

OMA Child Health Committee

Improving early childhood development – part II:

literacy, the primary care physician, and the enhanced 18-month well baby visit

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The OMA Child Health Committee has prepared a two-part series that highlights the critical role of the primary care physician in facilitating and promoting early childhood development. Part 1 focused on the enhanced 18-month well baby visit. Part 2, below, emphasizes the importance of preschool literacy in the primary care context.

Background

The new neuroscience and its implication for quality early childhood developmental experiences has been stressed across many cultures and much literature in recent years.

The success of a country is linked to its literacy level, and literacy levels are a population measure often used to compare countries, especially as a measure of school performance (e.g., Grade 3 language scores). Furthermore, literacy skills, as shown in recent studies, may predict health status even more accurately than education level, income, or socio-demographic variables.¹

How reading is learned

The ability to read (and the magical doors that open throughout one's life as a result of competency in this area) is rooted in early years experience.

Literacy levels are "spread" along a developmental continuum just like most other skills that are dependent initially on the traditional sensing pathway of hearing, vision, touch, fine motor, etc. It may also be that the same neurodevelopmental pathways that develop in the early years as a result of literacy skills are parallel to those which support good health.

Regardless, children acquire numerous and meaningful early literacy skills before they ever begin to read, and these are predictive of later accomplishments both in school and in adult life. Therefore, encouraging a mother or father to engage in reading with their child, in an atmosphere of enthusiasm, warmth and fun, is neurodevelopmentally a "full brain workout."

Simply defined, reading is made up of two parts: decoding and com-

prehension. Decoding means cracking the code of a particular sound/letter system. It involves alphabet knowledge, phonological processing, and knowledge about print. Comprehension is tied to the components of language, such as morphology and syntax, vocabulary, and narrative ability. These areas are ones that researchers have identified as skills children need at specific developmental time points to progress as readers.

For example, English speakers (and readers) who are presented with a word in another language, using another symbol system (e.g., Chinese or Russian) would first have to "crack the code" of the letter-sound correspondence in the symbol system used in the unfamiliar language before being able to pronounce it. Once the English speakers were told what the word was, and had it repeated a number of times, they could probably say it themselves.

However, comprehension would still be impossible because the English speakers would not have the lexical repertoire to know what the word means; therefore, what they have read, with help, is still meaningless. Similarly, in English, readers need to know what the letter-sound correspondence of the English alphabet is, and then have the meaning of a word stored in their memory, in order to comprehend it.

Reading is an active, cognitive, social, and emotional process that is constructed from the meaning of text and pictures. Background knowledge and previous experiences are critical to the reading process because readers understand what they read or what is read to them as it relates to what they already know.

As discussed in Part I of this series (see pp. 35-41), the preparedness of children presenting to Grade 1 to begin their formal education leaves room for improvement, with 25 per cent to 45 per cent of children in some Ontario communities not being as well prepared as they should be (as measured currently by the Early Development Instrument).

Adult literacy results in Canada, based on the International Adult Literacy and Lifestyle Survey (May 2005),² showed 42 per cent of Canadians from age 16 to 65 had skills in the lowest two levels on the prose scale, indicating that they would have some difficulty in meeting everyday reading needs. Some would have difficulty with any printed materials, and others would require the material

to be simple and clearly laid out.

The economic costs of low literacy are also significant, with the burden being estimated at \$4 billion per year.³

What should physicians do?

The primary care practitioner's role in facilitating and promoting early child development is multifaceted. Clearly, physicians are in a perfect position to facilitate literacy by beginning with encouraging parents to read to their young children and preschoolers.

Familiarity with age-appropriate books from six months on is key. Some even suggest reading to the baby in utero.

The OMA Child Health Committee believes the promotion of pre-literacy skills to the parents of 18-month-olds at the well baby visit is an important health message. Also, promoting "quality reading" through specific instruction or demonstration, and encouraging parents to learn about story reading through Early Years Centres, libraries, or other programs, is advised.

