



COLORADO

REACH OUT AND READ: THE EVIDENCE

Research shows that when pediatricians promote literacy readiness according to the Reach Out and Read model, there is a significant effect on parental behavior and attitudes toward reading aloud, as well as improvements in the language scores of young children who participate. These effects have been found in ethnically and economically diverse families nationwide.

The body of published research supporting the efficacy of the Reach Out and Read model is more extensive than the body of research for any other psychosocial intervention in general pediatrics. Additional studies about Reach Out and Read that address language outcomes in children are in progress.

To read the complete articles visit reachoutandread.org/why-we-work/research-findings/.

The following studies by independent academic researchers have been published in peer-reviewed medical journals:

Reach Out and Read: Changing Child Outcomes

Mendelsohn et al., *Pediatrics* High-risk urban families participating in Reach Out and Read read more frequently to their children. Children exposed to Reach Out and Read had higher receptive language scores (words the child understands) and expressive language scores (words the child says). Increased exposure to Reach Out and Read led to larger increases in both receptive and expressive language scores.

Mendelsohn A.L., Mogiler L.N., Dreyer B.P., Forman J.A., Weinstein S.C., Broderick M., Cheng K.J., Magloire T., Moore T., Napier C. "The impact of a clinic-based literacy intervention on language development in inner-city preschool children." *Pediatrics* 2001; 107 (1), p. 130-134.

High et al., *Pediatrics* Families participating in the Reach Out and Read model read to their children more often (4.3 vs. 3.8 days/week), and their toddlers' receptive and expressive vocabulary scores were higher. This effect held in parents of different levels of education and English proficiency.

High P.C., LaGasse L., Becker S., Ahlgren I., Gardner A. "Literacy promotion in primary care pediatrics: can we make a difference?" *Pediatrics* 2000; 104, p. 927-934.

Theriot et al., *Clinical Pediatrics* Among children ages 33 months to 39 months attending a well-child clinic in Louisville, KY, expressive and receptive language scores were significantly and positively associated with both the number of Reach Out and Read-enhanced well-child visits they had attended, and with the number of books purchased for them by their parents. This finding supports a "dose effect" for the Reach Out and Read intervention: the more Reach Out and Read, the higher the score.

Theriot J.A., Franco S.M., Sisson B.A., Metcalf S.C., Kennedy M.A., Bada H.S. "The impact of early literacy guidance on language skills of 3-year-olds." *Clinical Pediatrics* 2003; 42, p. 165-172.

Sharif et al., *Journal of the National Medical Association* Children participating in Reach Out and Read had higher receptive vocabulary scores. They also had higher scores on the Home Literacy Orientation (measured by how much the child was read to and how many books were in the home) than children not participating in Reach Out and Read.

Sharif I., Rieber S., Ozuah P.O. "Exposure to Reach Out and Read and vocabulary outcomes in inner city preschoolers." *Journal of the National Medical Association* 2002; 94, p.171-177.

Diener et al., *Journal of Community Medicine and Health Education* This study showed that a small sample of Latino children who participated in Reach Out and Read from six months of age had average or above average literacy skills by the end of kindergarten, as well as high-quality home literacy environments with frequent book sharing and high book ownership.

Diener M.L., Hobson-Rohrer W., Byington C.L. "Kindergarten readiness and performance of Latino children participating in Reach Out and Read." *Journal of Community Medicine and Health Education* 2012; 2:133.

**BOOKS BUILD
BETTER BRAINS**

WHEN
PEDIATRICIANS
PROMOTE
READING
READINESS,
LANGUAGE
SCORES
IMPROVE.

Reach Out and Read: Changing Parental Attitudes and Practices

High et al., *Archives of Pediatrics and Adolescent Medicine* Parents whose children (< three years) had received books and educational materials during well-child visits were more likely than parents in a control group to report that they shared books with their children, and to cite sharing books as a favorite activity or a child's favorite activity.

High P., Hopmann M., LaGasse L., Linn H. "Evaluation of a clinic-based program to promote book sharing and bedtime routines among low-income urban families with young children." *Archives of Pediatrics and Adolescent Medicine* 1998; 15, p. 459-465.

Continued on back

Needlman et al., *American Journal of Diseases of Children* Parents who had received a book as part of Reach Out and Read were more likely to report reading books with their children, or to say that reading was a favorite activity. The benefits of Reach Out and Read were larger for families receiving Aid to Families with Dependent Children.

