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Parental Engagement in Cue-Based Feeding for Preterm Infants in the NICU: A Retrospective Cohort Study

Jessica Duby

jduby@cheo.on.ca

Children's Hospital of Eastern Ontario

Adeline Launay

Montreal Children's Hospital

Yi-Chen Su

Mount Sinai Hospital https://orcid.org/0009-0006-8954-0274

Christine Labelle

Montreal Children’s Hospital

Amanda Camacho

Montreal Children's Hospital

Elissa Remmer

Montreal Children’s Hospital, McGill University Health Center

Marc Beltempo

Montreal Children's Hospital, McGill University Health Centre https://orcid.org/0000-0002-0295-3206

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Abstract

Objective

To evaluate Family-Driven Feeding (FDF), a parent-engaged cue-based feeding protocol, on feeding outcomes in preterm infants.

Study Design

Retrospective propensity score-matched cohort study of infants born < 32 weeks' gestation. FDF was compared with historical volume-based feeding practices. The primary outcome was achievement of ≥ 25% oral feeds.

Results

Seventy-two FDF infants and 72 matched controls were included. A greater non-statistically significant proportion of FDF infants achieved ≥ 25% oral feeds (75.0% vs 62.5%; aOR 1.86, 95% CI 0.92–3.76). Oral feeding commenced earlier after respiratory support cessation for FDF infants (aHR 4.0, 95% CI 2.3–7.0). FDF was associated with a higher likelihood of achieving ≥ 25% oral feeds among the infants born < 29 weeks' gestation (aOR 3.16, 95% CI 1.02–9.83) and infants whose families participated in ≥ 1 feeding per day (aOR 4.73, 95% CI 1.84–12.13).

Conclusions

FDF was associated with improved oral feeding milestones, supporting parental engagement in NICU feeding practices.

INTRODUCTION

Preterm infants born before 32 weeks gestation require gavage feeding due to immature oromotor coordination.[1] Consequently, learning to feed by breast and/or bottle becomes a critical developmental task during hospitalisation in the Neonatal Intensive Care Unit (NICU). The achievement of oral feeding is a major determinant of length of stay.[2,3] Traditionally, clinicians prescribe the initiation and advancement of breast or bottle feeding based on postmenstrual age (PMA) and clinical stability.

More recently, NICUs have introduced infant-driven feeding or cue-based feeding in which feeding decisions are guided by the infant's behavioural cues.[4,5] Infant-driven feeding has been associated with earlier attainment of full oral feeds and earlier discharge.[6,7] However, most infant-driven feeding protocols rely predominantly on nursing assessments, with no explicit role for parents.[8,9] The lack of parent engagement in cue-based feeding represents an important missed opportunity. First, family

participation in bedside care enhances multiple short-term neonatal and parental outcomes, including improved growth velocity, increased breastfeeding rates and reduced parental anxiety.[10,11] Second, interventions targeting parental competency and confidence are associated with long-term benefits in cognition and functioning for preterm infants.[12,13] Finally, feeding issues are a major cause of re-admission for preterm infants.[14,15] Supporting parental feeding proficiency during in the NICU may therefore help reduce re-hospitalizations. The aim of the present study was to compare the clinical outcomes among premature infants before and after implementation of a Family-Driven Feeding (FDF) protocol.

METHODS

Setting

The Montreal Children's Hospital NICU (Canada) is a 52-bed level 3 NICU with single rooms and surgical and medical consultants on-site with approximately 800 admissions per year. It is the referral centre for an almost 800,000 square kilometres territory and 1.9 million people. In the context of regionalized and publicly funded neonatal care in the Province of Quebec, the majority (> 90%) of infants born < 32 weeks' gestation are admitted to Level 3 units, but approximately 50% are transferred from to a Level 2 unit for subsequent care (typically closer to their home). General criteria for transfer to Level 2 NICUs are harmonized in the province and include PMA ≥ 32 weeks, full enteral feeds, no central line and maximum respiratory support of CPAP at 5 cm H2O with FiO2 21% or low flow oxygen.

