

Newborn Critical Care Center (NCCC) Clinical Guidelines

ELBW Delivery and Admission Role Assignments

Two Experienced Providers (Attending, NNP, Fellow):

- **Leader** – Directs the Golden Hour from delivery through completion of admission according to ELBW guideline and algorithm
- **Provider #2** – Assumes responsibility for the head of the bed during delivery and line insertion in the NCCC

*** These roles are interchangeable but the **Goal** is for the leader to remain the leader throughout the Golden Hour*

Responsibilities of Roles:

1. **LEADER** to coordinate huddle with Golden Hour team when delivery imminent:
 - a. Determine respiratory plan
 - i. (CPAP or intubation for 25 weeks gestation based on risk factors)
 - b. Discuss any special circumstances such as fetal anomaly
 - c. Review roles/responsibilities
 - d. Ensure “shared mental model”
2. **Provider #2** gather, open, prepare umbilical line equipment when delivery imminent
3. **Provider #2** coordinate setting up camera for video of resuscitation and admission
4. **Provider #2** check resuscitation equipment on arrival for delivery
5. **LEADER** to ensure infant is stimulated during delayed cord clamping and communicate need to intervene if infant requires immediate resuscitation
6. **LEADER** to direct team through resuscitation and admission according to algorithm
7. **Provider #2** head of the bed and intubation
 - a. **LEADER** to provide back-up intubation/switch roles
8. **LEADER** to update and ensure infant is shown to parents prior to transporting to the unit
 - a. After infant is stable, collect cord blood from placenta and maternal identification sticker for ABO/Rh tube
9. **LEADER** to place ELBW orders on arrival to the unit
 - a. STAT order-set **FIRST**: labs, antibiotics, line placement film
10. **Provider #2** insertion of umbilical lines
 - a. **LEADER** to provide back-up line insertion/switch roles
11. **LEADER** to interpret radiograph for line placement and retain or dismiss x-ray technician once line placement confirmed
12. **Provider #2** update mother, obtain blood consent, discuss initiation of pumping and use of maternal and donor breast milk
13. **LEADER** after completion of Golden Hour, sign out to admitting provider and organize debrief

Nurses

Shared Nursing Roles Prior to Delivery

- Set-up bed space including priming all fluids
 - (D10W for PIV with medline, D10W with AA, Isotonic AA)
- Set-up and check all delivery room equipment including ELBW specific items (warming mattress, temp probe, PIV materials)

Nurse #1

- Start APGAR timer at delivery
- Assist with resuscitation (aiding providers under direction, auscultation of breath sounds and heart rate)
- Insert PIV
- May switch out with Nurse #2 if unsuccessful PIV attempt or uncomfortable with attempting
- Assist with lines/drugs as needed

Nurse #2

- Re-check resuscitation equipment on arrival for delivery
- Temperature advocate (places probe, ensures probe stays on, maintains plastic wrap coverage as much as possible with hat on top if no CPAP, takes DR temperature, etc.)
- Apply pulse oximeter and cardiorespiratory leads
- Assist with intubation
- Measure infant's temperature

Shared Nursing Roles on Admission

- Weigh infant on transfer to open isolette
- Temperature advocate (maintain infant on warmer mattress and wrapped in clear plastic)
- Obtain measurements and admission vitals
- Place on monitors
- Connect fluid and medication line to PIV and begin D10W at ~60mL/kg/day
- Secure infant for umbilical line placement
- Send STAT labs immediately after provider obtains umbilical arterial access
- Initiate antibiotic administration
 - On admission if culture obtained from cord blood
 - Or immediately after blood culture obtained during line placement
- STAT page for umbilical line film when provider begins to suture
- Secure umbilical lines and connect new fluids
- Administer Vitamin K and erythromycin
- Close isolette and initiate humidity once all tasks completed and temperature stable

Respiratory Therapists

- Set up ventilator and bubble CPAP in the unit
- Bring pre-warmed surfactant to all deliveries < 27 weeks gestation
- Ensure oxygen is initially set at 21%; adjust as indicated during resuscitation
- Place duoderm if infant requires intubation, taping and securing ETT
- Administer surfactant
- When airway secured take position at head of the bed to continue PPV or CPAP and maintain during transport from the DR to the unit
- Connect infant to ventilator or bubble CPAP once back in the unit
- Adjust oxygen during line placement
- Run POC arterial blood gas during umbilical line placement
- Adjust ventilator following ABG per provider instruction during umbilical line placement

	Leader/Provider 1	Provider 2	Respiratory Therapist	Nurse 1	Nurse 2
Pre-delivery	Prepare team Discuss respiratory plan & any special considerations Lead just-in-time simulation	Set up umbilical line supplies near admission bed space	Set up CPAP & ventilator at admission bed space Prepare surfactant	Prepare delivery room equipment Set-up bed space Warm IV fluids & prime all IV tubing	
Delivery	Encourage stimulation during delayed cord clamping Direct the team during resuscitation Back-up provider intubating infant (switch roles if needed) Obtain cord blood and maternal sticker for ABO/Rh tube Update parents Ensure parents see their infant prior to transport to the unit	Set up camera Clear air way Provide immediate CPAP or intubation based on respiratory plan & NRP Provide PPV as indicated	Set oxygen at 21% initially & adjust during resuscitation Secure CPAP & monitor/maintain PEEP Place protective barrier, secure ETT, & give surfactant if intubated Maintain airway once established	Start/announce APGAR time Auscultation of breath sounds and heart rate Insertion of PIV Assist with lines/drugs if needed	Re-check all resuscitation equipment Temperature advocate Apply pulse ox & CR leads Assist with intubation if needed
Admission	Admitting provider performs examination Place admission orders Look at x-ray/dismiss technician	Admitting provider performs examination Line placement with assistant Adjust lines	Connect to ventilator or CPAP Adjust oxygen Run POC gas and adjust ventilator per provider instructions	Temperature advocate Transfer to open isolette & weigh infant Obtain measurements & admission vitals Place on monitors Connect IV fluid with medication line to PIV Secure infant for line placement Send STAT labs during line placement Initiate antibiotics after blood culture obtained STAT page x-ray technician when ready Connect central IV fluids once umbilical lines confirmed Administer erythromycin & Vitamin K	
Completion	Sign out to admitting provider	Update family, obtain consent for blood transfusion, encourage initiation of pumping, discuss use of donor breast milk as bridge		Close isolette and initiate humidity once all tasks are completed and infant's temperature is stable	