Needlman R., Fried L.E., Morley D.S., Taylor S., Zuckerman B. "Clinic-based intervention to promote literacy. A pilot study." *American Journal of Diseases of Children* 1991; 145, p. 881-884.

Weitzman et al., *Pediatrics* In a study using direct observation of children's homes, parents were more likely to read aloud to their children and enjoy reading together when their families had more encounters with the Reach Out and Read program.

Weitzman C.C., Roy L., Walls T., Tomlin R. "More evidence for Reach Out and Read: A home-based study." *Pediatrics* 2004; 113, p. 1248-1253.

Needlman et al., *Ambulatory Pediatrics* In a multicenter study, families exposed to Reach Out and Read were more likely to report reading aloud at bedtime, read aloud three or more days per week, mention reading aloud as a favorite activity, and own 10 or more children's books.

Needlman R., Toker K.H., Dreyer B.P., Klass P., Mendelsohn A.L. "Effectiveness of a primary care intervention to support reading aloud: a multicenter evaluation." *Ambulatory Pediatrics* 2005; 5, p. 209-215.

Silverstein et al., *Pediatrics* English and non-English speaking families who participated in the Reach Out and Read model increased their weekly bedtime reading, and more parents reported reading as their own or their child's favorite activity. For non-English speaking families the number of children's books in the home also increased as a result of the Reach Out and Read model.

Silverstein M., Iverson L., Lozano P. "An English-language clinic-based literacy program is effective for a multilingual population." *Pediatrics* 2002; 109, p. e76.

Sanders et al., *Archives of Pediatrics and Adolescent Medicine* Hispanic parents participating in Reach Out and Read were more likely to report reading to their children compared to Hispanic parents not participating in Reach Out and Read. When parents read more frequently to their children, they were also more likely to read frequently themselves.

Sanders L., Gershon T.D., Huffman L.C., Mendoza F.S. "Prescribing books for immigrant children." *Archives of Pediatrics and Adolescent Medicine* 2000; 154, p. 771-777.

Golova et al., *Pediatrics* Hispanic parents whose children had received bilingual books, educational materials, and anticipatory guidance about literacy were more likely to report reading books with their child at least three days/week (66% vs. 24%) and report that reading books was one of their three favorite things to do with their child (43% vs. 13%) than parents in a control group. Parents participating in the Reach Out and Read intervention also tended to have more books in the home (for children and adults).

Golova N., Alario A.J., Vivier P.M., Rodriguez M., High P.C. "Literacy promotion for Hispanic families in a primary care setting: A randomized controlled trial." *Pediatrics* 1998; 103, p. 993-997.

Reach Out and Read: Toward Better Primary Care

Jones et al., *Clinical Pediatrics* Parents participating in Reach Out and Read were more likely to rate their child's pediatrician as helpful than those not participating. Pediatricians in the Reach Out and Read group were more likely to rate parents as receptive than those in the non-Reach Out and Read group. Mothers in the Reach Out and Read group were two times more likely to report enjoyment in reading together with their child than those in the non-Reach Out and Read group.

Jones V.F., Franco S.M., Metcalf S.C., Popp R., Staggs S., Thomas A.E. "The value of book distribution in a clinic-based literacy intervention program." *Clinical Pediatrics* 2000; 39, p. 535-541.

King et al., *Academic Pediatrics* Successful implementation of the Reach Out and Read program was related to the culture of the clinic. Staff at clinics that struggled to implement Reach Out and Read found their jobs burdensome and reported lacks in communication. Staff at successful Reach Out and Read program sites worked as a team and expressed strong commitments to their communities.

King T.M., Muzaffar S., George M. "The role of clinic culture in implementation of primary care interventions: The case of Reach Out and Read." *Academic Pediatrics* 2009; 9 (1), p. 40-46.

Byington et al., *Journal of Health Care for the Poor and Underserved* This qualitative study examined the thank-you notes sent to staff at a Reach Out and Read clinic by Hispanic families. Families expressed thanks for the books received, as well as the literacy advice given by doctors and nurses. Many families believed that the books and advice promoted the habit of reading and demonstrated respect the staff held for the families and their children.

Byington C.L., Hobson W.L., Olson L., Torres-Nielsen G., Winter K., Ortiz K.A., Buchi K.F. "The good habit of reading (el buen habito de la lectura): Parental reactions to an enhanced Reach Out and Read program in a clinic for the underserved." *Journal of Health Care for the Poor and Underserved* 2008; 19, p. 363-368.