OBJECTIVES
The objectives of this statement are as follows.

• Review the importance of early reading in promoting literacy.
• Discuss current evidence-based research on how literacy develops.
• Review the developmental and psychosocial implications of illiteracy.
• Help the primary care physician provide practical resources that can be used to promote literacy.

INTRODUCTION
Research continues to demonstrate the importance of the environment on early brain development (1). One of the ways to create a positive environment is to develop early language and literacy skills by reading to children (2). Children whose parents read aloud to them at an early age are more likely to succeed in school than children who were not read to at an early age (2).

Primary care physicians who have repeated contact with the family at an early stage have a unique opportunity to promote literacy. Because the foundations of literacy are laid down long before children enter school, physicians can help to prevent early reading failure (3). By prescribing a book, encouraging and teaching the child’s caregiver to read aloud more often, providing resources and handouts, and by supporting local and national reading promotion programs, physicians can play an influential and significant role in promoting literacy (3).

THE IMPORTANCE OF EARLY READING
Many factors influence literacy acquisition (5). Many are controversial (for example, the controversy over phonics versus whole language), but this paper will not address the debate over the ideal method of teaching children to read in a school setting (6).

However, there is much agreement about the benefits of a caregiver reading aloud to a child (7). The National Commission on Reading, based in Washington, District of Columbia, concluded in 1985 that, “reading aloud by parents is the single most important activity for building the knowledge required for eventual success in reading” (2). Parental input in the early stages of literacy development is crucial. Still, a 1996 survey by the Commonwealth Fund revealed that only 39% of parents with children younger than three years old read to those children daily (8).

Books are powerful promoters of optimal childhood development for the following reasons.

• Positive exposure to children’s books motivates children to master reading for themselves. When the usefulness and pleasure of reading is modelled at a young age, it positively motivates the child at a time when he or she is eager to learn (3).
• Children who are read to from an early age learn to associate books with their parents’ love and attention. Books have the potential to strengthen the parent-child bond (3). It creates an enjoyable family experience. Children learn to use stories to satisfy desires and to work through their fears and problems. Favourite books may join blankets and teddy bears as transitional objects. Children form emotional ties with books and their characters.
• Books also play an important role in the development of verbal language, which is highly correlated with literacy. By
sharing books with their young children, parents engage in repetitive verbal exchanges and routines. Elements of shared attention, immediate feedback, and the parents' ability to adjust the difficulty of the task to the children's ability make reading routines ideal for learning language (9).

Exposure to stories teaches a child how literary narratives are constructed – with a beginning, middle and end. Children internalize this narrative structure at an early age and put it to use later at school when describing, for example, what they did over the weekend or vacation (6). This skill helps children become more creative and explore new ideas (10).

Children who have not been read to regularly at an early age may start school not believing that reading is important and fun. When reading is presented as a set of cognitive tasks, children may not be motivated to read. They may see it as an empty exercise or even a form of slow torture (2).

Selecting books that are interesting and appealing to both children and parents is key to successful literacy development. Factors to consider in choosing books include:

- quality;
- developmental appropriateness;
- cultural appropriateness;
- variety; and
- cost (2).

**Quality**
Books should be reviewed for visual appeal, content and message. The language should be rich and interesting and the illustrations should be attractive and colourful.

**Developmental appropriateness**
The child's age should determine the type and length of their books. As they grow up and their attention span increases, they like longer stories.

- Infants like books with photographs of other babies, textures, bright colours and taste, and familiar objects such as balls and bottles.
- Toddlers like books that are sturdy and have photographs or pictures of children doing familiar things such as sleeping or playing; books about saying hello and good-bye; books with only a few words on each page; books with simple rhymes and predictable texts; and books about animals.
- Preschoolers like books that tell stories about kids their age, making friends, going to school or the doctor, or having brothers and sisters. They also enjoy simple texts they can memorize.

**Cultural appropriateness**
Books should be assessed carefully for messages related to sexism or racism. Illustrations should depict abilities, cultures, families and sexes in a positive way. Research shows that culturally appropriate intervention significantly increases literacy behaviours in low-income minority families (11).

