Bridging the NICU to Home:
A Team-Based Approach to Infant Discharge and Follow-Up Care

Activity 1

Implementing a NICU Discharge Planning Program: Evidence - Based Guidelines

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Case 1

Late Preterm Infant Discharge Planning

Late Preterm Infant Discharge Planning

- 34-week female preterm infant with an unremarkable NICU course, now 10 days old, on fortified breast milk but still taking part of her feeds by NG due to feeding fatigue, being readied for discharge to a first-time mother

- Theme: Suboptimal discharge planning for the "routine" late-preterm infant; the risks of discharging an infant with an incomplete discharge plan and the complications that may potentially follow; how gaps in a "simple" NICU discharge create downstream consequences; importance of systems, protocols, and standard processes

Case Details

- **Gestational age at birth:** 34 weeks
- **Birth weight:** 2000 g (10th-50th percentile)
- **Current chronologic age:** 10 days (corrected GA 35 3/7 weeks)
- **Current weight:** 2055 g (10th percentile)
- **NICU course:** Admission for prematurity, feeding immaturity, and mild respiratory distress requiring CPAP for 72 hours; mild jaundice treated with phototherapy
- **Nutrition status:** currently tolerating full enteral feeds (150-160 mL/kg/day) of fortified expressed breast milk; 75%-80% of feeds by mouth with the remainder via NGT for occasional fatigue and feeding dyscoordination
- **Growth:** BW regained DOL 7, then ~18 g/day

Case Details—Continued

- **Family background and context:**
  - 24-year-old first-time mother lives with parents in multigenerational household and expresses strong commitment to caring for her infant despite substantial anxiety about caring for a medically complex infant; has been present daily during NICU stay and actively participates in care
  - 25-year-old first-time father does not live in home but visits NICU several times per week; participates in rounds intermittently due to working full time, but expresses desire to learn feeding and NG tube management
  - Maternal grandparents provide transportation and plan to assist at home but express concerns about remembering medical instructions

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Case 2

Medically Complex Infant

Medically Complex Infant

- 28-week male infant—now 12 weeks old (~40 weeks corrected, 2.7 kg)—with history of gastroschisis, BPD, and oromotor dysfunction; will be followed from NICU discharge planning (current case discussion; Part 1) through the first outpatient pediatric visit (in next activity; Part 2)

- Theme: Coordinating a complex handoff across NICU, pediatrics, surgery, GI, and home health; family and home needs assessment and education

Case Details

- **Gestational age at birth:** 28 weeks
- **Birth weight:** 850 g (3rd-10th percentile
- **Current chronologic age:** 12 weeks (corrected GA ~40 weeks)
- **Current weight:** 2725 g (<3rd percentile)
- **Primary diagnosis:** Simple gastroschisis at birth, complicated by prolonged ileus and multiple abdominal surgeries; bronchopulmonary dysplasia/chronic lung disease, electrolyte abnormalities, h/o liver dysfunction, poor growth.

Case Details

- **Surgical treatment:** Staged reduction and closure of gastroschisis with multiple operative interventions (initial silo placement, partial reduction, delayed abdominal closure, central line placement) and later required reoperation for adhesive obstruction, ultimately achieving full closure
- **Nutrition status:** Required TPN for 6 weeks, now tolerating fortified breast milk feeds (~60% orally; remainder by NG tube)
- **Growth:** BW regained DOL 16, then 10-15 g/day DOL 16-51; 15-20 g/day DOL 52-84

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Activity 2

Caring for NICU Graduates in the Primary Care Setting

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Case 2

Medically Complex Infant Continued

Medically Complex Infant

- 28-week infant—now 12 weeks old (~41 weeks corrected, 2.4 kg)—with gastroschisis, BPD, and oromotor dysfunction; will be followed from NICU discharge planning (in previous activity; Part 1) through the first outpatient pediatric visit (current case discussion; Part 2)

- Theme: Coordinating a complex handoff across NICU, pediatrics, surgery, GI, and home health; family and home needs assessment and education

