

# THE ELEPHANT IN THE CLINIC

EARLY LITERACY AND FAMILY WELL-BEING



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*Dedicated to the memory of our colleague Gretchen Hunsberger, who deeply loved Reach Out and Read and all the joy it brings to children and families.*

## About the Authors



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**Amy Shriver, MD**, is a general pediatrician at the Blank Children's Pediatric Clinic in Des Moines, Iowa. She received her B.A. in psychology at Northwestern University in Evanston, Illinois, and graduated AOA from medical school at the University of Iowa Carver College of Medicine in 2004. She went on to complete her pediatric residency training as well as a Chief Residency at the University of Colorado. After graduating from residency, she worked as a clinical instructor of pediatrics at the Child Health Clinic in Aurora, Colorado. She became the Medical Director for Reach Out and Read at the Child Health Clinic in Denver in 2008 and used this opportunity to educate more than 100 pediatric residents in the importance of early literacy promotion in pediatric practice. In addition, she spent two years as the Pediatric Residency Advocacy Director for the University of Colorado before moving to Des Moines in 2010. Dr. Shriver practices general pediatrics at a large, urban hospital-based pediatric clinic. She is an adjunct professor for the Department of Pediatrics at the University of Iowa College of Medicine as well as Des Moines University College of Osteopathic Medicine. She is a clinical educator for the Blank Pediatric Residency Program in Des Moines. She has been the Co-Medical Director for Reach Out and Read Iowa since 2011.

## Partner Organizations

**Reach Out and Read:** Reach Out and Read is an evidence-based nonprofit organization of medical providers who promote early literacy and school readiness in pediatric exam rooms nationwide by integrating children's books and advice to parents about the importance of reading aloud into well-child visits.

**Ascend at the Aspen Institute:** Ascend is the national hub for breakthrough ideas and collaborations that move children and the adults in their lives toward educational success and economic security. We take a two-generation approach to our work and embrace a commitment to gender and racial equity lenses. Dipesh Navsaria is an Aspen Institute Ascend Fellow, and Reach Out and Read is a member of the Ascend Network, a national network of organizations pioneering two-generation approaches for children and the adults in their lives.

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*In a parable originating from the Indian subcontinent, a group of blind men gather around an elephant, not knowing what is in front of them. Using only touch, they attempt to determine the nature of the mysterious entity. One feels a leg and declares it is like a tree trunk. Another touches the tip of the tail and says it is like a brush. Another feels the trunk and states it is like a tree branch. Another strokes the ear and likens it to a hand fan. Another touches the sides and determines the elephant is like a wall. Finally, another feels the tusk and says the elephant is like a pipe.*

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This allegory vividly represents the challenges we face when creating solutions that address the social determinants of children's health. Over time, many dimensions of how we address the health and well-being of children and families have improved. According to a 2013 statement from the American Academy of Pediatrics Council on Community Pediatrics, "As understanding of the mechanisms and impact of biological, behavioral, cultural, social, and physical environments on healthy development deepens and expands, the long-standing role of pediatricians in promoting the physical, mental, and social health and well-being of all children must also evolve."<sup>1</sup> This evolution has and will continue; for example, scientific advancements in public health (e.g., vaccines, sanitation, and nutrition) have vastly improved health outcomes over the last century.

However, many of society's largest health problems are complex and multi-factorial in nature. The interrelationships between those factors make solutions challenging and different from prior successes. Poverty, homelessness, food insecurity, school failure, crime, abuse, and neglect continue to produce poor health outcomes for millions of children and families across the country.<sup>3</sup> Unfortunately, poverty — and its attendant widespread effects on child health — remains a challenge of pachydermic proportions. In order to meet the challenges of the "new morbidities"<sup>4-6</sup> of 21st century pediatrics, providers must reach beyond current practice strategies to create new, population-based solutions.

