Provincial Breastfeeding Social Marketing Campaign on October 1, 2009, to coincide with World Breastfeeding Week. The campaign is targeted primarily to moms and potential moms, along with health professionals. The main message is that breastfeeding is a learned skill that may take time. The campaign includes television, print and online ads, posters and bookmarks, and a website, www.first6weeks.ca. The website provides breastfeeding information and connects moms to community supports.

Extensive qualitative and quantitative research was conducted in the development of the campaign, including one-on-one interviews with health professionals working at the front line and with pregnant women and new moms in Nova Scotia. While moms were aware of the benefits of breastfeeding, we learned that they often do not feel prepared or have realistic expectations about breastfeeding. They also identified the need for increased support when learning how to breastfeed. They wanted to have realistic expectations and they needed to know that it would get easier over time. This was the knowledge that helped women who breastfed get through those sometimes difficult, early weeks. Women need to know that while breastfeeding is indeed natural, it doesn't always happen naturally and success is possible with the right support.

Women need to know that while breastfeeding is indeed natural, it doesn't always happen naturally and success is possible with the right support.

Physicians who provide prenatal, postpartum, and pediatric care can have a positive impact on breastfeeding by ensuring that their offices are welcoming and supportive of breastfeeding and are not used to promote breastmilk substitutes. Early conversations about breastfeeding between physicians and women of childbearing age (particularly before or during pregnancy) can have positive implications on a woman's decision to breastfeed. Acknowledgement that breastfeeding is critical to women's and babies' health, that it will take time to learn but will get easier with time are key supportive messages that women need to hear in the early weeks of breastfeeding.

NEW BREASTFEEDING CAMPAIGN (CONTINUED):

Mother-to mother support exists in communities across Nova Scotia and the results in terms of maternal satisfaction and breastfeeding duration rates have been impressive. For example, the Friendly Feeding Line, a mother-to-mother breastfeeding telephone support located in communities in the South West Health District, has made over 200 matches between new moms and volunteers since 2004 and 82% of mothers who received peer support were still breastfeeding at three months.

Information about breastfeeding support programs in your area is available from the local Public Health Office or Family Resource Center. Some of the breastfeeding peer support programs offered throughout the province are listed below:

Breastfeeding Peer Support Programs

South Shore Health
B.E.S.T (Breastfeeding Encouragement & Support Telephone) Friend Peer Support Line
1-888-749-9777

South West Health
Friendly Feeding Line (902) 742-3542 ext. 433

Annapolis Valley Health
Bosom Buddies: Western Kings (902) 538-1430; Eastern and Central Kings (902) 542-6310

Colchester East Hants Health Authority
Public Health Services, East Hants – Mother to Mother Support (902) 883-3500
Maggie's Place Family Resource Center (902) 895-0200
La Leche League Canada - Colchester/East Hants (902) 895-5617
Tatamagouche & Area Breastfeeding Support Group (902) 657-1199 or (902) 657-0027

Cumberland Health Authority
Bosom Buddies Program
Maggie's Place Family Resource Centre, Amherst (902) 667-7250

Pictou County Health Authority
Kids First Family Resource Centre, New Glasgow (902) 755-5437
La Leche League Pictou County (902) 695-5184 or (902) 485-2530

Guysborough Antigonish Strait Health Authority
Kids First Family Resource Centre, Antigonish (902) 863-3848

Cape Breton Health Authority
Cape Breton Family Place Resource Centre, Sydney (902) 562-5616

Capital Health Authority
La Leche League (902) 470- 7029

For more information and support resources please visit www.first6weeks.ca

'Seatbelt Use During Pregnancy' Project

RCP has partnered with the IWK's Child Safety Link and The Atlantic Center of Excellence for Women's Health for the *Seatbelt Use During Pregnancy* Project. The Canadian Perinatal Surveillance System: Special Report on Maternal Mortality and Severe Morbidity (2004) noted motor vehicle crashes were the leading cause of incidental maternal death, citing no or incorrect use of seatbelts to be a major contributor. CPSS advises, 'The correct use of seatbelts is one clear measure to reduce morbidity and mortality among pregnant women.' (CPSS, 2004, pg 27)

In response to this education need identified in this report, partners in the *Seatbelt Use During Pregnancy* Project have developed a series of posters depicting proper seatbelt placement for pregnant women. These are available in three languages: English, French and Arabic, and were produced, along with patient information cards, from a grant from The Road Safety Advisory Committee of The Department of Transport and Infrastructure Nova Scotia.