Pre-intervention standard of care

Prior to FDF, infants were transitioned from gavage feeds to oral feeds by a prescriber-driven, volume-based approach which was typically initiated at PMA ≥ 34 weeks when the infant was off CPAP and on low flow oxygen or in room air. Humidified high flow nasal cannula was not standard of care. Total fluid intake was typically 140 to 160 mL/kg/day of fortified (81cal/100 ml) human milk (mother's own milk and/or donor milk).

Intervention development and implementation

A multidisciplinary team of neonatologists, nurses, a nurse educator, a lactation consultant, an occupational therapist and a veteran NICU parent convened in March 2023 to improve the transition from gavage to oral feeding. Literature review, stakeholder engagement and pilot testing informed the development of FDF, a cue-based feeding program for parents and nurses. FDF was implemented in April 2024 following 2 weeks of voluntary daytime and evening nursing workshops attended by 84% (141/168) of active nurses. Workshops reviewed the physiology of suck–swallow–breathe coordination, identification of feeding cues, and assessment of feeding readiness and quality using video-based examples. Parents received education through a brief instructional video

(https://www.youtube.com/watch?v=jKRg6ccLoOI), written materials (Supplementary Material) and bedside teaching. Between May 2024 and May 2025, three Plan-Do-Study-Act (PDSA) cycles used documentation audits and parent and nursing surveys to identify opportunities for improvement. These cycles led to additional nursing education on adult learning strategies to increase parent engagement, new FDF orientation for medical trainees and a written explanation of FDF to Level 2 NICUs receiving transferred infants. Infants were deemed eligible for FDF when they met the following criteria: PMA ≥ 32 weeks, clinically stable on room air or low-flow oxygen, tolerating enteral feeds and without contraindications identified by the treating team. Once an infant was on the FDF protocol, the parent (or nurse if parent was unavailable) scored oral feeding readiness at each feed on a 4-point scale. If oral feeding score was < 4, the infant would be offered oral feeds (breast or bottle) and feeding quality was subsequently scored on a 3-point scale to guide feed duration (Fig. 1).

Study design and data collection

This was a single-centre, retrospective pre–post cohort study. Infants born < 32 weeks' gestation participated in FDF (May 2024–May 2025) and were compared with propensity score–matched historical controls identified from infants admitted before implementation (January 2021–December 2023) and allowing for a washout period (January 2024 – April 2024). This study was approved by the Research Ethics Board at the Research Institute of the McGill University Health Centre (ID: FDF / 2026–11880).

Data on infant characteristics and outcomes were obtained from the local Canadian Neonatal Network (CNN) database where patient information is entered electronically by trained abstractors into a data-entry program with built-in error checking, high reliability, and internal consistency.[16] The following characteristics were extracted: use of antenatal steroids (partial or complete), multiple births, mode of delivery, outborn status, GA at birth, birth weight, infant sex, 5-minute Apgar, exposure to invasive mechanical and/or non-invasive ventilation, necrotizing enterocolitis (NEC) stage 2,[17], length of stay and discharge location. Electronic medical records were reviewed for the following data: PMA at discontinuation of respiratory support, timing of initiation of oral feeds and daily quantity (oral and enteral). Adherence to FDF protocol, defined as whether the appropriate action was taken in response to the documented readiness and quality scores, was recorded in the post-implementation cohort.

Intervention group

During the FDF period, a project coordinator screened all infants weekly for FDF eligibility beginning at 32 weeks' PMA and continuing until they became eligible or were transferred or discharged from the NICU. Eligibility was confirmed by the principal investigator. For this study, we included infants born at < 32 weeks' gestation who were admitted to the Montreal Children's Hospital NICU within 72 hours of birth between May 2024 and May 2025 and survived to NICU transfer or discharge. We excluded infants with significant complications from NEC (e.g., short bowel syndrome), other gastrointestinal conditions

affecting oral feeding (e.g. recurrent gastric perforation), major congenital anomalies, neurological conditions affecting oral feeding, and those who were never prescribed FDF by the treating team despite meeting eligibility criteria.