**Variety**
Children have different interests and they usually like characters, situations and topics to which they can relate. Books about people, animals, imaginary characters, the environment, folk tales, nursery rhymes and sports help children enjoy learning about new things.

**Cost**
Discounts are often available when books are ordered in bulk, which should be considered when launching a literacy program in a clinic setting. Many libraries, service organizations and private companies increasingly realize the importance of early literacy and reading to children. Companies may offer financial support to expose as many children as possible to good and affordable books (eg, Starbucks Annual All Books for Children Book Drive).

**HOW LITERACY DEVELOPS**
The traditional belief was that children learned to talk at home, then learned to read in the early grades before learning to write. As recently as the 1960s, some developmental experts believed that reading and writing could be taught only by trained and qualified educators and only after the age of six-and-a-half years. Some experts even believed that earlier exposure to reading risked subsequent learning disabilities (12).

Two studies published in 1966 began to change the view that early literacy education ran the risk of later learning difficulties (13). These were the first studies showing that children who learned to read in preschool excelled throughout grade school. Their success was not associated with superior intelligence or higher social class, but with having been read to by their parents (13).

Most children in literate societies have an understanding about reading and writing at an early age (2). Developmental milestones of early literacy are provided in Table 1.

The earliest stages of literacy overlap with spoken language development (6), and the two are closely linked (14). One of the best predictors of reading ability is the size of a child's spoken vocabulary (10). Reading disability is increasingly seen as an expression of an underlying processing disorder (9).

Just as 'baby talk' precedes the development of mature speech, children pass through immature gestures and stages of literacy on the way to mature reading and writing. However, there is one major difference – almost all children eventually learn to talk, but many never master the written word (2).

**PSYCHOSOCIAL IMPLICATIONS OF ILLITERACY**
About 5% to 15% of school children have significant reading delays (2), and reading problems are more common in
TABLE 1
Developmental milestones of early literacy

<table>
<thead>
<tr>
<th>Age</th>
<th>Motor function</th>
<th>Cognitive/social ability</th>
<th>Interaction with parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>6–12 months</td>
<td>Reaches for book</td>
<td>Looks at pictures, vocalizes, pats picture</td>
<td>Parent holds child comfortably, face-to-face gaze</td>
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<tr>
<td></td>
<td>Brings book to mouth</td>
<td>Prefers photographs of faces</td>
<td>Parent follows baby’s cues for ‘more’ and ‘stop’</td>
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<tr>
<td></td>
<td>Sits in lap</td>
<td>No longer mouths right away</td>
<td>Child gets upset if parent won’t give up control of book</td>
</tr>
<tr>
<td></td>
<td>Holds head up steadily</td>
<td>Points at pictures with one finger</td>
<td>Child may bring book to be read</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May label a particular picture with a specific sound</td>
<td>If parent insists that the child listen, child may insistently refuse</td>
</tr>
<tr>
<td>12–18 months</td>
<td>Holds book with help</td>
<td>Names familiar pictures</td>
<td>Parent asks “What’s that?” and gives the child time to answer</td>
</tr>
<tr>
<td></td>
<td>Turns pages, several at a time</td>
<td>Attention varies highly</td>
<td>Parent relates book to child’s experiences</td>
</tr>
<tr>
<td></td>
<td>Sits without support</td>
<td>Asks for the same story over and over</td>
<td>Parent should be comfortable with fluctuating attention of toddler</td>
</tr>
<tr>
<td></td>
<td>Able to carry book</td>
<td>‘Reads’ books to dolls</td>
<td></td>
</tr>
<tr>
<td>18–36 months</td>
<td>Turns one page at a time</td>
<td>Describes simple actions</td>
<td>Parent asks questions like “What’s happening?”</td>
</tr>
<tr>
<td></td>
<td>Carries book around house</td>
<td>Can retell familiar story</td>
<td>Parent validates child’s responses and elaborates on them</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plays at reading, moving finger from</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>left to right, top to bottom</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Writes’ name (linear scribble)</td>
<td></td>
</tr>
<tr>
<td>3 years and older</td>
<td>Holds book without help</td>
<td>Describes simple actions</td>
<td>Parent does not drill child, but shows pleasure when child supplies word</td>
</tr>
<tr>
<td></td>
<td>Turns normal thickness pages one at a time</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

boys than in girls (15). Nationwide, 55% of 13-year-old girls read at an advanced level compared with just 33% of boys (15). Illiteracy starts in early elementary school when children fail to read and write. At its roots, then, illiteracy is primarily a paediatric problem.