In addition, a pure focus only on the child ignores the well-being of the whole family — a counterproductive approach when you recognize that the family is the single largest element making up the psychosocial context in which a child is raised. We need to consider the needs of the whole



Photo: Reach Out and Read



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*Children aren't born loving to read. They learn about the joy of reading through book sharing with their family.*

- Amy Shriver, MD

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family, two generations at once. It is imperative that we realize that with our current medical toolbox, we may be holding only a part of the bigger picture and work toward a more comprehensive approach to child and family health.

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The science of Early Brain and Child Development highlights the impact of a child's physical, social, and emotional environment on brain architecture, development, learning potential, and behavior.<sup>7</sup> Primary care providers are ideal points of access to provide surveillance and early intervention for environmental stressors for infants, children, and families; however, they are often limited by the time available in the context of well-child care. One well-researched, clinic-based approach to forging intentional skill-building, resilience, and positive behavior change in children and families is the early literacy promotion program **Reach Out and Read**. The effects of literacy promotion on early brain development, including improved language skills and school readiness, are well-documented.<sup>8-19</sup> As one of us (AS) states, "Children aren't born loving to read. They learn about the joy of reading through book sharing with their family."

Established 25 years ago, Reach Out and Read prepares young children to succeed in school with a "prescription for shared reading" as a key element of health supervision in primary care

settings. The three-part model includes a brand-new, developmentally appropriate children's book directly given by a health care provider to a child at each well-child visit from age 6 months through 5 years. Along with this, the provider recommends and explores book-sharing attitudes and practices with families, all in the setting of a clinic where the waiting and exam rooms are literacy-rich in order to amplify the message. The power of early literacy promotion was formally recognized by the American Academy of Pediatrics through its June 2014 policy statement on the benefits of offering a prescription for shared reading and other clinic-based literacy efforts in primary care settings.<sup>20</sup>

However, the deceptive simplicity of the core Reach Out and Read model can blind many both inside and outside pediatric medicine to the numerous programmatic advantages for the child, the parents, the provider, and society. Much like the blind men in the parable, different individuals appreciate different features. Understanding the full power and scope of the model as an efficient, easily implementable public health tool, however, requires consideration of each of the program's strengths and how they interact to improve child and family health.

Recognizing only a handful of these strengths can lead to a narrow realization of potential opportunities to improve child health outcomes. While the Reach Out and Read program would not be harmful simply as a book distribution method, without understanding the clinician's important role as assessor and advisor, the clinic's investment in training, time, and books yields far fewer benefits. Making the



best use of the mammoth potential of early literacy promotion is good policy — we want to ensure that you see how much this approach has to offer children, families, clinicians, and society when well understood and well implemented.

Accordingly, let's visit each of the figurative blind men as we consider the complex elephant that is Reach Out and Read.

### Blind Man #1: “I believe this is a book giveaway.”



Reach Out and Read is most readily apparent as a book giveaway program. The delighted child departing a health supervision visit

with a book in hand is perhaps the most enduring image of Reach Out and Read. The key transaction of a clinician handing a book to a child, often accompanied either literally or figuratively with a prescription to read, sends a high-impact positive message to families (see Figure 1).

Shared reading is a key component in promoting language development in young children and nurturing emergent literacy skills. Many families cite a lack of access to books as a barrier to shared reading in the home. In some of the country's lowest-income neighborhoods there is only one book available for every 300 children.<sup>21</sup> Research shows that more books in the home can lead to significant advances in education.<sup>22,23</sup> One of the main goals of the Reach Out and Read program is to provide access to new, high-quality, developmentally appropriate, language/culture-appropriate books

for families to share together. The advice, combined with the immediate availability of the book, gives families the “equipment” they need to carry out the recommendation.

Early literacy messaging to families with young children occurs through many possible avenues; however, using the child's primary care provider in the context of the health supervision visit is cost-effective and highly efficient. Greater than 90 percent of young children attend health supervision visits, whereas fewer than one-third are in formal early childhood education settings.<sup>24</sup> Additionally, the primary care clinician is a trusted messenger that most parents will turn to as a source of reliable knowledge and advice, further amplifying the message. Finally, having the message gently repeated (and adjusted for developmental progress) can change parental behavior.<sup>25</sup>

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*I see that this is indeed a way to provide books to children and families. But I get the sense there is more. I wonder what my colleague thinks.*



Dr. Dipesh Navsaria joins in as a young boy and his mother share a book during a well-child visit.



