

Direct Parent Involvement and Perception of Engagement in Care of Premature Infants through the DEFINE Colorado Study

Katelyn Johnson MS4₁, James S Barry, MD₁ BSN, RN₁, Lani Bowler BSN, RN₂, Cathy Busby₂
₁University of Colorado School of Medicine, ₂University of Colorado Health



Introduction

- ◆ Increased parent engagement has been shown to positively impact neurodevelopmental outcomes, breastfeeding rates, duration of hospital stay, and stress and anxiety scores in parents.¹
- ◆ The DEFINE Colorado study was developed to form a collaborative among Colorado hospitals to share data and initiate changes to increase family engagement in the NICU
- ◆ The goal of this portion of the study was to obtain baseline data to compare the effect of subsequent quality improvement changes to.

Study Aim

SMART AIM: By July 2022, families of infants with an expected NICU stay of at least two weeks will have improved family engagement by 20% on family-reported surveys through interventions including utilizing technology for communication, developing structured communication times, and reorganization of primary nursing assignments.

Methods

- ◆ From Nov 2021 to January 2022, we enrolled infants born at ≤ 34 weeks with an anticipated NICU stay of at least 14 days into the study to begin collecting data to obtain baseline information to which the effect of subsequent changes can be measured.
- ◆ We evaluated current caregiver perception through surveys developed by the DEFINE Colorado team¹ sent directly to the parents at around 2 weeks of life, 2 days prior to discharge and 1 month after discharge to assess their perception of direct involvement with their infants and social barriers.
- ◆ We obtained qualitative and quantitative data from parents and chart-abstracted measures. Data was analyzed in the REDCap system.^{2,3}

Table 1. Descriptive Characteristics

	N	Gestational age, mean (SD)	Birth weight, mean (SD)	Male sex, n (%)	Female sex, n (%)
All enrolled infants	19	30.39 weeks (2.95)	1475 g (457)	11 (57.9%)	8 (42.1%)
Infants with response to surveys	8	28.6 weeks (3.43)	1185 g (457)	6 (75%)	2 (25)

Results

- ◆ During the study 19 infants were enrolled. Parents of 8 infants responded to the parent-reported survey at 2-4 weeks of life. Of the 8 responses, 1 set was excluded as the infant was transferred prior to day of life 14. Figures 1-3 represent data from parent-reported surveys.

Figure 1. Effort made by healthcare team to help parents/caregivers understand infant's health issues

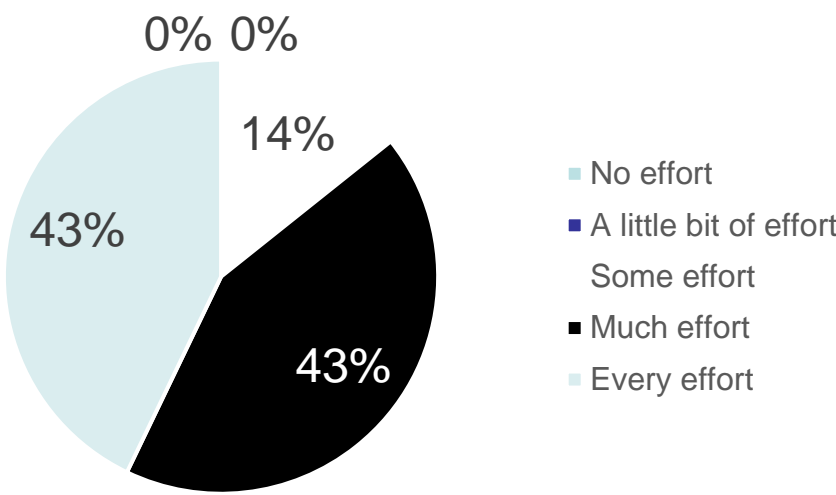


Figure 3. How often does parent/caregiver feel like the infant's parent

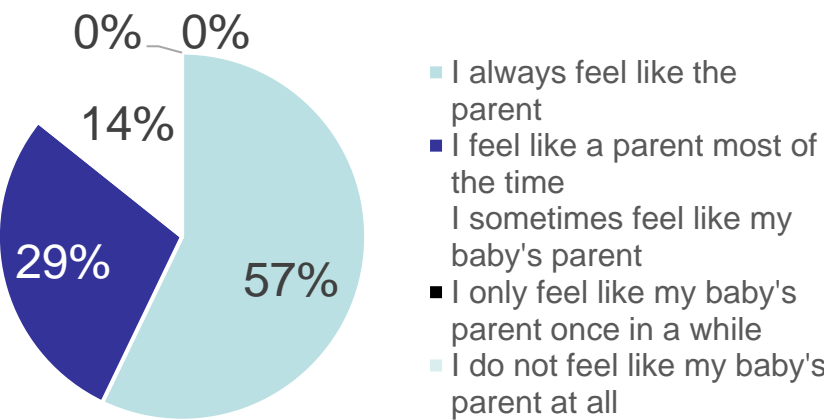


Table 2. Chart-abstracted outcomes

	All Participants (n=18)
Days in first week parents included on care plan, mean (SD)	6.88 (0.33)
First day of social work contact in first 7 days, n (%)	13 (72.2%)
First day of social work contact, mean (SD)	2.46 (1.33)
Skin-to-skin by caregiver in first 7 days, n (%)	14 (77.8%)
First day of skin-to-skin, mean (SD)	3.5 (1.95)
Hours of skin-to-skin in the first 7 days, mean (SD)	6.02 (6.51)

Figure 2. Has the parent/caregiver had enough input in the infant's care?

