Executive Summary: Recommendations for the Ontario 18 Month Well Baby Visit

Scope: These recommendations are intended for Family Doctors, Community-based Paediatrics and Nurse Practitioners responsible for the 18 Month Well Baby Visit.

Key Highlights: This Executive Summary provides the evidence for the routine use of the Rourke Baby Record for the 18 Month Well Baby Visit as key to healthy child development. The clinical topics below follow the format of the Rourke Baby Record. The following recommendations were excerpted from the full clinical report developed by the Ontario College of Family Physicians Steering Committee on the 18 Month Well Baby Report. The Introduction and Background information has been provided for quick reference. Please access the full clinical report for more information at www.ocfp.on.ca

Note: Clinical Considerations and Resources are provided for each topic following the recommendation section of this summary.

Introduction

The September 2005 report of the Expert Panel on the 18 Month Well Baby Visit, entitled "Getting it Right at 18 Months...Making it Right for a Lifetime" recommended a strategy to implement an enhanced 18-months well-baby visit. The Expert Panel recommended that primary care providers and parents become more aware of the importance of healthy child development and how to enhance it aided by evidence-based developmental evaluation tools. This recommendation was to be implemented by giving free access to the revised Rourke Baby Record to all primary care providers to use as a charting tool to monitor child development and as clinical guideline for strategic planning of well-baby visits. In addition, the use of the parent administered developmental checklist (the Nipissing District Development Screen) was recommended as an efficient screening aid in clinical practice to focus developmental discussion with parents and provide useful age appropriate suggestions to give to parents to support their child’s development.

Towards that end, the Ontario College of Family Physicians (OCFP) obtained funding to work with the Guidelines Advisory Committee (GAC) on evidence-based tools for an enhanced 18 month well-baby visit that represents a standard of care. The OCFP brought together a Steering Committee to provide guidance and direction to the GAC.

It was determined by the Steering Committee of expert clinicians, that the Rourke Baby Record (RBR) would be the launching point for an evidence review of the 18-month visit. The Guidelines Advisory Committee was appointed to direct this evidence review and present this evidence platform as a foundation to support the development of evidence-based clinical practice recommendations by the Steering Committee for incorporation of an enhanced 18 month well-baby visit (expanded to include extra components of a child developmental evaluation). Findings from this process are presented in this Clinical Report on the 18 month visit.

The final report does not address recommendations for information, program or service needs of patients, parents and physicians related to systemic, programmatic, or community resource issues suggested for inclusion in the 18 Month Visit tools, nor does it attempt to amalgamate the clinical and programmatic components into a comprehensive guideline.
Background

IMPORTANCE OF FOCUS ON DEVELOPMENT AT 18 MONTHS AND KEY EVIDENCE ISSUES

In Ontario, family physicians, nurse practitioners and paediatricians provide well-child care from birth through adolescence. This document focuses on the evidence underpinning the 18-month visit. It is difficult, and perhaps artificial, to isolate elements of paediatric care to a single visit, since the clinician gathers information and formulates clinical opinion over the course of many visits. The 18 month visit is an opportunity to identify areas which may benefit from follow-up. Nevertheless, focusing on child development at the 18 month visit was felt by the Steering Committee to enhance, rather than isolate, the developmental review of a child’s progress. While earlier visits concentrate on preventive health issues such as safety counseling and immunizations, the 18 month visit is an opportune time to address important social and developmental determinants of health in a young child’s life, many of which will have a significant impact on their well being in the future. While many clinicians recognize the importance of these factors, and most parents report that they would like to talk about them, development and social risk issues are not raised frequently enough. iv

There are many potential barriers to evaluating development in children. The average paediatric visit is 17 minutes long. The time spent doing a formal developmental assessment is often considered unnecessary, as global clinical judgement of developmental delay is thought to be as accurate, even though it is not. v Even when convinced of the ability to detect developmental issues by formal examination, many clinicians have not been trained to do so. Language and cultural differences may affect answers more than they do in physical disease. Prevention is hard to practice in an office overwhelmed with the demands of acute and chronic care. Referral is perceived as time-consuming, and access as limited, for little perceived benefit, and findings from psychological and developmental assessments by experts are often not communicated back to physicians. As a result, clinicians may not have learned how much these services can improve children’s outcomes.

