



RESIDENT ARTICLE

Promoting Literacy and Developmental Milestones: Teaching Primary Care Pediatricians via the Reach Out and Read Program Model

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ABSTRACT

Pediatricians are tasked with the responsibility to educate families and children during annual well-child visits about the importance of literacy as a key part of development. The American Academy of Pediatrics strongly supports the promotion of early literacy. Developing early literacy stimulates optimal patterns of brain development and strengthens parent-child relationships that in turn builds language, literacy, and social-emotional skills. Reach out and Read is a national nonprofit organization that promotes the use of books during well-child visits for children age 6 months and 6 years to encourage families to read together. In our resident pediatric clinic, we strive to utilize this model with our families. In addition to promoting early literacy, we have found that this program offers the unique opportunity to allow resident physicians first-hand education on developmental milestones in pediatric patients.

INTRODUCTION

It has been reported that only 12% of US adults have proficient health literacy.^{1,2} As pediatricians, we are tasked with the responsibility to educate families and children during their well-child visits about the importance of literacy as part of their development, as it sets a foundation for their child's development and vocabulary. In addition to developing speech, it also promotes social development, fine and gross motor skills. The American Academy of Pediatrics (AAP) strongly supports the promotion of early literacy.³ This is accomplished in manners such as reading regularly with young children. These activities then stimulate optimal patterns of brain development and strengthen parent-child relationships that, in turn, build language,

literacy, and social-emotional skills.³ The objective of the Reach out and Read (ROAR) model is to work with pediatric primary care providers to maximize children's development by incorporating books and encouraging families to read out loud, with a focus to start as early as infancy.⁴

Our pediatric residents participate in the ROAR model in their continuity clinic by distributing age-appropriate books to all children between 6 months and 5 years of age during their well-child visits.⁴ At these visits, we educate parents about the importance of early childhood literacy. As the infants grow, we teach parents how to adapt the reading time activity to the child's age. For example, parents learn to let toddlers point to the pictures, flip the pages, squat to pick up the book, and tell a story from the pictures before learning sight words.

The ROAR model allows physicians to support parents in reading to their children. For residents, it also encourages them to learn and evaluate developmental milestones. Residents are taught about the program at the start of each academic year by the senior resident on the project during a dedicated morning report. This includes an explanation of what the program is and examples of how to best use the books for infants and toddlers. Residents continue to learn about developmental milestones through clinical teaching and hands-on experience throughout the year. When a resident physician provides a parent and child a book, the resident physician is to teach them how to properly use it as appropriate for the child's age. For instance, they are to explain to the parent that at 6 months the infant will grab the book and transfer it from hand-to-hand. It is explained to the family that hardcover books are recommended as infants may explore by putting the book in their mouths. Alternatively, the resident would discuss with the parents of an 18-month-old the ability of the toddler to squat or pick out the book they wish to read or their ability to point to the pictures as the family reads together. Additionally, each patient room has a laminated pamphlet for parents to browse through while residents are speaking with their attendings. The pamphlet contains examples of how to best utilize the book based on their child's age. This helps reinforce resident knowledge and parental understanding.

METHODS

In 2019, a Quality Improvement (QI) initiative was developed to better understand the utility of the ROAR program in encouraging parents to read to their children. An anonymous survey was given to parents with children 6 months to 5 months of age who had come for a well-child check. The survey specifically measured if the parents were reading to their children prior to their well-child visit, if they took time to read after seeing their physician, and if they have heard about Reach Out and Read. Data was collected over a 5-month period.

RESULTS

From the survey responses, it was found that approximately 89% of surveyed parents read to their children prior to the well-child visit, 43% of parents read more to their children after receiving a book, and 61% of parents do not remember being told about ROAR. While many parents were already reading to their children, there was a reported increase in reading following having received a ROAR book. Despite this, only 39% recalled learning about the ROAR when they received a book during their appointment.

A review of the data from the initial QI showed that one possible reason that there was a low recollection of ROAR by families is that residents were not dedicating time to discuss it with the families as well as maximizing its potential as a learning tool. Therefore, we implemented a phase to promote literacy and improve physicians' compliance to teach and use the model during their clinic. At the start of this phase, a survey of all resident physicians was sent out. The survey showed that half of the residents gave books to their patients, but only 14% used the laminated pamphlets to talk about the milestones. Overall, 63% of residents polled said that if they were provided a reminder for each visit, then they would be more likely to practice their milestones.

As a result of the survey, we realized residents were not as adherent to the ROAR model as desired, and a multi-pronged approach was initiated to increase participation. Initially, teaching was provided to all residents via a formal presentation on how each age group will benefit from a book and what they should see that specific age do with a book. Secondly, we implemented reminders on all physician computers. A laminated note was taped on the bottom of the screens reminding all physicians before going into a patient room: "Did you hand out a BOOK and discuss milestones?" Thirdly, note templates were added for well child visits aged 6 months to 6 years to document whether or not ROAR was discussed during the visit.

After the implementation of these changes, there was a significant improvement in the number of residents who reported adherence to the program. Qualitatively, residents have commented on the appreciation of the small reminders to ensure their patients are able to participate in ROAR. Post surveys show 90% of providers agree that the laminated sheets next to their computer is a helpful reminder. There has been a transition that 33% are using the laminated pamphlets in the room based on

age to give to parents to read while they are waiting for the physician to come back with the supervising attending. Around 90% of residents are currently using the books to teach families and practice their developmental milestones (up from 14%). Overall, with time and the implemented changes, we hope to see continued improvement of each resident remembering to bring in a book and discuss developmental milestones during their time with their patient and families.

DISCUSSION

Early children's literacy is a key foundation to childhood development. Primary care pediatricians are uniquely positioned to be able to help promote literacy and early development. Through ROAR, physicians make a difference by taking the time to share how to best use a book to help develop skills through multiple developmental domains. In doing so, we are not only able to assist families, but also use this as a teaching tool for resident physicians. Residents are able to use such a source to learn and practice their developmental milestones during their training. Through this quality improvement initiative, we were able to improve the utilization of ROAR in our resident physician clinic. In doing this, we hope to encourage our pediatric residents to continue to use books as a teaching tool for families in order to promote early literacy, develop therapeutic relationships with families, and learn developmental milestones.

REFERENCES

1. Kutner M, Greenberg E, Jin Y, Paulsen C. (2006). The health literacy of America's adults: Results from the 2003 National Assessment of Adult Literacy (NCES 2006-483). U.S. Department of Education. Washington, DC: National Center for Education Statistics. <https://nces.ed.gov/pubs2006/2006483.pdf>.
2. Understanding literacy and numeracy. (2019, November 13). Retrieved January 24, 2021, from <https://www.cdc.gov/healthliteracy/learn/understandingliteracy.html>
3. Council on Early Childhood. Literacy promotion: an essential component of primary care pediatric practice. *Pediatrics*, 2014;134(2), 404-409. doi:10.1542/peds.2014-1384
4. Home. (2021, January 06). Retrieved January 24, 2021, from <https://www.reachoutandread.org/>
5. Morrison A K, Glick A, Yin HS. Health literacy: implications for child health. *Pediatrics in Review*, 2019;40(6), 263-277. doi:10.1542/pir.2018-0027