Control group

To evaluate the association between feeding practices and clinical outcomes, we constructed a historical propensity score–matched cohort using the Target Trial Emulation Framework[18] for comparison with infants in the post–FDF cohort. A three-year historical control period was chosen to allow a robust matching buffer for strict propensity score criteria while reducing the risk of secular trends in clinical practice. The matched cohort was developed in two steps that were a priori defined.

Potential controls were identified using the local CNN database if they were born at < 32 weeks gestation, did not have major congenital anomalies and did not have surgical NEC or abdominal surgery for other reasons. First, propensity scores were estimated using logistic regression with the following variables: gestational age, sex, multiple birth status, inborn status, necrotising enterocolitis stage 2, and intubation history (yes/no). Matching was performed using a greedy 1:2 nearest-neighbour algorithm on the logit of the propensity score with a caliper width of 0.1.[19]

Second, for each potential control, charts were reviewed to select the control with the smallest absolute difference in corrected age at time of respiratory support cessation (in order to account for the time when a baby had the “opportunity” to feed which would correspond to the timing of randomisation in a trial) in order to obtain 1:1 matched pairs.

Outcomes

The primary outcome was achievement of ≥ 25% of prescribed total feeds by breast and/or bottle prior to discharge or transfer. Prescribed total feeds were defined as the daily fluid volume ordered by the treating team. For direct breastfeeding, milk intake was estimated using either pre- and post-feed weights or clinical estimates by parents and nurses, based on the individualized feeding plan developed between the family and the lactation team. The ≥ 25% milestone was selected because most infants were transferred to step-down units at other hospitals before achieving full oral feeds, allowing consistent measurement across the cohort. Secondary outcomes included time to first oral feed following discontinuation of respiratory support, time from first oral feed to achievement of ≥ 25% of total feeds, total time to oral achievement of ≥ 25% of total feeds, time to full oral feeds, length of stay, direct breastfeeding and parental participation in FDF.

Sample size

We anticipated a 1-week reduction in PMA at achievement of full oral feeds with an assumed standard deviation of 2 weeks. With a two-sided α of 0.05 and 80% power, 62 infants per group were required. To

allow for multivariable regression analyses, we aimed to enrol 70 infants per group, corresponding approximately to a 1-year implementation period.

Analysis

Descriptive statistics were used to evaluate the proportion of feeding assessments completed by parents and nurses. Rates of protocol deviation between parents and nurses were evaluated using a Wilcoxon signed-rank test. A protocol deviation was defined as having occurred if any of the following were documented (Fig. 1): a) infant was offered a bottle despite scoring “3” or “4” on feeding readiness; b) infant was put to the breast despite scoring a “4” on feeding readiness; or c) infant feeding lasted ≥ 5 minutes despite scoring “3” on feeding quality.

Kaplan–Meier curves were generated to illustrate cumulative probability of achieving 25% of oral feeds over time. Baseline characteristics between groups were assessed using absolute standardized differences, with values > 0.1 indicating imbalance. Clinical outcomes were compared using multivariable logistic regression for binary outcomes, gamma regression model with log link for continuous outcomes, and Cox proportional hazards regression with infants censored at discharge for time-to-event outcomes. Results are presented as adjusted odds ratios (aORs) and adjusted ratio of means (aRoM), and adjusted hazard ratios (aHRs) respectively with 95% confidence intervals (CIs). All models were adjusted for GA to improve precision since it is highly correlated with outcome[20] in addition to variables that were imbalanced between groups: sex, multiple birth status and mode of delivery. Generalized estimating equations with an exchangeable correlation structure were used to account for clustering within matched pairs. Analyses were conducted using matched pairs. For outcomes with missing values for one member of a pair, the entire pair was excluded from that specific analysis.