There are significant demonstrated benefits from early developmental interventions. These apply not only to the traditionally identified children with medical disease, but the vast majority of children who come for well-baby care. In the former group, history questions and physical exam maneuvers seek to identify problems. In the latter, time spent focuses on preventive counseling and anticipatory guidance. Published evidence does not address well the needs or circumstances of either group of children. The social and physical development of children remains much more difficult to assess quickly and reliably than more “traditional” office screens, in part due to the complex interaction between parents, children and their social environment.

The Steering Committee sought to find evidence of practical benefit to the time-stressed clinician: specifically, feasible office-based interventions that might have a significant impact on the detection or improvement of child development. Additionally, evidence was sought to fit the context of office-based care.

Recommendations: Growth Monitoring

1. The Steering Committee supports the current RBR practice of measuring length, weight and head circumference at 18 months. The Steering Committee recommends that the clinician optimize accuracy by using specialized equipment (for 18 month: a scale, a long board, and head circumference tape) and train the measurer (MD or nurse). Factors that increase accuracy are: measuring twice, recording the result immediately, calculating the exact age, and plotting findings on the chart.

Level of evidence: Consensus

Recommendations: Parent/Child Interaction
1. The Steering Committee supports the current RBR recommendation that the clinician ask about parental concerns at the 18 month visit.
   Level of evidence: Level II

2. The Steering Committee recommends that the clinician follow the principles of anticipatory guidance, by specifically raising discipline and developmental issues at the 18 month visit in order to reduce the likelihood of harmful parenting practices and increase the likelihood of beneficial parenting discipline strategies
   Level of evidence: Level II

3. Use interviewing techniques which have been associated with increased parental disclosure.
   Level of evidence: Level II

   Level of evidence: Level II

5. Tailor advice to the behaviour issue of discipline using techniques known to be effective for 18 month old children (see resource list). Supplement advice judiciously with developmental information directly relevant to the problem. Use written handouts for more complex disciplinary learning.
   Level of evidence: Levels I and II

6. Reinforce to all parents that there are many resources available to support parenting skills. Encourage all parents to increase their parenting competency by connecting them to available community resources.
   Level of evidence: Consensus

7. Strongly discourage physical punishment even when taking into consideration the families traditional values.
   Level of evidence: Level II

8. Refer children at risk of, or showing signs of, behavioural problems to parent education programs, which have been shown to improve parenting skill and child outcomes.
   Level of evidence: Level I

9. Be aware that, despite their effectiveness, there are high rates of non-attendance and non-completion of parenting education programs.
   Level of evidence: Level II

10. Discuss the association of positive discipline techniques on behavioural outcomes.
    a. Tell parents that warm, responsive, flexible and consistent techniques are associated with positive child outcomes
    Level of evidence: Level II
    b. The use of over reactive, inconsistent, cold and coercive techniques is associated with negative child outcomes.
    Level of evidence: Level II
    c. Review the evidence-based CPS statement on maternal depression
    Level of evidence: Consensus
Recommendations: Counseling for Non-Parental Child Care

1. The Steering Committee recommends that the clinician provide families with information regarding those factors found to enhance quality childcare.  
   **Level of evidence: Consensus**

2. Be aware that high quality childcare is associated with improved paediatric outcomes in all children.  
   **Level of evidence: Level I** (for children in low-income and disadvantaged families)  
   **Level of evidence: Level II** (for general population)

3. Inquire about current childcare arrangements.  
   **Level of evidence: Consensus**

Recommendations: Developmental Surveillance

1. The Steering Committee recommends that the clinician inform all families of the potential benefits of developmental programs  
   **Level of evidence: Level II**

2. Provide parents with the opportunity to fill out the NDDS (Nipissing) as an educational tool, an opportunity for parents to structure their concerns, a chance for clinicians to follow up on highlighted concerns, and as an advisory for parents to help with activities that enhance development. The steering committee emphasizes that it be used as one of many variables to assist clinicians in raising concern for developmental delay, not as a diagnostic tool by itself.  
   **Level of evidence: Consensus**