The literacy chart reproduced on page 45 identifies skills that are devel-

oped through specific story-reading strategies. Physicians can use the chart to guide their teaching with parents, and provide information for parents to take home for reference.

What if parents are illiterate, or English isn't their first language?

All children should be developing a familiarity with language and books by 18 months, regardless of a parent's language or reading ability.

Parents should be encouraged to read books to their children in their first language, and if the parents themselves are illiterate, they can story-tell using rich language and picture books.

At the 18-month enhanced visit, the Nipissing District Developmental Screen (see Part I, p. 39), which is completed by the parent, contains six items focused on speech and language. This should stimulate conversation between physician and parent about language and preliteracy skills.

Strategies to promote literacy

Following are strategies for physicians to promote literacy in young children:

- Encourage parents to read to their young children from six months.
- Be aware of resources for parents.
- Address issues of illiteracy in parents, and work to assist them in providing reading materials to their children.
- Be aware of appropriate books for children of different age groups, and have some available in the waiting room.

Speech delay

Any delay in speech milestones, or concerns expressed by parents at the 18-month well baby visit, should be investigated, including history and physical focusing on hearing, neurodevelopment, and the specifics of the speech or language concern.

While awaiting assessment by the local speech and language services, the child and parents should be referred to the generic or universal community services (e.g., Early Years Centres, library programs).

Improving Childhood Development

Familiarity with local speech and language services is important, and access to speech, language, and phonological processing interventions are critical to reducing the risk of reading difficulties for these children.

Each community in Ontario has a preschool speech and language program, and a Healthy Babies Healthy Children program, that can assist the physician in accessing services. Ontario Early Years Centres are also available in each community and offer resources for parents to enhance their interactional skills with their children.

Example literacy program: Reach Out and Read

There are examples in the United States of programs that have developed over the past few years with an

emphasis on the physician role and literacy.

Considering that children's experiences with books, and time spent reading with an adult, can be used as a measuring stick for how their pre-reading skills are developing, these programs, such as Reach Out and Read (ROR, see: www.reachoutandread.org), developed through the Boston Children's Hospital, have been promoting early literacy by bringing new books and advice about the importance of reading aloud into the pediatric exam room.

In the ROR program, doctors and nurses give new books to children at each well-child visit from six months to five years of age, and accompany these books with developmentally appropriate advice to parents about reading aloud with their child.

The ROR program model is based on research that shows a connection between the frequency of sharing books with babies, toddlers, and young children, and enhanced language development.

Since 1989, ROR pediatricians have been prescribing books and reading aloud for their young patients, with a special focus on children growing up in poverty.

ROR-trained doctors and nurses are currently promoting pediatric literacy at more than 2,500 U.S. hospitals, health centres and private pediatric practices.

Literacy resources in the physician office

A much less sophisticated approach would include the presence of age-appropriate reading materials in the physician office as a model of the

Literacy Reference Chart

Reading Strategy	Rationale
Read and re-read favourite books.	Repetition aids in ingraining the vocabulary.
Talk about events in the books as they relate to the child's experiences.	This "explicit reading" draws attention to what you want them to learn and associates it to what they already know (e.g., reading the word "vacation" and relating it to a personal experience aids in comprehension).
Provide materials for pretend writing and drawing.	Allows creative expression and an understanding of how print represents what you say. Early scribbles are the beginning of writing.
Allow the child to sit with you, hold the book, and turn the pages.	Children who are more engaged in the reading process have better success.
Provide opportunities for the child to write (make shopping lists, menus).	Teaches that print is meaningful in our lives and emphasizes that print represents what you say.
Point out print and common logos in the environment.	Teaches the meaning of symbols like a STOP sign. Environmental print/logo representation is the earliest form of reading.
Continue to sing songs and repeat rhymes.	Rhyming is the beginning of a child's recognition of the fact that words are made up of smaller units.
Listen attentively to what the child is attempting to say, and expand their sentences.	This provides a model of more advanced patterns of speech and grammar.
Talk about the order of events in a story — What happens first? Second? How does it end?	Sequencing is important for comprehension of the story/event, and to learn that there is order in a story.

importance of books in an 18-month environment, the use of a literacy handout (see p. 45), and referral to community programs.