We conducted subgroup analyses among infants born at < 29 weeks’ gestation and among infants with high parental participation in FDF, with each subgroup compared with its matched non-FDF controls. High parental participation was defined as parents completing ≥ 12% of feeding assessments, corresponding to approximately one assessment per day for an infant fed every 3 hours and selected to represent daily parental presence at the bedside. To evaluate potential biases, we performed a sensitivity analysis using the 2:1 matched cohort (before selection of the closest match based on cessation of respiratory support) using similar models as described (adjusted for gestational age, sex and multiple births).

Statistical analyses were performed using SAS version 9.4 (SAS Institute Inc., Cary, NC, USA).

RESULTS

Seventy-two infants were included in the FDF cohort after application of eligibility criteria (Fig. 2). Clinicians did not prescribe FDF for two eligible infants. In the FDF cohort, parents completed 988 of 6925 feeding assessments (14%), corresponding to approximately 1–2 assessments per day, with nurses completing the remaining evaluations. Parent participation varied substantially between infants

(median 6.4% of assessments per infant, IQR 1.9–19.9%). Parent and nurse error rates were similar (median 0% vs 3.7%; p = 0.65).

Propensity score matching identified 72 controls from the pre-implementation period (Supplementary Material). Baseline characteristics were generally balanced between groups, except for lower rates of singletons, vaginal birth and NEC in the FDF cohort (Table 1).

The proportion of infants achieving ≥ 25% oral feeds before discharge was higher in the FDF group (75.0% vs 62.5%), although this difference was not statistically significant (aOR 1.86, 95% CI 0.92–3.76) (Table 2). Time from birth to achievement of ≥ 25% oral feeds was not significantly different between groups. Oral feeds were initiated approximately one week earlier in the FDF group than in matched controls. The median interval from discontinuation of respiratory support to initiation of oral feeds was 2 days in the FDF group vs 7 days in the control group. There were no significant differences in the remaining secondary outcomes.

In subgroup analyses, FDF was associated with a higher likelihood of achieving ≥ 25% oral feeds before NICU discharge among infants born at < 29 weeks' gestation compared to their matched controls and among infants with high parental participation in FDF (Table 3). Infants in both subgroups were also more likely to breastfeed than matched controls. Among infants born at < 29 weeks' gestation, length of stay was longer than in matched controls, consistent with their lower gestational age at birth.

Sensitivity analyses in the full unmatched cohort (n = 143 controls, regardless of timing of discontinuation of respiratory support) yielded similar findings. The association between FDF and achievement of ≥ 25% oral feeds reached statistical significance, and infants in the FDF group achieved ≥ 25% oral feeds earlier than controls (Supplementary File).

DISCUSSION

This study compared a cue-based feeding protocol that engaged parents (FDF) with a traditional prescriber-driven, volume-based feeding approach. Infants exposed to FDF initiated oral feeding earlier after discontinuation of respiratory support and were more likely to achieve ≥ 25% oral feeds before discharge and to reach this milestone earlier than matched controls, although the latter two associations did not reach statistical significance. In subgroup analyses, both were statistically significant among infants born at < 29 weeks' gestation and those whose parents had high FDF participation. Breastfeeding was also more common in both subgroups. Despite similar opportunities for education and support, parental participation varied considerably.

Multiple studies have shown that nurse-led cue-based feeding is associated with faster acquisition of oral feeds compared to prescriber-driven, volume-based feeding approaches.[5–7,9,21–23] Our findings extend these observations by demonstrating that similar benefits may be achieved when parents are engaged alongside nurses. To our knowledge, only one previous study has evaluated a cue-based feeding program involving parents.[24] Although that study reported earlier attainment of full oral feeds,

the intervention was introduced at 34 weeks' PMA in a single-centre where parents lived close to the hospital, and infants remained until discharge. In contrast, our intervention began at 32 weeks' PMA in a regional referral NICU, where many families travel long distances and approximately two-thirds of infants are transferred before discharge. This extends the evidence supporting parent-engaged cue-based feeding to a more geographically dispersed and regionally integrated model of neonatal care.