# Rx PRESCRIPTION FOR READING RECETA PARA LEER



Child's Name: \_\_\_\_\_  
*El nombre del niño*

Date: \_\_\_\_\_  
*La fecha*

Instructions: **Read Books / Lee Libros**  
*Instrucciones*

- Every night at bedtime  
*Cada noche antes de acostarse*
- For \_\_\_\_\_ minutes a day  
*Durante \_\_\_\_\_ minutos todos los días*
- For reading tips and book lists,  
visit [reachoutandread.org/parent-resources](http://reachoutandread.org/parent-resources)



*Para listas de libros y sugerencias para fomentar la lectura, visite [reachoutandread.org/parent-resources](http://reachoutandread.org/parent-resources)*

Refills: At the local public library / *Recambios: En la biblioteca*

Signature: \_\_\_\_\_  
*Firma*

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Figure 1: Prescription to Read

failure and poor health outcomes.<sup>28,29</sup> However, the goal of literacy promotion is not to create early readers, but rather to encourage the early love of sharing books. This shared reading with infants and children promotes skills critical for starting formal schooling. One of the central concepts of emergent literacy is print awareness. A young child's gradual consciousness of the notion that print conveys information is critical foundational work that builds a scaffold for further literacy skills. Development of contextual reading skills and fluency requires a solid foundation of print awareness along with other skills: phonologic awareness, vocabulary, alphabet knowledge, narrative skills, and print motivation—the love of books and reading. Given the long-term impacts, intervening to assess and assure preparedness for learning is a vital strategy.<sup>30</sup>

## Blind Man #2: “This is a school readiness and educational intervention program.”



According to a 2004 article in the journal *American Educator*: “Children who fall seriously behind in the growth of critical early reading skills

have fewer opportunities to practice reading. Evidence suggests that these lost practice opportunities make it extremely difficult for children who remain poor readers during the first three years of elementary school to ever acquire average levels of reading fluency.”<sup>26</sup>

Given the profound importance of education to lifelong health,<sup>27</sup> interventions to assure preparedness for learning are critical. Inadequate literacy skills are linked to school

A recent study looking at parent attitudes towards reading with young children comparing clinics with Reach Out and Read implemented versus those who had not yet done so found a key significant difference: the families in the Reach Out and Read clinics were more likely to report a belief that reading was a way to prepare their child for kindergarten.<sup>31</sup> By realigning parents' attitudes about the effectiveness of early reading together as a preparation for school success, Reach Out and Read offers a route to address achievement gaps via early interventions in the first thousand days of life.

...

*I see that this is indeed a way to help children prepare to learn in school. But I get the sense there is more. I wonder what my colleague thinks.*



## Blind Man #3: “This program is a useful developmental surveillance technique for clinicians.”



It may seem surprising that clinicians can benefit from Reach Out and Read as much as patients and families. Used well by skilled clinicians, this

program can provide a great deal of information to the health care provider about developmental surveillance.

Developmental surveillance is a flexible, longitudinal, continuous, and cumulative process whereby knowledgeable health care professionals identify children who may have developmental problems.<sup>32</sup> In many primary care clinics, clinicians perform developmental surveillance at least partially via the use of printed or verbal “checklists” of developmental milestones (see example on inside back cover). However, the opportunity to witness children’s capabilities via their interaction with the provided book can be valuable in performing fast, efficient, and high-quality developmental surveillance during health supervision visits.

When providers present a book to a child at the outset of the visit, they can quickly assess gross and fine motor development as well as language by observing how the child interacts with the book.<sup>33</sup> From a less-than-one-minute interaction involving an exclaiming child excited about receiving a book, the provider can also glean aspects of the home environment and personal-social interaction. Likewise, the four-year-old who holds a book closed and upside-

down for the duration of the visit is displaying some concerning behaviors around curiosity and book-handling skills that require further investigation and assessment.