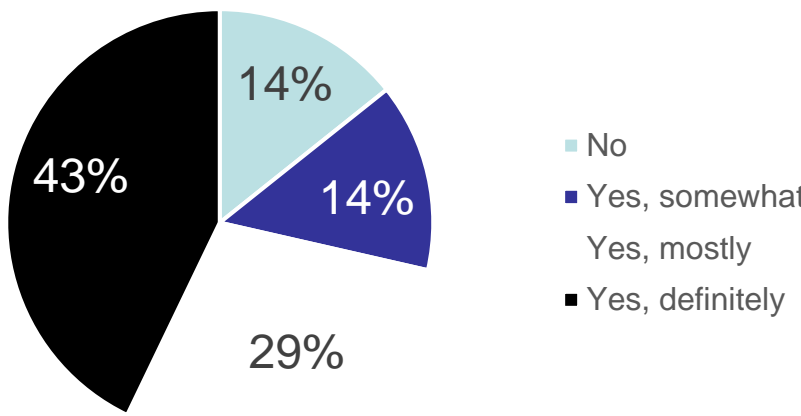
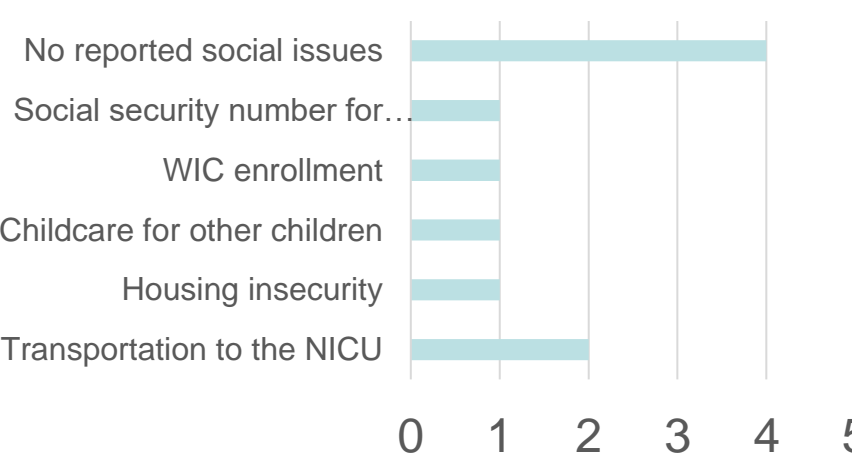


Figure 4. Parent-reported social barriers



Abstract

Background Preterm births are increasing in frequency and come with a number of health consequences. Studies have shown parent engagement positively impacts infants and their parents/caregivers. The goal of this study is to evaluate current parent/caregiver direct involvement and perception to subsequently implement changes with the goal of increasing family engagement, either in person or virtually.

Methods This study focuses on measuring baseline data to compare subsequent interventions to. Parent engagement was measured through parent-reported surveys as well as chart-abstracted measures. The study focused on infants at the University of Colorado Hospital level III NICU born at ≤34 weeks, targeting a stay of at least 14 days. Analysis of the baseline data was completed through REDCap and Microsoft Excel.

Results All three primary outcome measures as well as chart-abstracted outcome measures currently show high levels of family engagement. Other parent/caregiver-reported outcome measures show barriers exist to family engagement.

Conclusions The current data works to provide a baseline of family engagement in the NICU. However, the data is based on a limited sample size. Further enrollment to provide more baseline data may give a more complete picture of current engagement, especially in regard to parent-reported social/financial barriers, to which the effect of the potential change concepts can be compared.

Limitations

- ◆ Limited enrollment and parent-reported responses from November 2021-January 2022,
- ◆ Survey only in English and Spanish

Conclusions

- ◆ For all three primary outcome measures (Figures 1-3), most parents are reporting options correlating to higher levels of engagement.
- ◆ Next steps will be to implement changes such as including most recent provider updates in daily progress notes, improving primary care nurse tracking, utilizing technology for virtual interaction, improving interdisciplinary discussions regarding social barriers.

References

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 2. Harris PA, et al. Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, J Biomed Inform. 2009; 42(2):377-81.
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