Most trials have not reported whether cue-based feeding is associated with earlier initiation of oral feeding.[6,7,9,21,23,24] In our study, infants in the FDF group initiated oral feeding sooner following discontinuation of respiratory support compared with controls. Earlier initiation may confer benefits beyond reducing time to full oral feeding, as oral feeding is a complex neurodevelopmental task requiring repeated infant-driven practice to coordinate sucking, swallowing, and breathing.[25,26] Readiness-based initiation may better align feeding progression with neurodevelopmental maturity than PMA-based thresholds and support attainment of other milestones.[27] Concerns that earlier initiation increases adverse events, such as aspiration, have not been supported in studies of cue-based feeding.[6,8,9]

In subgroup analyses, FDF was associated with improved feeding outcomes among infants born at < 29 weeks' gestation, suggesting that parent engagement in cue-based feeding may be particularly important for the most immature infants. These infants often experience prolonged periods during which opportunities for parental participation are limited because of medical instability.[28,29] They are also at greatest risk of delayed oral feeding skill acquisition and subsequent feeding difficulties.[30] FDF encourages parental participation during a period when feeding skills are still developing, rather than waiting until feeding difficulties become apparent.

A major strength of this study is that FDF was implemented as routine care rather than as a research intervention, with 97% of eligible infants exposed. This enhances the generalisability of our findings and demonstrates that parent-engaged cue-based feeding can be integrated into routine practice. Importantly, infants whose parents participated in at least one feeding assessment per day achieved feeding milestones earlier and were more likely to breastfeed than matched controls. These findings suggest the possibility of a dose-response relationship, with benefits observed with as little as one parent feeding assessment per day. Whether greater parental participation confers additional favorable outcomes warrants investigation in future studies.

There are several limitations to this study. First, as approximately two-thirds of infants in our NICU were transferred prior to achieving full oral feeding, we were unable to assess the impact of FDF on the complete transition from gavage to full oral feeding. Second, fidelity to the intervention could not be fully assessed, as neither parents nor nurses were directly observed for every assessment of feeding readiness or feeding quality. However, occupational therapists intermittently performed independent assessments and provided additional teaching when discrepancies were identified. In addition, protocol adherence based on nursing and parental documentation suggested low error rates. Finally, we did not assess the association between earlier initiation of oral feeding and adverse events. However, prior

studies of cue-based feeding have not demonstrated an increased risk of respiratory complications, including aspiration.[6,8,9]

Our findings suggest that parental participation in the transition from gavage feeding to oral feeding represents a meaningful opportunity to empower parents and strengthen partnerships between parents and healthcare providers in the NICU. Integrating parents into cue-based feeding builds on evidence that family engagement improves outcomes for preterm infants[10,33] and extends this literature to the transition from gavage to oral feeds. However, the variability in parental participation observed in our study highlights the need for further research to identify how cue-based feeding models can be tailored to support families with differing capacities, preferences, and needs.

Declarations

COMPETING INTERESTS

The authors have no competing interests to disclose.

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Tables

Table 1
Baseline Characteristics

Gestational age (weeks) (mean, SD)	**FDF (n = 72)**	**Matched controls (n = 72)**	**Absolute standardized difference**
	28.8 (2.1)	**28.8 (2.0)**	**0.03**
Birthweight (grams) (mean, SD)	1312 (353)	1284 (368)	0.08
Male sex, n (%)	37 (51.4)	42 (58.3)	0.14*
Multiple births, n (%)	21 (29.2)	17 (23.6)	0.13*
Inborn, n (%)	64 (88.9)	62 (86.1)	0.08
Caesarean section, n (%)	45 (62.5)	40 (55.6)	0.14*
5-Minute Apgar score (median, IQR) ¥	7 (6, 8)	7 (6, 8)	
Necrotizing enterocolitis‡, n (%)	2 (2.8)	4 (5.6)	0.14*
Never intubated, n (%)	46 (63.9)	45 (62.5)	0.03
Post-menstrual age at discontinuation of respiratory support (weeks+days) (median, IQR) ¥	33 + 4 (32 + 2, 35 + 0)	33 + 4 (32 + 2, 35 + 0)	Not applicable