Accordingly, the Reach Out and Read model advises that the book be given (1) to *the child* (2) at the *beginning of the encounter* (3) by the *clinician* to maximize the opportunity for developmental surveillance.

While there are variations that have

### The Power of Skilled, Intentional Observation

I saw a family with two young children, new to our practice. The patient that day was a six-month-old infant with what we ultimately diagnosed as a common cold. However, when a medical student and I walked into the room, we gave a gently used book to the four-year-old brother of the patient, who was not being seen that day. As we proceeded with the visit, I observed the brother sitting there with the book upside-down, backwards, and closed for the entire time. Notably, he didn’t seem to have the intellectual curiosity to open the book and explore it. I wondered if he knew what to do with it and what his prior exposure to books had been like.

When we walked out of the room, I asked the medical student who he was most worried about in the room. “The baby?” he asked. I shook my head — it was the brother, because I was concerned about his preparation for kindergarten. I explained what I had observed out of the corner of my eye, despite not having any history yet on this child, who was not even technically the patient today.

When we went back in to finish the visit, I enquired gently about reading together at home. The mother’s response was interesting: “See? Even the doctor is telling you to read!” It became clear that she placed a value on her son reading books but didn’t know how to nurture that at home by reading with him and modeling such behavior. We clearly had something specific to work on with this mother and her children!

— Dipesh Navsaria, MPH, MSLIS, MD



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*In a well-child visit where there is no other clearly identified problem at the outset, I would rather walk in without my stethoscope than without a book.*

- Dipesh Navsaria, MPH, MSLS, MD

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developed in which ancillary personnel provide the book, the book is given to the parents, or the book is given at the end of the visit, all of these miss the valuable opportunity for cognizant, trained, skilled clinicians to make valuable assessments and comment on their observations directly with families. The opportunity for valuable teachable moments should not be lost. Additionally, the notable published evidence for Reach Out and Read is based upon adherence to this model.

A recent qualitative study showed benefits for clinics and health care providers. Despite both groups in the study reporting perceived value to early literacy promotion, those participating in Reach Out and Read were more likely to report specific, nuanced advice, the use of motivational interviewing, promoting family bonding through shared

reading, and assisting parents with their own literacy struggles. Notably, when it came to disadvantages, the non-Reach Out and Read clinics reported concerns over the time it would take in the clinical encounter and implementation burden; the Reach Out and Read clinics, on the other hand, only cited sustainability funding as an issue, and did not believe the time taken in the encounter or the training to be an issue. Clinics also reported that non-clinician staff enjoyed participating in early literacy initiatives and that more conversations and interest in this area was evident in their workplace. Clinicians also reported spending more time on developmental surveillance and assessing parent-child bonding and family dynamics since implementing Reach Out and Read.<sup>34</sup>

The utility of using this approach in health supervision is such that one of us (DN) stated in a federal Congressional briefing “In a well-child visit where there is no other clearly identified problem at the outset, I would rather walk in without my stethoscope than without a book.”<sup>35</sup>

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*I see that this is indeed a way for clinicians to evaluate the development of children. But I get the sense there is more. I wonder what my colleague thinks.*

**Blind Man #4: “I think this is a relational assessment tool for the clinician.”**



Dr. Amy Shriver reads with a young boy and his mother during a well-child visit.



Family interactions and relationships make up a “fourth vital sign” in pediatrics.<sup>36</sup> Reach Out and



Read offers an efficient and readily available method for assessing the quality of parent-child relationships. Watching parents' faces light up as their child enjoys a book can reveal important information about the home environment. Likewise, a lackluster or even caustic reaction from parents can be an important red flag for clinicians to probe further into family stressors, attitudes, and challenges. Providers can use the cues and clues they see in these interactions to initiate a discussion on the parent's social and emotional health.