'The correct use of seatbelts is one clear measure to reduce morbidity and mortality among pregnant women.' - CPSS

You may wish to display one or more of the posters and offer the information cards directly to pregnant women. Posters or cards can be requested by contacting RCP at 470-6798, or by email rcp@iwk.nshealth.ca. Answers to Frequently Asked Questions regarding seatbelt use in pregnancy are available on the RCP website.

Upcoming RCP Event

ALSO

Advanced Life Support in Obstetrics
April 24 and 25, 2010
IWK Health Centre
Registration and Course Information: http://rcp.nshealth.ca

Provincial Model of Care Project

The Model of Care Initiative in Nova Scotia (MOCINS) was launched in March 2008. It arose out of the recommendations of the Provincial Health Services Operational Review (PHSOR) and was one of the first health transformation initiatives made possible through a partnership of the Department of Health, District Health Authorities (DHAs), and the IWK. Currently all nine DHAs and the IWK are implementing a new Collaborative Care Model, primarily focused in medical-surgical 'showcase units'. This Model will allow healthcare providers to make the best use of their talents by enabling them to work to their full potential, using efficient processes, information and modern technology to provide patient-centered, high quality, safe, and cost effective care.

NOVA SCOTIA
Health Promotion and Protection

Phase II of the Model of Care project is now in the planning stages. A number of centres have chosen their Maternal Child Units as 'showcase units'. RCP will be involved in the planning specific to these units including identification of data sources, development of a report from the Nova Scotia Atlee Perinatal Database if appropriate, and consultation on implementation strategies.

At the request of the Nova Scotia Department of Health, RCP will be organizing the next provincial workshop to introduce this phase of the Model of Care project.

Hemoglobinopathy Screening Education Sessions for Health Care Providers and Communities

RCP has undertaken a project to conduct health care provider and public education sessions in selected communities about the importance of offering screening and testing for specific inherited conditions to populations in Nova Scotia at increased risk. The focus is on screening for hemoglobinopathies, particularly sickle cell anemia. The project includes development of presentations and written materials for health care providers and community members. Project-specific funding has been provided through the Department of Health, Primary Health Care Division.

The project is overseen by a Working Group made up of health care providers and community volunteers. To date there have been sessions in Yarmouth, Sydney and Dartmouth with several more planned in the Halifax area before the end of March 2010. In addition to session handouts, participants in the community sessions have had the opportunity to hear family stories from those who have experienced sickle cell anemia personally, or as a caregiver for someone with the condition. These stories have increased the impact of the sessions immeasurably and are being considered for inclusion in upcoming care provider sessions.

If you are interested in hosting a local information session for care providers or for community members, RCP can put you in contact with presenters from the Working Group.

Loving Care

Public Health has just released the third book in its age-paced, four-part parent and family health resource: ***Loving Care***. Last year they released the first two books: ***Birth to Six months***, and ***Parents and Families***. This year the ***Six to Twelve Months*** book has been added to the age-paced series.

These books are delivered to every parent in the province through pre- and post-natal programming. Public Health Services is the primary distributor of the books. They are written at a reading level that reflects the Atlantic Canada results of the National Adult Literacy Survey.

The ongoing development of the books is lead by a multi-disciplinary working group of Public Health Services staff across the province, the Reproductive Care Program, Extra Support for Parents – a program of the IWK, a Family Resource Centre, Department of Community Services, and Health Promotion & Protection.

The Loving Care series focuses on attachment parenting and includes messages that help parents make decisions for the well being of their children.

The working group was struck in 2004 after members of district and provincial public health decided to replace *Year One Food for Baby* with a more comprehensive resource. This resource would have a population health approach aimed at building capacity of families to make informed health decisions, thus moving away from a prescriptive expert driven 'how-to and when' approach.

After a background environmental scan was completed by consultants Susan Lilley and Phyllis Price[1] the working group designed a multi-phased development process for creating the ***Loving Care*** series. This included culling from the Lilley/Price report what types of information parents are seeking and how parents wanted to receive information, gathering current evidence to support key messages, developing comprehensive outlines and multiple edits, sending drafts to a number of content experts for review, and focus testing the drafts with parents in the target audience.