*Absolute standardized difference > 0.1 indicating imbalance

¥ Standardized difference was not calculated for variables summarized as median (IQR)

‡necrotising enterocolitis stage 2[17]

Table 2
Primary and Secondary Outcomes

Achieved ≥ 25% oral feeds, n (%)	**FDF (n = 72)**	**Matched controls (n = 72)**	**Adjusted effect estimate* (95% CI)**
	54 (75.0)	**45 (62.5)**	**1.86 (0.92, 3.76)**
Postmenstrual age at first oral feeds, weeks+days, median (IQR) ¥	33 + 6 (32 + 4, 35 + 5)	34 + 6 (34 + 2, 36 + 1)	1.05 (1.02, 1.08)
Days between discontinuation of respiratory support and first oral feed, median (IQR)	2 (1, 6)	7 (3, 12)	4.25 (2.31, 7.81)
Days between first oral feed and achievement of ≥ 25% oral feeds, median (IQR)	8 (4, 16)	7 (4, 14)	1.13 (0.63, 2.03)
Days between birth and achievement of ≥ 25% oral feeds, median (IQR)	43 (20, 71)	50 (29, 78)	1.56 (0.83, 2.92)
Achieved 100% oral feeds, n (%)	22 (30.6)	24 (33.3)	0.83 (0.41, 1.71)
Length of stay, days, median (IQR)	53 (27, 91)	57 (32, 92)	1.13 (0.89, 1.44)
Postmenstrual age at discharge or transfer, weeks, median (IQR)	37 (34, 40)	37 (35, 40)	1.02 (0.97, 1.07)
Direct breastfeeding prior to discharge, n (%)	45 (62.5)	36 (50.0)	1.60 (0.76, 3.33)
Any breastmilk at discharge, n (%)	44 (61.1)	47 (66.2‡)	0.85 (0.45, 1.59)
Exclusive, n (%)	27 (37.5)	32 (45.1)	0.73 (0.36, 1.49)

*Adjusted effect estimates: odds ratio (OR) for binary outcomes, ratio of means (RoM) for continuous outcomes and hazard ratio (HR) for time-to-event outcomes

¥ Analysis restricted to 61 matched pairs

‡ Denominator n = 71

Table 3
Subgroup Analyses

***< 29 weeks' gestation*¥**	**FDF**	**Matched Controls**	**Adjusted effect estimate* (95% CI)**
	n = 29	***n = 29***	
Gestational age, weeks, mean (std)	26.6 (1.2)	29.1 (1.9)	
Achieved ≥ 25% oral feeds, n (%)	23 (79.3)	17 (58.6)	3.16 (1.02, 9.83)
Days between discontinuation of respiratory support and first oral feed, median (IQR)	2 (1, 3)	7 (4, 16)	26.59 (2.78, 254.03)
Days between first oral feed and achievement of ≥ 25% oral feeds, median (IQR)	8 (5, 27)	10 (4, 12)	5.00 (0.58, 42.80)
Length of stay, days, median (IQR)	95 (72, 111)	49 (27, 78)	1.63 (1.23, 2.14)
Direct breastfeeding prior to discharge, n (%)	12 (41.4)	9 (31.0)	2.96 (1.08, 8.10)
High parental participation‡	*n = 28*	*n = 28*	
Achieved ≥ 25% oral feeds, n (%)	24 (85.7)	15 (53.6)	4.73 (1.84, 12.13)
Days between discontinuation of respiratory support and first oral feed, median (IQR)	2 (1, 3)	6 (3, 12)	7.37 (2.07, 26.21)
Days between first oral feed and achievement of ≥ 25% oral feeds, median (IQR)	9 (3, 17)	7 (4, 20)	2.07 (0.63, 6.83)
Length of stay, days, median (IQR)	74 (48, 97)	45 (32, 78)	1.04 (0.75, 1.44)
Direct breastfeeding prior to discharge, n (%)	20 (71.4)	9 (32.1)	7.50 (2.20, 25.60)