Learning about the parent's own functioning and ability to cope, followed by offering solutions or programs that may help, is key to helping parents build their own abilities and be the good parents they want to be. As one of us (AS) says, "I like to tell my families, 'Your voice is the most important voice your child will ever hear. Take every opportunity to talk, sing, and read to your child to share the gift of your voice.'"

Does the family take the book away from the child and put it away? Does the toddler inspect the book and then hold it out to a caregiver in the universal "read to me" gesture, indicating his or her comfort with book-sharing activities and an ability to turn to a caregiver and ask for a need to be fulfilled? Does the family describe activities that involve interaction with each other? Do they discuss their favorite times together in a caring, loving manner? Discussing reading offers a significant number of "peeks" into family life.

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*I see that this is indeed a way to assess family relationships. But I get the sense there is more. I wonder what my colleague thinks.*

## Blind Man #5: "This program is aimed at building parental capacities and capabilities."



Children's interactive experiences with caregivers at home significantly impact the physical architecture of the brain, and

subsequent developmental and behavioral outcomes.<sup>37,38</sup> As awareness builds regarding the impact of environment on child development, clinicians must strive to create clinical interventions that improve parental capacities to promote their children's executive functioning skills. Responsive, or positive, parenting skills in the form of interactive play and shared reading can positively impact educational outcomes. As part of Reach Out and Read, clinicians should keep in mind and discuss the importance of the 5 Rs of early education.

TABLE 1: The 5 Rs of Early Childhood Education

1	Reading together as a daily fun family activity.
2	Rhyming, playing, talking, singing, and cuddling together throughout the day.
3	Routines and regular times for meals, play, and sleeping to help children learn what is expected of them.
4	Rewards and praise for everyday successes and helping behaviors.
5	Relationships that are reciprocal, nurturing, purposeful, and enduring. <sup>39</sup>



## The Power of Dialogic Reading

**A** mother and grandmother brought in a nine-month-old baby for a well-child visit. He eagerly took the board book from my hands and promptly put it into his mouth, as one would expect. His mother loudly told him “Get that out of your mouth” and pulled it away from him and out of his reach. He began to cry, gesturing at the book, clearly wanting it. His mother reached into her bag and pulled out a bottle of formula, putting it into his mouth. He clearly wasn’t hungry and spit it out. I knew I had to a) educate about mouthing behavior; b) help them learn to “read” his behavioral cues; and c) work on appropriate calming skills. This 30-second interaction around the book showed me a lot that I might not have otherwise had an opportunity to see. The grandmother was supportive of the mother’s approach, making this extra-challenging.

I discussed these three issues throughout the visit, and even had opportunities to bring the book into the discussion after his mother gave him back the book. He immediately mouthed it, and I reiterated how this was expected and normal. This time, she let him continue. I pointed at dogs in the book and counted them out for him, demonstrating dialogic reading.

Finally, as I left the room, the grandmother opened the book for the child, pointed at a picture, and started saying, “Red flower, blue flower, green flower. ...” I stepped into the hall, closed the door behind me, and a huge smile broke out over my face. Progress!

— Dipesh Navsaria, MPH, MSLIS, MD

Science supports the act of reading to a child as having an effect on their brain activity. A recent study shows functional magnetic resonance imaging changes in preschool-aged children as they listened to stories. Those whose parents reported more reading at home and more books in the home showed activation in parts of the brain that deal with multisensory integration — the same areas that are active when older children read to themselves.<sup>40</sup> This suggests that

reading to a child may prepare their brain circuitry for independent reading later on. The phrase “Books Build Better Brains” may have more to it than we previously imagined!

Additionally, reading aloud to children contains richer, more diverse language than the language typically used when talking to children.<sup>41</sup> Accordingly, reading picture books aloud to children may not only expose the child to more words, but also to a broader vocabulary and complexity, allowing them to practice and develop the skills of extrapolating from context at an early age.