3. Ask parents explicitly about any developmental concerns during the interview.  
   **Level of evidence: Level II**

4. Do not rely on clinical judgement alone. Administer use of validated developmental assessment domains at the 18 month visit, such as those listed in the RBR Table.  
   **Level of evidence: Level II**

5. Refer patients for further evaluation if either clinician or parental concern of developmental delay exists, especially in the setting of psychosocial risk factors.  
   **Level of evidence: Level II**

6. In patients who have been judged to have been false positive screens, maintain vigilance in their developmental surveillance and refer to universal programs.  
   **Level of evidence: Consensus**

7. Make early referrals in view of the evidence that early identification and intervention is increasingly recognized as very important in child development.  
   **Level of evidence: Consensus**
The Steering Committee recommends that among children with identified or suspected developmental delay the clinician:

8. Provide directed developmental advice while awaiting programmatic interventions.
   **Level of evidence: Level II**

9. Provide support to families
   **Level of evidence: Consensus**

### Recommendations: Communication

The Steering Committee recommends that:

1. Further study is required to identify whether universal screening for communication skills would be beneficial
   **Level of evidence: Consensus**

2. Clinicians should administer those aspects of the Rourke Baby Record addressing communication
   **Level of evidence: Consensus**

3. Clinicians should refer a child with identified communication delay or disorder for assessment and treatment if appropriate
   **Level of evidence: Consensus**

### Recommendations: Literacy

The Steering Committee recommends that:

1. Clinicians provide advice for parents to read to their children
   **Level of evidence: Level II**

### Recommendations: Vision Screening

1. The Steering Committee recommends that the clinician examine the child’s eyes for red reflex, and with cover/uncover test to detect amblyopia, retinoblastoma, and cataract.
   **Level of evidence: Level I**

### Recommendations: Hearing Screening

The Steering Committee recommends that the clinician:

1. Refer positive parental concern of hearing loss for formal hearing assessment.
   **Level of evidence: Consensus**

2. Refer all children with normal newborn hearing screening who are at high risk of hearing loss (Table 7) for formal audiology/infant hearing assessment.
   **Level of evidence: Level II**
Recommendations: Dental Exam and Counseling

The steering committee reviewed the evidence from the 2 identified systematic reviews\textsuperscript{vii,100} and the statement on fluoride use from the Canadian Paediatric Society\textsuperscript{101} and recommends that the clinician should:

1. Determine for each patient, the fluoride content of his or her drinking water.  
   \textbf{Level of evidence: Consensus}

2. Assess each child for dental carries risk  
   \textbf{Level of evidence: Level II}

3. After eruption of the first tooth, recommend that parents brush their 18 month old's teeth with a soft toothbrush using only a pea-sized amount of fluoridated dentrifice twice a day.  
   \textbf{Level of evidence: Level I}

4. Consider prescribing fluoride supplementation only if 1) fluoride is <0.3 ppm in water supply, 2) the child is not brushing twice a day \textbf{and} 3) the child at \textbf{high risk} for dental caries.  
   \textbf{Level of evidence: Level I}

5. Examine teeth for dental caries and fluorosis, eruption, abscess, missing teeth.  
   \textbf{Level of evidence: Level II-3}

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\textbf{Developed by:} Steering Committee on the 18 Month Well Baby Visit, Ontario College of Family Physicians

For more information on the development of these recommendations, please access the final report located at: www.ocfp.on.ca

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Clinical Considerations and Resources

Growth Monitoring


Parent Child Interaction

- Parents have been repeatedly shown to have unaddressed concerns, and the limited time afforded these discussions may be insufficient. Consider a general question such as “Do you have any issues you wish to discuss?”

- Table 2 illustrates factors which helped elicit disciplinary issues from parents. The Discipline Survey developed by Socolar et al. may be obtained by contacting Dr. Socolar at rsocolar@med.unc.edu.

- The Steering Committee endorses the joint statement on physical punishment of children and youth (http://www.cheo.on.ca/english/pdf/joint_statement_e.pdf). The Steering Committee also supports the CPS statement on discipline: (http://www.cps.ca/ENGLISH/statements/PP/pp04-01.htm)

- With repeated encouragement and reinforcement from clinicians, more parents will attend and complete programs and achieve positive outcomes. Many resources exist to support/assist parents.

