Dear editor

Pediatricians play an important role in promoting the healthy development of all children. This involves addressing disparities in the environments of children that can affect their ability to grow and learn. Historically, pediatric primary care has included a variety of evidence-based strategies to prevent disease and disability including encouraging vaccination, counseling about safety risks, and promoting healthy diets and physical activity. The state of a child’s early language and literacy environment has also become a focus for pediatricians because of the connection between early exposures, brain development, educational achievement, and lifelong health [1].

Through their landmark study of direct recordings in homes, Hart and Risley estimated a 30 million word gap when comparing the number of words heard by children growing up in low-income versus high-income homes [2]. More recent research has further described the connections between this early word environment and children’s language development. Weisleder et al. [3] described their work using recording technology to measure words heard by young children. From these recordings, they were able to quantify the spoken words specifically directed at the children. They found that the amount of child-directed speech heard by 19 month-old children in a typical day correlated significantly with the child’s own vocabulary at 24 months of age.

Based on evidence of the importance of the richness of language exposure early in life for healthy child development, pediatricians focused on children’s home literacy environment and specifically shared reading. Addressing the lack of books and encouraging parent-child shared reading, especially in the homes of low-income families, were foundational to the development of Reach Out and Read (ROR) [4–6]. This program seeks to address these literacy exposure gaps from the primary care physician’s office. ROR consists of doctors providing culturally and developmentally appropriate books with anticipatory guidance at each well-child visit from six months old to five years old. It also entails incorporating the book into the well-child visit as a developmental assessment tool, and providing literacy-rich waiting rooms and clinic environments where volunteers model sharing books to families [4].

ROR is one of several language and literacy promotion programs targeting young children and their families. Since its inception in 1989, it has grown and expanded across the country and is now being implemented at over 5,800 sites across the United States and reaches one in four families living in poverty [7]. ROR is included as a model example in the American Academy of Pediatrics 2014 policy statement on promotion of early childhood literacy [8]. It is the literacy promotion strategy most commonly used in the outpatient clinical practices of pediatric residency training programs across the country [7,8].

Evidence exists for the impact of ROR on families. The cross-sectional, pilot study of ROR found that in families who received books, parents reported a higher likelihood of reading books with their child or that sharing books together was a favorite activity (adjusted odds ratio = 4.0, 95% CI: 1.1–14.6). An even greater effect was seen in families who were receiving welfare support; ROR parents had 7.8 times increased odds (95% CI: 1.5, 41.2) of reported reading together or sharing books as a favorite activity [5]. Similar improvements in parents’ attitudes towards shared reading were found in a subsequent larger national sample looking at families exposed to ROR through their clinics when compared to historical controls [9].

When looking at reports of behavior and language outcomes, a cross-sectional study showed that families attending clinics with ROR reported reading with their children an average of one day a week more than unexposed controls (p = 0.04). The children exposed to ROR had increased scores on receptive language testing by 8.6 points (95% CI: 3.3, 14.0) and expressive language testing by 4.3 points (95% CI: 0.04, 8.6). In the same study, each exposure to ROR at a well-child visit was associated with a 0.4-point increase in receptive language score (95% CI: 0.1, 10.6) and a 0.2-point increase in expressive language score (95% CI: 0.02, 0.4). This demonstrated that for each visit where the child was exposed to ROR the child had a small, but significant, increase in language scores [10].

In a randomized control trial conducted with children beginning around age seven months and continuing through 18–22 months, families exposed to ROR had a 40% increase compared to control families who experienced only a 16% increase in Child-Centered Literacy Orientation over time (p = 0.007) [11]. Child-Centered Literacy Orientation measured “a family’s ability and willingness to engage in literacy-promoting activities with young children”. ROR-exposed families also read to their children an average of 4.3 days per week compared to 3.8 days per week in control families (p = 0.001).

These are just some of the most compelling studies demonstrating the effect of ROR. A systematic review of the evidence for ROR showed that three other randomized controlled trials demonstrated an impact on parental reading attitudes and practices by self-report [12]. Several other quasi-experimental studies evaluated in the review were limited by study design, but showed positive correlations between ROR exposure and reported reading frequency as well as child language development.
Why is it important to include the evidence on early language and literacy exposure and the benefits of ROR in the training of pediatric healthcare providers? Future pediatricians learn to provide primary care to children at their continuity clinics typically for one half-day per week throughout residency. This longitudinal clinical experience allows residents to gain primary care skills through progressive autonomy and responsibility that is guided by faculty. In these clinics, residents care for a mix of well children at routine visits, ill children at acute visits and children with chronic illnesses at visits for ongoing management of their conditions. Very often these children live in low-income families and are covered by Medicaid/S-CHIP insurance: the same families are at risk for suboptimal early language and literacy exposure [13]. While providing health care and receiving education, residents are establishing the practices and habits that they will carry with them throughout their careers.

Pediatricians, once finished with residency and practicing independently, have reported being insufficiently prepared to promote early brain and child development [14]. Since exposure to a rich language and literacy environment is so important to the healthy development of young children, pediatricians need to be well trained and comfortable in promoting shared reading for their patients. Full implementation of ROR can be a powerful tool for pediatricians, but they must learn how to use it during their formative training years.

There is a clear role for pediatric providers to promote optimal child health and language development through encouraging shared reading. This is especially true for residents who care for a generally at-risk patient population and are establishing their lifelong practices. Therefore, it is critically important that we effectively empower residents. They must become comfortable in providing literacy-promoting anticipatory guidance and tools, for which ROR is an evidence-based technique. As competing educational and service demands grow, there is a need for innovative and efficient strategies to address this aspect of pediatric training.

In a survey of 71 pediatric residents at our program, we found that only 21% could recall having attended our formal ROR training delivered through an annual noon conference. This identified a gap that exists between the goal of providing optimal literacy promotion to families and our current education of residents. While these results reflect the experience of a single, large training program, the challenge of reaching residents likely exists in other institutions. This points to the need for novel educational efforts, targeted towards ROR. Through these efforts we will create a workforce of pediatricians equipped to ensure that all children have the opportunity to experience a rich early language and literacy environment and achieve their full potential.

References