Virtually all children at risk for educational failure live in families where their parents had educational struggles.<sup>42</sup> Parents who struggled during childhood with challenges such as poverty, lack of social and emotional support, and the lack of early cognitive stimulation often struggle with their own parenting skills.<sup>43</sup> The intergenerational cycle of school failure is difficult to escape; however, parents remain the single most important influence on their children’s development in the first thousand days of life (and beyond).<sup>44</sup> Notably, when parents have themselves struggled with school, their belief in their own ability to help their child learn can be suboptimal, resulting in both unconscious and conscious messages and behaviors that may affect learning negatively.<sup>45</sup> It is critical, therefore, to find ways to strengthen parental confidence and competence to enable their own growth and allow parents to become their child’s first and best teacher.

Parents who grew up in poverty, lacking necessary tools for parenting, may feel a sense of resignation and



inevitability when faced with their children's behavioral concerns or poor grades, fueled by a notion of biologic destiny.<sup>46</sup> Overwhelmed parents who may feel inadequate to the task and wish to change their child's future for the better may fall victim to ineffective "educational" marketing schemes involving infant/toddler DVDs and digital media. These, of course, counterproductively reduce the child's face-to-face time and language stimulation from others. Clinicians face a significant challenge increasing parental confidence and competence and providing effective parenting tools in a 15-minute health supervision visit. Using the Reach Out and Read model, clinicians communicate their confidence in parents' capabilities as their child's first (and most important) teacher. (A study showed that parents in clinics participating in Reach Out and Read were significantly more likely to report that they should start reading to their child in the early months of life.)<sup>47</sup> The model also offers the routes, techniques, and tools for parents to use. The advice to share books together with young children on a daily basis promotes the messaging of positive parenting and builds parental confidence and competence. Additionally, it offers a positive opening in which to assess and discuss the quantity and content of children's screen time. Finally, it offers the opportunity for the clinician to gently probe for and assess potential barriers, such as the parent's own functional illiteracy — and offer possible solutions, including referrals to adult literacy programs.

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*I see that this is indeed a way to build parenting skills and confidence. But I get the sense there is more. I wonder what my colleague thinks.*

## Building Parental Confidence and Competence in the Clinic

**A**s I entered the exam room for a well-child visit with a 15-month-old girl, I was pleased to see that she was sitting happily on her father's lap, and they were sharing a book! I watched for a few moments, noting that the father engaged his daughter with the use of dialogic reading, and they both were having a good time. This interaction provided me with an opportunity to give some positive instructive feedback. "It's wonderful to see the two of you reading together!" I said. "The way that you are engaging her by involving her in the story will help her pay more attention to books and learn more from the experience. You are giving her the gift of words and vocabulary by sharing books together, and this will help her learn to love books and be more prepared for school!" The father beamed at me and said, "You sure know how to make me feel like a good parent!" This brief book-focused interaction helped me build more rapport with the family, helped the family learn more important information about early literacy skills, and helped the father build confidence in his own parenting skills.

— Amy Shriver, MD

## Blind Man #6: "This is a public health approach to improving health outcomes."



The paradigm of traditional clinical pediatric medicine is changing. As the practice of medicine becomes more complex,

we recognize that population health strategies must be integrated into health care encounters.<sup>48</sup> A broad-based, population-oriented approach to educational foundation-building takes solid aim at the significant concerns, such as the achievement gap, that we see in vast swathes of our society.<sup>49</sup> With 47 percent of American children living in poor or





Photo: Reach Out and Read

near-poor conditions,<sup>50</sup> traditional individual patient-oriented responses are inadequate to the task in front of us — we need comprehensive public health measures to have any hope of success.

Traditional population health approaches often rely on building new frameworks and systems to reach groups — home visitors, public health nurses, media messaging. While these are often effective, they are expensive with respect to additional personnel and work in a largely separate, “parallel play” realm from clinical medicine. By integrating a population-health approach into an already well-established delivery system, we not only limit additional costs but also allow for synergies with the medical realm.

