

Using Newborn Individualized Developmental Care and Assessment Program (NIDCAP) Philosophy and Principles in the Implementation of a NICU Book Sharing Program

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Background

Infants admitted to the Newborn Intensive Care Unit (NICU) are at increased risk of developmental delay; additionally, they are exposed to sounds but relatively little language. Language exposure, such as talking, reading, and singing, is essential for speech and language development. Greater language exposure and shared reading in the NICU is associated with better neurodevelopmental outcomes.^{1,2} As such, the American Academy of Pediatrics (AAP) recommends that parents begin sharing books with infants as soon as possible after birth. Shared book reading can help parents promote literacy and reading achievement in their children; it also enhances parent infant bonding and reduces parental stress.³ Intervening in the NICU encourages parents to continue reading to their infant post-discharge; however, such a book sharing program has not been carried out on a large scale in a heterogeneous and diverse population in the Cincinnati region.

Relevance to NIDCAP

This project supports development of relationships between parents and infants in a NICU. Such early interactions, based upon responsive and synchronous experiences, may positively influence infant short-and long-term outcomes. Staff involvement that embraces parental partnership builds trust and positive unit culture. Embracing the Synactive Theory we know that infant behavior proceeds through continuous balancing of approach and avoidance behaviors across five subsystems, communicated as infant biobehavioral cues. Understanding and utilizing these behaviors is key to the length and timing of book sharing with infants in the NICU, as we individualize our interactions to support the competence of each infant within their family's supportive structure.

Aim

The aim of this project was to increase the adoption of shared book reading between parents and infants by increasing the percentage of parents sharing books with their infants in the NICU and continuing that book sharing post-discharge.

Method

All families from NICUs in the Cincinnati region from June 1, 2018 were approached. Discharged families were administered an Institutional Review Board (IRB) approved questionnaire at their first clinic visit assessing home reading environment and shared reading practices, adapted from a validated measure and from NICU infant-shared reading literature.³

Results/Findings

Before starting the intervention staff and parent reading beliefs and behaviors were assessed, as were the home reading environment for infants recently discharged from the NICU. The pre-intervention outpatient parent survey clinic in 198 families showed that 143 (64%) had infants who were never or rarely read to in the NICU, while 64 (29%) never or rarely read at home. Only 85 (38%) recalled having received anticipatory guidance on shared reading in the NICU, and very few (11%) recalled being shown how to read to their NICU infant. After adjusting for potential confounders, the frequency of reading aloud in the NICU was independently associated with the frequency post discharge ($p < 0.001$). The NICU Bookworm Program was designed with the hypothesis that such a program would increase the frequency of book sharing in the NICU and at home post discharge. Post intervention our data revealed that in 115 families, parents receiving anticipatory guidance increased from 38 to 60%. Parents being shown how to share books with their infant increased from 11 to 56%. Parents regularly reading to their child significantly increased in the NICU (34 to 54%). Parents regularly reading to their child at home increased (71 to 75%), but significant change was seen in the high-risk group (parents who did not enjoy reading) from 46% to 72%.

Conclusion

Despite AAP recommendations, there exist significant gaps on giving anticipatory guidance to parents in the NICU about shared book reading. Healthcare professionals can play a significant role in increasing this practice. In our population a structured book-sharing program increases reading behaviors in the NICU as well as at home post-discharge, with the most significant benefit seen in the high risk group of parents who themselves do not enjoy reading.

References:

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