The percentages of children with reading problems may be quite high in underprivileged populations – those who live in poverty and who have reading-disabled parents (8). These children are at an increased risk for failing in school altogether (4) and will most likely face a great number of psychosocial challenges such as:

- low self-esteem;
- teen parenthood;
- delinquency (80% of Canadian inmates have literacy problems);
- substance abuse;
- greater economic disadvantages later in life; and
- greater economic burden on society at large.

Individuals with low literacy skills may have more difficulty finding employment and performing a job adequately (4). Illiteracy may also result in lower productivity than that in other countries. Literacy problems cost Canadian employers $4 billion/year and the country $10 billion/year (16). Illiteracy leads to higher health care costs due to poor health status and higher rates of being hospitalized (4). Some well-known blue-chip companies in North America recognize the amplitude of this problem and have made financial contributions to programs aimed at preventing illiteracy (17).

It is important, therefore, for primary care physicians to identify groups at higher risk for illiteracy and to get these patients into preventive programs that focus on literacy. Children living in poverty are at particular risk for becoming below-average readers, but when they are identified and helped early, the prognosis for improvement is guardedly good (11).

THE ROLE OF THE PHYSICIAN IN LITERACY PROMOTION

All parents face the challenges of preparing their children to read and develop optimally. And many parents and caregivers consider paediatricians to be experts in their children’s health and development. Advice, suggestions and encouragement given by the primary care physician at an early stage of a child’s development may benefit families greatly (18).

Literacy counselling impacts and changes the behaviour of youths and their parents. A study by the Reach Out and Read program at the Boston Medical Center (8) found that parents who received literacy counselling and a book during a clinic visit were four times more likely to look at books with their children than parents who did not.
### TABLE 2
Useful resources in promoting literacy

<table>
<thead>
<tr>
<th>Organizations</th>
<th>1450 Don Mills Road, Don Mills, Ontario M3B 2X7, telephone 416-442-2292</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC Canada</td>
<td>An organization founded in 1984, working with parents to provide early experiences with books that lay the groundwork for mastery of reading and for school success</td>
</tr>
<tr>
<td>Beginning with Books</td>
<td>A nonprofit program used by the Toronto District School Board and other school boards in Canada</td>
</tr>
<tr>
<td>Canadian Institute of Reading Recovery</td>
<td>Provides links to other sites of local libraries and services on the programs offered</td>
</tr>
<tr>
<td>Canadian Library Association</td>
<td>For parents: &lt;www.caringforkids.cps.ca&gt;. Includes documents on reading to babies, and helping school-aged children develop their reading skills</td>
</tr>
<tr>
<td>Canadian Paediatric Society</td>
<td>Physicians can contact the CPS for copies of One More Story, a booklet to encourage parents to read to babies. E-mail <a href="mailto:info@cps.ca">info@cps.ca</a></td>
</tr>
<tr>
<td>Fédération canadienne pour l’alphabétisation en français</td>
<td>235 Montreal Road, Suite 205, Vanier, Ontario K1L 6C7, telephone 613-749-5333</td>
</tr>
<tr>
<td>Frontier College Frontière, Helping Canada Read</td>
<td>35 Jackes Avenue, Toronto, Ontario M4T 1E2, telephone 416-923-3591</td>
</tr>
<tr>
<td>Movement for Canadian Literacy</td>
<td>458 Maclaren Street, 2nd Floor, Ottawa, Ontario K1R 5K6, telephone 613-563-2464</td>
</tr>
<tr>
<td>National Literacy Secretariat</td>
<td>Senator Joyce Fairbairn, The Senate of Canada, Ottawa, Ontario K1S 0A4, telephone 613-996-4382</td>
</tr>
<tr>
<td>Politician with an interest in literacy promotion</td>
<td>National Center, Boston Medical Center. A program that integrates early literacy into paediatric primary care, and provides additional training in designing and launching literacy programs, fundraising skills and establishing collaborations. Telephone 617-414-5701, fax 617-414-7557, e-mail <a href="mailto:ror@bmc.org">ror@bmc.org</a>, Web site &lt;www.reachoutandread.org&gt;</td>
</tr>
<tr>
<td>Reach Out and Read</td>
<td></td>
</tr>
</tbody>
</table>