Although the books are given to every parent in the province, they've been designed specifically for parents facing multiple challenges – like low literacy, lack of social support, or limited access to health and parenting resources.

The ***Loving Care*** series focuses on attachment parenting and includes health promotion and disease and injury prevention messages that help parents make decisions for the well-being of their children. The series uses principles of plain language. Because parents can open the books at any chapter or page, messages are purposely repeated in several sections. The re-iteration of key messages throughout the book captures the readers with the best intention to build parent capacity. ***Loving Care*** strives to position parents as the experts in decoding their baby's cues, making decisions and relying on the social capital that exists within their own communities.

The ***Loving Care*** series is consistent with the WHO/UNICEF Baby Friendly Initiative. It provides context to promote breastfeeding as the norm. Parents will continue to also receive ***Breastfeeding Basics***. In recognition of the fact that many parents do feed their babies with infant formula, a separate booklet was

Primary care providers can access this latest addition to the Loving Care series, as well as the 2009 versions of the initial two Loving Care books from Health Promotion and Protection's website: http://www.gov.ns.ca/hpp/resources/pre-post.asp.

LOVING CARE SERIES (CONTINUED)

developed by the Working Group called ***How to Feed your Baby with Infant Formula***. It is not given out universally. It is given only to parents post-natally who have made the informed decision to feed their babies with infant formula.

As part of the public launch in 2008, Health Promotion and Protection and Public Health Services partnered with Department of Health's Primary Health Care division to provide primary care providers (family physicians, NPs, and Midwives), FPNs and maternal child health units across the province with hard copies of the two ***Loving Care*** books and the infant formula book.

If primary care providers would like to see this year's addition to the set, ***Six to Twelve Months***, and the 2009 versions of the initial two ***Loving Care*** books that were printed last year, they can all be viewed online and downloaded from Health Promotion and Protection's website: http://www.gov.ns.ca/hpp/resources/pre-post.asp. Please contact your local Public Health Services office if you have any questions.

Plans are underway for future distribution of Loving Care books to primary care providers after the last book -- ***Loving Care: One to Three Years*** is completed. As there is ongoing new evidence, developments in the field, and standards of care available, edits were made to the initial two books, ***Birth to Six Months***, and ***Parents and Families***, and the infant formula booklet's 2009 printing.

Public Health Services will be offering information sessions for partners in maternal newborn health in the future. This is one venue where primary care providers can learn about key messages in the ***Loving Care: Six to Twelve Months*** book, and key revisions to 2009 versions of the initial books that were launched last year. We have also included several tables that outline key messages in the new book and revisions made to the 2009 versions of the initial books.

**There are a number of district and provincial resources listed in the back of each LOVING CARE book.*

We hope that all primary care providers find the books useful in conveying key health promotion and injury prevention messages to their clients. Remember, every parent receives these books from Public Health Services; we would love it if you referred to it in your practice with families.

The tables included with the newsletter offer key messages from ***Loving Care: 6 months to 12 months*** and revisions/additions to ***Birth to 6 months***, ***Parents and Families*** and ***How to Feed Your Baby with Infant Formula***. You may wish to print the table for 6 months to 12 months and post it in your office as a quick reference.

LABOUR AND BIRTH IN THE EMERGENCY ROOM

Occasionally, pregnant women arrive in active labour in the emergency or outpatient area of a facility where a maternity service is unavailable. In order to support care providers, and women, babies, and families at these sites, RCP has revised its Unanticipated Birth document, now entitled *Labour and Birth in the Emergency Room: Guidelines for Assessing Labour, Facilitating Imminent Delivery, and Initiating Transfer when Possible.* Key new features include a table of recommended stock medications for each Emergency Department, a quick decision algorithm, and improved step-by-step instructions for assisting with imminent birth.

For online readers, this document may be accessed on the RCP Website. It is also being printed and will soon be distributed to institutions which do not provide active maternity care.

NEW RCP WEBSITE UNDER DEVELOPMENT

The RCP website is getting a makeover! We've teamed up with Halifax-based web designer ModernMedia, to give it a fresh new look and improved layout for easier access to content such as clinical guidelines, Nova Scotia Atlee Perinatal Database information, news and workshops.

The desire for change grew out of a 2008 strategic planning goal of enhanced communication among RCP constituents. Communications Nova Scotia helped us write the RFP and find a vendor while HITS-NS agreed to host the site and provide technical support. The site is being built in Drupal, a flexible open-source content management system with community features such as user-generated content, blogging, public and private areas and RSS news feeds. This functionality will be incorporated into future versions of the RCP website.

When phase one goes live this December, users will have access to all existing content plus two new features: online ordering of prenatal forms and the ability to subscribe to the electronic version of the RCP newsletter. As the site grows over the next year, look for more exciting features like discussion forums, online course registration and secure areas for user-specific content.

A big thank you to everyone who contributed ideas and feedback. This holiday season, watch for something shiny and new at http://rcp.nshealth.ca.

Happy Holidays from RCP!

2009 Revisions to *Loving Care: Birth to 6 Months**	
Play	• New reference to tummy time preventing flat head (p. 28)
Breastfeeding	• Weight gain amounts changed to be consistent with ***Breastfeeding Basics*** (p. 40) • From birth to 3 months most babies gain about 675 to 900 grams (1 and a half to 2 pounds) per month • From 3 months to 6 months most babies gain about 450 to 560 grams (one to one and a quarter pounds) per month • Removed message double birth weight by 6 months (p. 40) • "It's too soon for solid food" moved to follow Growth Spurts section (p. 42)
Sleeping	• Double check box refers to flat head prevention (p. 64) • Addition of co-sleeping and bed-sharing messages (p. 70) • Co-sleeping means your baby is near you, but in his own crib. Research has shown that this is safe and may reduce the risk of SIDS. • Bed-sharing means bringing your baby into your bed. • The safest approach is co-sleeping however, non-smoking breastfeeding women may choose to bed-share and the book offers ways to make bed-sharing as safe as possible.
Health	• Any child under 6 months should see a health care provider if they have listed symptoms including a temperature higher than 37.3°C (p. 84) • After the first month it is OK for a breastfed baby to go several days without pooping (p. 87) • Changed order in 'caution box' as diarrhea more serious than constipation (p. 87) • Dental health message 'added info box' on preventing the spread of germs that cause cavities (p.88)
Safety	• Information about soothers moved from safety section to dental care section (p. 89) • Referral to ***Parents and Families*** which now includes entire Car Seat Safety guide (p.92) • Double check box added to refer to ***Parents and Families*** for sun and pet safety (p. 96) • Smoke-free home message more prominent (p. 98)

2009 Revisions to *Loving Care: Parents and Families**	
Moms Section	• Removed breast health and PAP information (p. 18)
All Parents	• Family safety section with car seat, sun safety, insect bites, ticks, pets, wild animals, food safety • Safety information added on sunscreen and insect repellant • Information added on lead poisoning and lead in toys and water • Smoking in cars with children (under 19 yrs) is against the law
Sharing Family Values and Traditions	• Information to help families learn the importance of sharing their values with children. This recognizes that families may have different traditions and/or can start their own traditions
Finding Quality Childcare	• New information for parents, care givers and health care professionals about regulated and unregulated childcare as well as licensed and approved family day care. The section also includes tips for choosing childcare.
	• Car Seat Guide added at back of book

To access a revised version of *Loving Care: Birth to 6 months*, please go to the link:
http://www.gov.ns.ca/hpp/publications/09045_Birthto6MonthsBooks_Jul09_En.pdf
-OR-
To access a revised version of *Loving Care: Parents and Families*, please go to the link:
http://www.gov.ns.ca/hpp/publications/09048_Parents&FamiliesBook_Jul09_En.pdf

2009 Revisions to *How to Feed Your Baby with Infant Formula*
• Emphasizes safety regarding formula preparation and storage.
• WHO Powdered Infant Formula Guidelines ➢ For as long as using Powdered Infant Formula, boil the water ➢ Ideally prepare ONE bottle at a time ➢ If preparing more than one bottle, let water cool for no longer than 30 minutes
• Specific guidelines for each type of formula are included in the book. The three types include: ➢ Ready to serve ➢ Concentrate ➢ Powdered
• It is important to have well water tested. Contact information on well water testing is included in the book.

For a revised copy of the booklet, *How to Feed Your Baby with Infant Formula*, please contact your local public health office.

Key Messages and Content in *Loving Care: 6 Months to 12 Months**	
Attachment	• A bond between parents and baby of love, trust and confidence influences how baby's brain develops • There are different temperaments---neither good or bad and baby's temperament cannot be changed • Understanding your own temperament will make it easier or more difficult to appreciate baby's temperament • Discourage 'labels' for children – e.g. regarding personality traits, physical appearance
Development	• Children develop at different paces • The book offers information on new skills to watch for • 'When to wonder' about development by 12 months • Too soon for toilet training
Play	• Babies learn through different types of play • Book includes age-paced games and activities • Parents are the best toys
Behaviour	• Cues are how babies communicate • Book includes behaviour changes that may occur at this age • Discipline is loving guidance and teaching. It is NEVER about punishment • Be patient, gentle, consistent, baby-proof the home, help baby to learn warning words
Sleep	• Back to sleep until baby can roll over on own. • Babies still need parenting at night. They may awaken at night for feeding and comfort • Most babies DO NOT sleep through the night at 6 months but learn to sleep longer • Sleep patterns vary according to temperament and development • Babies need bedtime and naptime routines that are suited to their cues and personality. • Babies need to learn to soothe themselves. The book includes pointers on how to deal with fussing and crying at night. • Safety information included about co-sleeping (baby in the room with parents) and bed-sharing (baby in the bed with parents) • Cribs need to be age appropriate, mattress at right height, no bumper pads or toys in crib
Food	• It is important to support child-led, cue-based feeding. • Signs that baby is ready for solid foods—holding head up, sitting in highchair, open mouth when offered food on a spoon, closing lips over spoon, keeping food in mouth and swallowing it, showing no longer wants food (e.g.: turning head away) • This is a learning time for baby--do not focus on amount of food, solid food will NOT be your baby's main source of nourishment until 12 months • Safety messages re: feeding and family foods. • Sample menus included • Healthy drink information • Encourage baby to explore food with their hands and with a spoon when able—Expect a mess!
Health	• Information on hand washing and immunizations (encouraged to get seasonal flu shot at this age) • When to see or talk to a health care provider---a list of symptoms and a sample list of questions to ask • Dental health—Keep baby's teeth and mouth clean, don't let food and drink stay on teeth, see a dentist regularly • Smoke free home and car
Safety	• Baby-proof early---a checklist is included • Information on lead poisoning from toys, paint and water • Car safety---the right car seat---Child Safety Link's guide is reproduced in the back of ***Parents and Families*** • Bath safety---never leave a baby alone in the bath, need appropriate amount of water and lukewarm temperature.

*To access the full book, ***Loving Care: 6 months to 12 months***, please go to the link on the Nova Scotia Health Promotion and Protection website at:
http://www.gov.ns.ca/hpp/publications/09046_6to12MonthsBook_Jul09_En.pdf

Upcoming Conferences

Society of Obstetricians and Gynecologists of Canada (SOGC)

66th Annual Clinical Meeting
June 2 – 6, 2010 – Montreal, QC

In conjunction with l'Association des obstétriciens er gynécologues du Quebec

www.sogc.org

Canadian Pediatric Society (CPS)

www.cps.ca

Canadian Nurses Association (CNA)

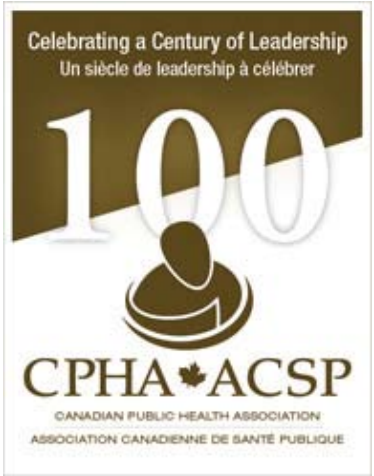
www.cna-aiic.ca

Canadian Association of Midwives (CAM)

CAM ACSF
Canadian Association of Midwives
Association canadienne des sages-femmes

www.canadianmidwives.org

Canadian Public Health Association (CPHA)



www.cpha.ca

Canadian Association of Neonatal Nurses (CANN)

www.neonatalcann.ca/index.html