Case Details

- **Brief reminder of previous case introduction**
  - 28-weeker, 850 g at birth, multiple gastroschisis surgeries, TPN for 6 weeks
  - Sent home looking stable with instructions to follow up with her pediatrician and various subspecialties
- Discharged from the NICU 2 weeks prior, presenting for first outpatient visit with pediatrician
- **Chronologic age:** 14 weeks
- **Corrected gestational age:** 42 weeks
- **Current weight:** 2900 g (avg wt gain ~12 g/day since discharge)

Case Details

- **Medical history:**
  - Prolonged NICU hospitalization for gastroschisis complicated by surgical recovery and feeding challenges due to oromotor dysfunction
  - At discharge, infant was stable on room air with mild bronchopulmonary dysplasia, tolerating fortified breast milk feeds, and receiving partial NG supplementation (~40%)
- **Medications:** multivitamin with iron
- **Current status:**
  - **Feeding:** fortified breast milk (24 kcal/oz), with ~65% of feeds taken orally and the remainder by NG tube; parents report occasional spit-ups and fussiness after feeds
  - **Growth:** ~12 g/day

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Case 3

Pediatric Follow -up of “Healthy” NICU Graduate

Pediatric Follow-Up of “Healthy” NICU Graduate

- 32-week female infant who "looks fine" at multiple well visits, while feeding inefficiency, early motor delay, and growth faltering are not identified in the primary care setting

- Theme: How easily a seemingly healthy NICU grad can “fall through the cracks”; what do subtle warning signs look like in routine visits; importance of thorough interviewing and ongoing vigilant assessment

Case Details

- **Gestational age at birth:** 32 weeks
- **Birth weight:** 1750 g (50th-90th percentile)
- **NICU course:** 4-week admission for prematurity, feeding immaturity, mild anemia of prematurity
- **Discharge corrected gestational age:** 36 weeks
- **Discharge weight:** 2350 g (10th-50th percentile)
- **Feeding at discharge:** fortified breast milk (22 kcal/oz) via bottle; occasional direct breastfeed
- **Supplements:** iron, vitamin D

Case Details

- **Discharge instructions/planning:**
  - Continue fortified breast milk feeds and supplements
  - Weigh infant twice per week
  - Schedule pediatric follow-up within 1 week
  - Follow-up ROP examination scheduled
- **First pediatric visit (1 week after discharge):**
  - **Corrected age**: 37 weeks
  - **Weight:** 2510 g (gain ~23 g/day since discharge)
  - **Feeding:** breastfeeding well with occasional bottle feeds; infant occasionally tires during feeds but otherwise seems comfortable
- Pediatrician reassures the family that the infant is doing well; no changes are made to feeding or supplementation

Case Details—Continued

- **Pediatric visit (3 months' chronologic age/1 month corrected GA)**
  - Routine well-child visit
  - **Weight:** 3.65 kg (10th-50th percentile)
- **Feeding:** exclusive breastfeeding, with sessions lasting 35-40 minutes and sometimes falling asleep before finishing; fortification discontinued due to challenges with pumping and mixing as well as seeming "unnecessary"
  - **Growth:** has plateaued in last 10 days but otherwise appears adequate

Case Details—Continued

- **Pediatric visit (4 months' chronologic age/2 months' corrected GA)**
  - Visit scheduled to discuss increased fussiness and spit-ups
  - **Weight:** 4.1 kg (3rd-10th percentile)
  - Caregivers report frequent spit-ups after feeds, arching during feeding, and stooling once every 3-5 days
  - Infant is diagnosed with GERD, and caregivers are reassured

Case Details—Continued

- **Pediatric visit (6 months' chronologic age/4 months' corrected GA)**
  - Routine well-child visit
  - **Weight:** 5.15 kg (~5th percentile – transitioned to WHO growth chart)
  - **Feeding:** continues to spit up frequently; complementary feeding has not been introduced; parents believe breastfeeding is adequate because the infant seems satisfied after feeds
  - **Growth:** now crossing percentile lines downward, 5th percentile for corrected age
  - **Development:** limited head control when prone
  - Parents report infant dislikes tummy time and shows minimal pushing up on forearms
- The pediatrician is concerned about poor weight gain and possible feeding inefficiency contributing to early motor delay