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*I see that this is indeed a way to bring public health principles into primary care clinics. But I get the sense there is more. I wonder what my colleague thinks.*

### **Blind Man #7: “This offers a way to buffer toxic stress for children and families.”**



Adverse childhood experiences, such as poverty, homelessness, parental depression, and physical or emotional

abuse, have a harmful effect on the developing brain.<sup>51</sup> Children growing up in families in which these stressors are prominent may have chronically elevated stress hormone levels — which in turn can interfere with the formation of healthy brain connections. This type of stress, referred to as “toxic stress,” can lead to poor educational and health outcomes as children grow into adulthood.<sup>52</sup> However, we also know that positive, nurturing supportive relationships buffer the effects of this toxic stress.<sup>53</sup>

Notably, while there is widespread awareness of the plasticity of the newborn brain, there is now evidence for another neurobiologic “open window”: a sensitive period (paired chronologically with that of infants) in which structural and functional changes in the brains of new parents can occur — if well supported through positive support and opportunities.<sup>54</sup> The corollary to this, of course, is that if not well supported, this period is one of vulnerability for both members of the parent-child dyad, placing both at risk for poor outcomes.



Offering practical, workable solutions to build and nurture supportive family relationships is difficult when the temporal and financial challenges of life create significant obstructions for at-risk families. To effectively address toxic stress issues in the home, parents need concrete advice and modeling as well as clear guidance rather than vague exhortations to “spend time together.” Accordingly, the simple, specific, beautiful act of book sharing in the home can mitigate some of the effects of toxic stress in those children most at risk for downstream adverse educational and health outcomes. The physical intimacy present during shared reading as well as the positive verbal and nonverbal caregiver-child interactions in an otherwise chaotic home environment help reinforce a secure attachment and sense of well-being for children.

By providing advice and guidance on book-sharing with clear-cut advice on dialogic reading that can be easily modeled in the exam room, clinicians can play an important role in helping families develop a more nurturing, supportive home environment. This clinic-based intervention offers at-risk families a moment of respite in the midst of their chaotic lives that can help ameliorate the effects of toxic stress during early childhood.

Child health providers can be one piece in a multipronged approach to helping families buffer toxic stress by using clinic-based tools that promote responsive parenting. Increasing the quality of the day-to-day parent-child interaction by promoting shared reading as a routine in the home can increase warmth and consistency in parenting, both of which have been



Photo: Reach Out and Read

shown to be powerful predictors of healthy child development.<sup>55-57</sup>

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*I see that this is indeed a way to help buffer toxic stress in the lives of families coping with adversity. But I get the sense there is more. I wonder what my colleague thinks.*

### **Blind Man #8: “This is an inexpensive, scalable, evidence-based clinical care model.”**



As the understanding of the complexities of child health progresses, the paradigm of traditional pediatric medicine must

change by integrating data-driven population health strategies into a new form of clinical practice. Ideally, such strategies should be not only efficacious, but also evidence-based, cost-effective, and easy to implement and maintain. As with all public health

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*Buy us the books and pay for a bit of training and infrastructure support...and we'll throw the docs in for free.*

- Dipesh Navsaria, MPH, MSLIS, MD

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approaches, solutions need to be realistically scalable.

To promote healthy child development in high-risk families, society needs comprehensive approaches. Many effective public health interventions have good evidence for their efficacy but are limited by their cost; an intervention that costs several thousand dollars per family per year cannot reach the population at large. At approximately \$20 per child per year, the well-researched Reach Out and Read program fits seamlessly and inexpensively into the nearly universally accessible primary care ecosystem. This intervention gives pediatric health providers an affordable, time-efficient, effective “piece of the puzzle” to address child development.

In an era where primary care providers are being asked to do more and more in less time, it is notable that the enthusiasm with which Reach Out and Read has been adopted remains high, particularly when you consider that clinicians are not paid anything extra for doing this. In Wisconsin, for example, there has been almost 300 percent growth in the number of clinics participating in the space of the 5 years since the Reach Out and Read Wisconsin coalition was formed.<sup>58</sup> This speaks to how providers find it to be a useful, efficient approach that blends

well with clinical practice. As one of us (DN) noted to funders, “Buy us the books and pay for a bit of training and infrastructure support...and we'll throw the docs in for free.”