#### Books

**Choosing Books for Kids: Choosing the Right Book for the Right Child at the Right Time**


**How to Make Your Child a Reader for Life**

Kropp P. New York: Random House, 2000


Web site <www.benwicks.com>

**How to Stock a Home Library Inexpensively**

Williams Jane A. Placerville: Bluestocking Press, 1995

**Rethinking the Brain: New Insights into Early Development**

Shore R. New York: Families and Work Institute, 1997

**The Read-Aloud Handbook**


#### Web sites

**American Academy of Pediatrics**

<www.aap.org/family/readmeastory.htm>

Read Me A Story – Designed to give parents research-based information about how to help their children become readers. It covers early reading development from birth to 10 years of age

**Association for Library Services to Children**

<www.ala.org/alsc/born.html>

How to nurture a baby’s love of reading

**I Am Your Child Foundation**

<www.ismyourchild.org>

Rob Reiner, Michele Singer Reiner, and Ellen Gilbert formed the I Am Your Child Foundation and began a national public awareness and engagement campaign to communicate the importance of the prenatal period through the first three years of life

**Laubach Literacy of Canada**

<www.laubach.org>

World’s largest and oldest literacy organization

**Public Broadcast Station**

<www.pbs.org/rogers/tourguide/parentreading.html>

A Web page designed to provide parents with basic information about the importance of reading to their children. It also provides age-specific reading advice

**The Oppenheim Toy Portfolio**

<www.toyportfolio.com>

A Web site, updated each year, that gives advice on selecting the latest books appropriate for promoting literacy development. Many of these books include award-winning literary selections for children

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The office
Physicians can promote literacy and early childhood reading by facilitating reading in the office.

- Have culturally and age-appropriate books and magazines available in the waiting room.
- Display visual reminders (such as posters and videos) of parents and caregivers reading out loud together. Pictures of celebrities – influential athletes, artists, entertainers or politicians – may add extra value. Display posters promoting events such as National TV Turn-off Week.
- Implement a reading promotion program in your own practice. The Reach Out and Read program, developed at the Boston Medical Center, may serve as a very useful model of how an early literacy program can be launched and developed further to suit the practice setting (8).
- Encourage parents to watch less television and read more to their children (19). It is never too early to make books part of a child’s life (18).
- Cultivate strong relationships between parents and medical providers to help parents help their children develop a love for books and reading. Regularly scheduled well-child visits are ideal for focusing specifically on promoting literacy. Literacy development should become a standard part of good paediatric care.
- Allow volunteer readers to demonstrate vividly in the waiting room that reading aloud can be a source of pleasure and entertainment. This may be especially helpful if the practitioner is too busy to model how parents and caregivers can read to their children.
- At office visits, provide parents with resource lists of how to select books that are age-appropriate (8). Many libraries offer such resources and will provide printed, easy-to-display criteria lists for selecting the right books.
- Encourage visits to local libraries and tell parents who cannot afford to buy books to consider getting a library card.

REFERENCES
In the moment of the telling of a story, the chanting of a nursery rhyme or the singing of a lullabye, there is the creation of a safe place. All children deserve this. It is from this safe place that the love of words and the beginning of literacy takes root.

My son Jordan was three years old when we ‘pieced’ together the following poem:

**Dr Stickles**

Dr Stickles tickled me
And I began to giggle
Dr Stickles tickled harder
Then I began to wiggle
When Dr Stickles tickled my toes
I laughed and so would you
Then I tickled Dr Stickles
Because he was ticklish too!

It was a tribute to our much loved paediatrician, Dr Lee Stickles.

It was also a tickle of the tongue, and a way to play with language. It was our way of making a safe place together.

**Sheree Fitch**

BA MA PhD (Hon),
Author, poet,
Honorary Spokesperson for IWK “Read to me” program,
Honorary Patron NB Literacy