1. Recommended books

Following is a partial list of recommended books for the 18-month visit:

a) Print salient books, a series that emphasizes the beginnings of reading with simple words in illustrations or which use different fonts for emphasis, and

b) Language oriented books, which emphasize rich language and vocabulary.

a) Print salient books:

- *School Bus*, Donald Crews, Harper-Collins 1984.
- *Trucking*, Donald Crews, Harper-Collins 1984.
- *The Big Red Bus*, Judy Hindley, Candlewick Press 1995.
- *Nine Ducks Nine*, Sarah Hayes, Candlewick Press 1999.
- *Where's Spot*, Eric Hill, Puffin Books.
- *Spot's First Walk*, Eric Hill, Puffin Books.
- *Spot's First Easter*, Eric Hill, Puffin Books.
- *Spot's First Christmas*, Eric Hill, Puffin Books.
- *Spot's Birthday Party*, Eric Hill, Puffin Books.
- *Spot Goes to School*, Eric Hill, Puffin Books.
- *Spot Goes to the Park*, Eric Hill, Puffin Books.
- *Spot Goes to the Farm*, Eric Hill, Puffin Books.
- *Spot Bakes a Cake*, Eric Hill, Puffin Books.
- *The Wide-Mouthed Frog* (A pop-up book), Keith Faulkner, Dial Books for Young Readers 1998.
- *The Long-Nosed Pig* (A pop-up book), Keith Faulkner, Dial Books for Young Readers 1998.
- *The Terrible Twos*, Julia Gorton, Hyperion Books for Children 1999.

b) Language oriented books:

- *Good Night Gorilla*, Peggy Rathmann, Scholastic 1994.
- *Let's Play*, Debbie MacKinnon,

Little Brown and Company 1999.

- *Good Night Gorilla*, Peggy Rathmann, Scholastic 1994.
- *Ten Minutes To Bedtime*, Peggy Rathmann, Scholastic.
- *Guess How Much I Love You*, Sam McBratney, Walker Books/Candlewick Press 1995.
- *There was a Old Lady Who Swallowed a Fly*, Pam Adams, Child's Play 1973.
- *There was a Cold Lady Who Swallowed Some Snow*, Lucille Colandro, Scholastic 2003.
- *Chicka Chicka Boom Boom*, Bill Martin, Simon Schuster/Aladdin Paperbacks 2000.
- *Froggy series* (e.g., *Froggy Gets Dressed*, *Froggy Goes to Bed*, *Froggy Goes to School*, *Froggy's First Kiss*), Jonathan London, Puffin Books.
- *Kipper*, Mick Inkpen, Red Wagon Books 1999.
- *Lily Takes a Walk*, Satoshi Kitamura.
- *Who Stole the Cookies?*, Judith Moffat, Grosset & Dunlap 1996.
- *Harold and The Purple Crayon*, Crockett Johnson, Harper Collins 1981.

2. Literacy handout

In addition to referencing age-appropriate books, an educational handout with reading tips for parents can advise the adoption of behaviours that encourage sound literacy development. The literacy chart on page 45 outlines the rationale behind recommended reading strategies.

3. Referral to Community Programs

Perhaps one of the final and most important roles the primary care practitioner has is to encourage parents to become involved in community activities with their children.

Each community in Ontario has literacy specialists, Early Years Centres, library programs, etc. As noted in Part I of this series, the variety of services in the community is broad, and the physician role of strengthening these connections for families where they can learn parenting skills, experience good developmental environments and strategies, including literacy promotion, is crucial. **OMR**

References

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