- Parenting skills can be improved through: Home visiting programs eg. HBHC Program, Parent support groups, eg Baby Talk, Parent training programs, eg , Nobody’s Perfect, Family resource Programs, eg. Drop in programs for parents and children (Ontario Early Years Centers), Books, Videos, Websites, Peer support, e.g. self help groups.

Additional Print Resources:


Websites:

- Invest in Kids: www.investinkids.ca
- Zero to Three: National Center For Infants, Toddlers and Families: www.zerotothree.org
- Niagara Region Parenting Resources: www.regional.niagara.on.ca/parenting

Report available at: www.ocfp.on.ca
Counselling for Non Parental Child Care

Factors that affect quality child care:

- Most of the studies that examine quality have highlighted the same areas as key:\textsuperscript{viii,ix}
  - Practitioner Education (generally)
    - Practitioner Training (specifically in Early Childhood Education)
  - Group size
  - Child/staff ratio
  - Licensing and Registration/Accreditation
  - Infection Control and Injury Prevention
  - Emergency Procedures

- The issue of who will look after the baby and children when return to work is necessary is a major stressor for families. The key message is that to foster optimal development the \textbf{quality of care} is the most important consideration regardless of whomever is providing care, be it the parent(s), relatives, nanny, neighbour or child care setting.

- The range of choice is at times confusing. Care is divided into part time or full time, Parental or non parental. Non parental care takes place at home or out of home, by a relative or non relative.

- Out of home care is further broken down into regulated and unregulated settings. Regulated care can be offered in a Centre (usually called child care) or in a regulated home child care setting, both must follow the Day Nurseries Act legislation which outlines minimal standards. Unregulated child care is provided either in or out of the child’s home. Both regulated and informal care can offer full and part time places. Infant care is more expensive and in the case of licensed centre based care there are fewer places.

- The following web links provide information on quality child care \url{www.cfc-efc.ca/cccf} and \url{www.cfc-efc.ca.html}

- The American Academy of Pediatrics’ Policy Statement, \textit{Quality early education and child care from birth to kindergarten} details specific criteria for the indicators above. It is available at \url{http://aappolicy.aappublications.org/cgi/content/full/pediatrics;115/1/187}


Developmental Surveillance

- Parents have been repeatedly shown to have unaddressed concerns, and the limited time afforded these discussions may be insufficient. Consider a general question such as “Do you have any issues you wish to discuss?”

- Practical tips for assessing development, office processes which facilitate developmental assessments, and reducing barriers to effective implementation of developmental interventions is provided by the CDC at \url{http://www.cdc.gov/ncbddd/child/screen_provider.htm}.

- The Nipissing tool can be found at \url{www.NDDS.ca}
• The clinician should be aware of the anxiety, loss, and stress that a child with developmental problems may cause to the whole family and endeavour to see that the family has support in finding resources for the needs of the child and the family as a whole.


**Communication and Literacy**

• The Canadian Paediatric Society statement “Promoting literacy in the physician’s office” provides much helpful advice and information, including patient handouts and a table of milestones to assist physicians in providing anticipatory guidance to parents. The current statement was published in 2002 and is, according to the website, being revised.

• There are 31 Preschool Speech and Language (PSL) initiatives covering all of Ontario and parents may self-refer to their local PSL services. To find an appropriate contact phone number, as well more detailed information about speech and language developmental milestones for children from 0 to 6 years of age please refer to http://www.children.gov.on.ca/CS/en/programs/BestStart/PreschoolSpeechLanguage/default.htm

PSLs provide a full range of interventions directly to young children and through their parents and caregivers, as well as serving as a resource for general information about the facilitation of language and early literacy development in young children.

• There are numerous websites and program resources dedicated to providing parents and caregivers with information on promoting their child’s communication and literacy development, including:
  - The Hanen Centre: www.hanen.org
  - National Centre for Reading Disabilities – Get Ready to Read: http://www.getreadytoread.org/
  - Toronto Public Library Kids’ Space - School Readiness and Reading Support: http://kidsspace.torontopubliclibrary.ca/schoolandreading.html

• Ontario Early Years Centres http://www.ontarioearlyyears.ca/oeyc/en/home.htm offer pre-literacy programs such as the

**Vision Screening**

• If testing is abnormal, the clinician should refer the child for complete visual screening to a qualified specialist.