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*I see that this is indeed a scalable, evidence based model. But I also hear all that my colleagues have said. It is not any one or two of these things — my friends, **it is all these things.***






Photo: Reach Out and Read

## Conclusion

We began this piece by relating the parable of the elephant and the blind men. In a variation of this tale dating from the 13th century, sighted men enter a dark room where the elephant is kept and feel it, with similar results. It ends with these lines:

*If each had a candle and they went in together  
The differences would disappear*

*The lamp and the wick change  
but the light's the same  
See the light within the flame*<sup>59</sup>

When it comes to the children in our society, we should all walk in with candles and illuminate the strengths and challenges from our own perspectives while appreciating those of others. Contemporary, complex challenges such as school failure; long-term cognitive, emotional and physical health problems secondary to early adversity; and chronic, unremitting poverty require approaches that are efficient, broadly based, and universally implementable. While not a panacea, the Reach Out and Read model of early literacy promotion addresses elements of the significant complexities of 21st century primary care pediatrics. When implemented in a high-fidelity manner, the multifaceted Reach Out and Read program can help fulfill the promise of child health supervision visits — to provide expertise, tools, and guidance that positively shape the home environment and, ultimately, improve family and child health outcomes. 

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# MILESTONES OF EARLY LITERACY DEVELOPMENT

## NEWBORN TO 6 MONTHS

**TALK, READ, SING, PLAY** Right from birth, babies are listening, looking, and learning. So find, and enjoy, those everyday moments when you can talk, read, sing, and play together with your baby.



## 6 TO 12 MONTHS

holds head steady  
sits in lap without support  
grasps book, puts in mouth  
drops, throws book

### MOTOR DEVELOPMENT

*What your child is doing*

### COMMUNICATION AND COGNITION

*What your child is saying and learning*

## 12 TO 24 MONTHS

holds and walks with book  
no longer puts book in mouth right away  
turns board book pages

says single words, then 2- to 4-word phrases  
gives book to adult to read  
points at pictures  
turns book right-side up  
names pictures, follows simple stories

## 2 TO 3 YEARS

learns to turn paper pages, 2 to 3 pages at a time  
starts to scribble

adds 2-4 new words per day  
names familiar objects  
likes the same book again and again  
completes sentences and rhymes in familiar stories

## 3 TO 4 YEARS

turns pages one at a time, and from left to right  
sits still for longer stories  
scribbles and draws

recites whole phrases from books  
moves toward letter recognition  
begins to detect rhyme  
pretends to read to dolls and stuffed animals

## 4 TO 5 YEARS

starts to copy letters and numbers  
sits still for even longer stories

can listen longer  
recognizes numbers, letters  
can retell familiar stories  
can make rhymes  
learning letter names and sounds

### ANTICIPATORY GUIDANCE

*What parents can do*

*Ask questions and wait for your child to answer*

*Read and speak in your first language*

ask “Where’s the dog?” or “What is that?”

be willing to read the same book again and again  
as you read, talk about the pictures

keep using books in daily routines

ask “What happens next?” in familiar stories

point out letters, numbers  
point out words and pictures that begin with the same sound

together, make up stories about the pictures

relate the story to your child’s own experiences

let your child see you read  
ask your child to tell the story

encourage writing, drawing  
point out the letters in your child’s name

### WHAT TO READ

board and cloth books;  
books with baby faces;  
nursery rhymes

board books; rhyming books;  
picture books; books that name things

rhyming books; picture books that tell stories; search and find books

picture books that tell longer stories; counting and alphabet books

fairy tales and legends;  
books with longer stories, fewer pictures

LET YOUR CHILD CHOOSE WHICH BOOK TO READ. FIND STORIES ABOUT THINGS YOUR CHILD LIKES.



where great stories begin™

Reach Out and Read is an evidence-based nonprofit organization of medical providers who promote early literacy and school readiness in pediatric exam rooms nationwide by integrating children's books and advice to parents about the importance of reading aloud into well-child visits.

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