

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