**Hearing Screening**

• Ensure all children with congenital risk indicators for hearing loss who receive newborn hearing screening are followed by the Infant Hearing Program (IHP). Ensure referral of any child with known risk factors, who did not receive newborn hearing screening, to their local Infant Hearing Program. The IHP web site is http://www.children.gov.on.ca/CS/en/programs/BestStart/InfantHearing/default.htm

**Dental Exam and Counseling**

• Water fluoridation is an effective delivery method of topical fluoride. Patients may drink water from a number of sources, including bottled water and well water. The local public health department can
provide information on local fluoride concentrations of water. Appropriate ranges for fluoride are between 0.3 –0.7 ppm.

- High risk for dental caries exists with any of the following: inadequate fluoride exposure, caries in siblings or parents, irregular brushing, white spots on smooth tooth surfaces, frequent/prolonged carbohydrate exposure, lower socio-economic status.\textsuperscript{xi}

- Brushing provides adequate fluoride. Since children under age 6 are at increased risk of dental fluorosis from swallowing toothpaste, parental supervision is suggested. For infants, parents may need to help brush their children’s teeth. Parents should be reassured that it may take considerable time for their child to learn adequate brushing technique. The following CDA website is suggested as an educational resource: \texttt{http://www.cda-adc.ca/en/oral_health/cfyt/dental_care_children/cleaning.asp}

- Prescription of oral fluoride supplements by primary care clinicians leads to reduced dental caries. Supplemental fluoride should be given in preparations that maximize the topical effect, such as mouthwashes or lozenges. Compliance with topical application with fluoride may be challenging in an 18 month old. The ingestion of more than the recommended daily dose of fluoride is associated with an increased risk of dental fluorosis. The Canadian Paediatric Society recommends 0.25 mg/day for this age group.\textsuperscript{xiii}

- After 2 hours of training, primary care providers can achieve a sensitivity of 76% and specificity of 95% at identifying patients with caries. Among children with signs of tooth decay, 70-78% of clinicians give the name of a dentist to parents, and 50% refer all children by 2-3 yrs, 20% between 1 and 2 yrs, 2.7% before age 1.
Table 7: Expected Speech-Language-Auditory Milestones

Check-list of selected speech-language-auditory milestones achieved by infants and children who have intact cognition and hearing

Failure to achieve these milestones by expected age ranges might relate to hearing loss that necessitates audiologic testing.

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<tr>
<th>Birth to 3 Months</th>
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<tr>
<td>11. Startles to loud noise</td>
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<td>12. Awakens to sounds</td>
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<td>13. Blinks or widens eyes in response (reflex) to noises</td>
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<th>3 to 4 Months</th>
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<tr>
<td>• Quiets to mother’s voice</td>
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<tr>
<td>• Stops playing, listens to new sounds</td>
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<tr>
<td>• Looks for source of new sounds not in sight</td>
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<th>6 to 9 Months</th>
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<tr>
<td>b. Enjoys musical toys</td>
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<td>c. Coos and gurgles with inflection</td>
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<td>d. Says “mama”</td>
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<th>12 to 15 Months</th>
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<tr>
<td>4. Responds to his or her name and “no”</td>
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<td>5. Follows simple requests</td>
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<td>6. Uses expressive vocabulary of 3 to 5 words</td>
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<td>7. Imitates some sounds</td>
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<th>18 to 24 Months</th>
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<tr>
<td>10. Knows body parts</td>
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<td>11. Uses expressive vocabulary 2 word phrases (minimum of 20 to 50 words)</td>
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<td>12. 50 % of speech intelligible to strangers</td>
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<th>By 36 Months</th>
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<tr>
<td>4. Uses expressive vocabulary of 4 to 5 word sentences (approximately 500 words)</td>
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<tr>
<td>5. Speech is 80% intelligible to strangers</td>
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<tr>
<td>6. Understands some verbs.</td>
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References: