Reach Out and Read: A Pilot Program at Boston Medical Center

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BACKGROUND

Premature infants are exposed to less language in-utero and after birth than term infants but language exposure is essential for normal language development.

• Language delay is common among premature infants, but infants who hear more words during their NICU stay have better neurodevelopmental outcomes at 18 months of age¹.

• Reading to infants is one way to ↑ language exposure.

• Language exposure is particularly important for low SES infants who experience significant disparities in vocabulary growth, school readiness and reading skills².

• Parents who read to their infants in the NICU experience less stress & are more likely to read to their infants post-discharge³.

• Reach Out and Read is an evidence-based non-profit 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.

• ROR families read together more often & their children enter kindergarten with larger vocabularies and stronger language skills⁴.

PROJECT AIM

To increase the percent of infants who are read to by their parents at least once per day during their stay in our Level II nursery from 0% to 50% by October 1, 2015.

METHODS

We conducted a retrospective chart review to determine demographic characteristics, primary language, baseline visitation patterns, and current reading activity for infants born at <37 weeks who were admitted to the NICU during October and November, 2014 and who remained in the NICU for at least 7 days.

RESULTS

Demographic Characteristics (N=21)  DOI: October 1, 2014- November 30, 2014

<table>
<thead>
<tr>
<th>Demographic Characteristics</th>
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<tbody>
<tr>
<td>Maternal Age (years)</td>
<td>31.2 ± 7.8</td>
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<tr>
<td>Gestational Age (weeks)</td>
<td>33.4 ± 2.5</td>
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<tr>
<td>Birth Weight (grams)</td>
<td>2035 ± 572</td>
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<tr>
<td>Gender</td>
<td>76% Male, 24% Female</td>
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<tr>
<td>Race</td>
<td>10% White, 71% Black, 19% Hispanic</td>
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<tr>
<td>Primary Language</td>
<td></td>
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<tr>
<td>English</td>
<td>62%</td>
</tr>
<tr>
<td>Spanish</td>
<td>10%</td>
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<tr>
<td>Haitian Creole</td>
<td>18%</td>
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<tr>
<td>Portuguese Creole</td>
<td>10%</td>
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<tr>
<td>Primary Insurance</td>
<td>100% Medicaid</td>
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<tr>
<td>Length of Stay (days)</td>
<td>31.6 ± 22.3</td>
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Parental Visits to the NICU

• For each of the 21 infants, the total number of visits by the mother or father was extracted from the electronic medical record and tabulated by hospital week.

• We then calculated the average #visits per hospital day (total visits/length of stay) by the mother or father for each patient and plotted them on run charts; medians are displayed in red.

• Mothers visited more frequently than fathers, visiting 1.2 times per day vs. 0.1 times per day.

• In all, 62% of mothers and 14% of fathers visited their infants an average of at least once per day.

• None of the parents read to their infants when they visited.

CONCLUSIONS

We have established baseline population data to inform our effort to increase reading in the NICU. Our data confirms that infants are not currently being read to, but that the parents visit often enough to aim for 50% of infants being read to at least once per day by their parents.

NEXT STEPS

• In our pilot program, we will adapt traditional Reach Out and Read methodology to provide parents with in-person anticipatory guidance regarding the benefits of reading to their infants, and we will provide them with free books.

• Infants will be eligible for participation upon transfer from the NICU to the level II nursery (aka as “the Annex”).

• All medical and nursing staff will be educated regarding the benefits of reading to infants in the NICU; Staff interested in providing one-on-one anticipatory guidance to parents can also complete the traditional online ROR training.

• Parents will be encouraged to read to their infants at least once per day; Cuddlers, nurses, and other staff members will also be encouraged to read to the infants.

• Daily reading will be tracked using bedside calendars, and we will distinguish between readings done by parents vs. staff.

• Parental visits will be tracked as recorded in the EMR.

• Anonymous surveys will be conducted regarding parental and nursing experiences with this program.

• Start date for this pilot project is July 1, 2015

REFERENCES


We would like to thank the staff at Reach Out and Read for their enthusiastic support of this Pilot Program. For more information contact: Bernadette.Levesque@bmc.org