*Adjusted effect estimates: odds ratio (OR) for binary outcomes, ratio of means (RoM) for continuous outcomes and hazard ratio (HR) for time-to-event outcomes

¥ Defined as FDF infants born at < 29 weeks' gestation and their matched controls

‡ Defined as parents completing ≥ 12% of feeding assessments

Figures

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FMU-3847

Figure 1: Family-Driven Feeding Form

NEONATAL INTENSIVE CARE UNIT (NICU)
Oral Feeding Assessment and Documentation Tool

Date (YYYY/MM/DD)										
Time (00:00)										
Assessment by: Parent (P) / Nurse (N)										
Readiness score										
Quality score										
Strategies (refer to legend)										
Breast / Nipple type										
Duration (minutes)										
Quantity (mL)										
Top off by gavage (mL)										
Parent initials										
Nurse initials										

READINESS TO FEED SCALE			
Score	**Baby BEFORE the feed**	**Action**	
1	Alert or fussy prior to care, or once handled, and sustained feeding cues: • Turns head and opens mouth (roots), and/or • Hands to mouth, and/or • Takes pacifier	Put to breast	Offer bottle
2	Sleepy but responds to stimulation. Shows some feeding cues.		
3	Briefly alert during care or sleeps throughout care. Limited or no feeding cues.		No bottle
4	Drops in heart rate or oxygen level (apnea/bradycardia/desaturation). Fast breathing (tachypnea) or difficulty breathing with care.	Gavage only	

Scan QR code to watch educational video

QUALITY OF FEEDING SCALE			
Score	**Baby DURING the feed**		**Action**
1	Breast: Latch is deep and strong. Sucks, swallows, and breathes in a coordinated pattern. Drops chin to indicate swallowing.	Bottle: Bottles with a strong suck. Sucks, swallows, and breathes in a coordinated pattern.	Stop at signs of disengagement. Typically about 20 minutes.
2	Breast: Latch is shallow or weak, or frequent need to re-latch. Sucks on and off, may fall asleep.	Bottle: Bottles with a weak / inconsistent suck. Coordinated but tires. Takes breaks spontaneously or needs external pacing. May have some milk loss.	Stop at signs of disengagement. Typically about 10 minutes.
3	Either breast or bottle: Unable to latch or poor suck at the bottle. Unable to coordinate suck, swallow, breathe pattern (coughs, chokes). Drops in heart rate or oxygen level. Fast / difficulty breathing during feed. Large amount of milk lost.		Stop immediately, complete by gavage.

LEGEND
Strategies Needed • Side-lying (S) • Pacing (P) • Breastfeeding reclined position (RP) • Partial expression (E)
Breast or Nipple • Breast (B) • Dr Brown's™ (Dr) • Ultra slow flow (USF) • Slow flow (SF) • Regular flow (RF)
Ø **Not applicable** ✶ **Refer to nursing notes**

Signature	Nurse/Parent	Initials	Signature	Nurse/Parent	Initials

DM- 6811 (REV 2024/03/21) Approbation CPRC (2024/01/16) CUSM Repro MUHC

Français au verso

Figure 1

Family-Driven Feeding form

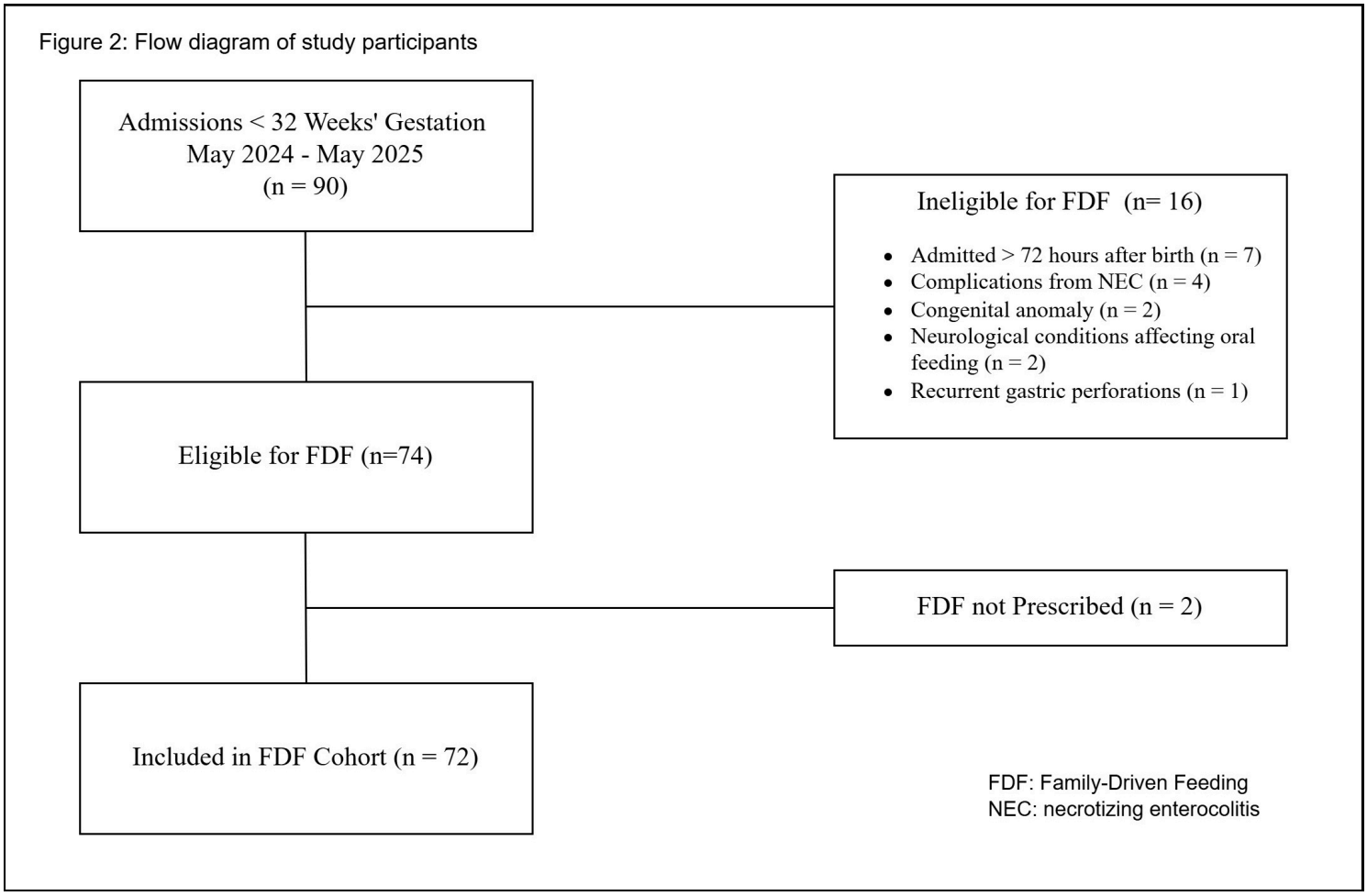


Figure 2

Flow diagram of study participants

Legend:

FDF: Family-Driven Feeding

NEC: necrotising enterocolitis

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- SupplementaryMaterialFDF.pdf