Newborn Critical Care Center (NCCC) Clinical Guidelines

Guideline for Infants Exposed to HIV

(Shared NCCC/NBN Perinatal HIV Guideline)

Initial Lab Work:

- Obtain baseline CBC with differential
- Obtain **Quantitative HIV RNA PCR:**

Qualitative HIV RNA PCR or HIV DNA PCR are acceptable tests to obtain, but UNCH has switched to the quantitative assay due to decreased blood volume needed.

- Send one, full (1.8mL) purple top tube (this tube includes CBC and HIV assay)
- **Do NOT** order HIV Antigen / Antibody Combo

*** All blood testing may be ordered with Newborn Metabolic Screen at 24 hours of life for those not receiving admission blood work.*

Level of Perinatal HIV Transmission Risk:

- **Low Risk Infants born to a person who:**
  - Is currently receiving and has received ≥ 10 consecutive weeks of anti-retroviral therapy (ART) during pregnancy; **AND**
  - Has achieved and maintained viral suppression (at least 2 consecutive tests with HIV RNA < 50 copies/mL at least 4 weeks apart) for the duration of pregnancy; **AND**
  - Has a viral load < 50 copies/mL at or after 36 weeks gestation; AND within 4 weeks of delivery **AND**
  - Did NOT have acute HIV infection during pregnancy; **AND**
  - Has reported good ART adherence without adherence concerns
- **High Risk Infants born to a person who:**
  - Has not received antepartum Antiretroviral Therapy (ART); **OR**
  - Has only received intrapartum ART; **OR**
  - Has received antepartum ART, but did not achieve viral suppression (at least 2 consecutive tests with HIV RNA < 50 copies/mL obtained at least 4 weeks apart) within 4 weeks of delivery; **OR**
  - Has primary/acute HIV infection during pregnancy

ANTIRETROVIRAL PROPHYLAXIS:
Management based on GA and risk status *(see definitions on page 1).*

TERM (≥ 37 weeks) HIV-EXPOSED INFANTS Initiate as soon as possible after delivery (ideally within the first 6 hours of life).		
Level of Risk	**Management**	**Dose**
Low Risk:	Zidovudine (ZDV) for 2 weeks	4 mg/kg/dose PO (or 3 mg/kg/dose IV) Q12 hours
High Risk:	Presumptive HIV Therapy with triple ART for 2-6 weeks. *If the duration of triple ARV is less than 6 weeks, ZDV is to be continued alone to complete 6 weeks.	ZDV • 4 mg/kg/dose PO (or 3 mg/kg/dose IV) Q12 hours Lamivudine (3TC) • 2 mg/kg/dose PO Q12 hours Nevirapine (NVP) • 6 mg/kg/dose PO Q12 hours
Infants born to a person who: • Does not meet low or high risk criteria BUT has a viral load < 50 copies/mL at or after 36 weeks gestation	ZDV for 4-6 weeks	4 mg/kg/dose PO (or 3 mg/kg/dose IV) Q12 hours

Adapted from: Panel on Treatment of HIV During Pregnancy and Prevention of Perinatal Transmission. Recommendations for the Use of Antiretroviral Drugs During Pregnancy and Interventions to Reduce Perinatal HIV Transmission in the United States. Department of Health and Human Services. Available at https://clinicalinfo.hiv.gov/en/guidelines/perinatal.

PRETERM (<37w) HIV-EXPOSED INFANTS Initiate as soon as possible after delivery (ideally within the first 6 hours of life).			
Level of Risk	**Management**	**Dose**	
Low Risk:	Zidovudine (ZDV) for 4-6 weeks	≥ 35 weeks GA	4 mg/kg/dose PO (or 3 mg/kg/dose IV) Q12 hours
		≥ 30 to < 35 weeks GA	2 mg/kg/dose PO (or 1.5 mg/kg/dose IV) Q12 hours **Age 2 weeks:** advance to 3 mg/kg/dose PO (2.3 mg/kg/dose IV) Q12 hours
		< 30 weeks GA	2 mg/kg/dose PO (or 1.5 mg/kg/dose IV) Q12 hours **Age 4 weeks:** advance to 3 mg/kg/dose PO (2.3 mg/kg/dose IV) Q 12 hours
High Risk:	Presumptive HIV Therapy with triple ARV therapy		
	ZDV	See above preterm dosing guideline	
	Lamivudine (3TC)	≥ 32 Weeks GA at birth	2 mg/kg/dose PO Q12 hours **Age 4 weeks:** advance to 4 mg/kg/dose PO Q12 hours
	Nevirapine (NVP)	≥34 to < 37 Weeks GA at birth	4 mg/kg/dose PO Q12 hours **Age 1 to 4 Weeks:** 6 mg/kg/dose PO Q12 hours
		≥ 32 to < 34 Weeks GA at birth	2 mg/kg/dose PO Q12 hours **Age 2 to 4 Weeks:** 4 mg/kg/dose PO Q12 hours **Age 4 to 6 weeks:** 6 mg/kg/dose PO Q12 hours

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INFANT CARE

Contact Dr. Tom Belhorn via direct pager (919-216-9049) to inform him of the patient and discuss the need for antiretroviral prophylaxis. *If the infant is delivered late in the evening or at night the page can wait until morning, however you may page him at any time if there are questions.*

Infant Feeding

- Avoiding breastfeeding eliminates the risk of postnatal HIV transmission to the infant and is recommended for mothers not receiving ART or without viral suppression at delivery. Mothers with HIV who choose to formula feed should be supported in this decision.
- Mothers with HIV who are on ART with a sustained undetectable viral load and who choose to breastfeed should be supported in this decision. Joint counseling with peds ID should be provided to address the following considerations:
    - Achieving and maintaining viral suppression via ART during pregnancy and while postpartum decreases breastfeeding transmission risk to < 1%, but not 0% (i.e., there is a small risk that transmission can occur).
    - Exclusive breastfeeding up to 6 months of age is recommended over mixed feeding (breast milk and formula) to prevent transmission. Rapid weaning off breastfeeding may increase the risk of HIV transmission. Therefore, weaning over 2-4 weeks may be safer and should be discussed with the ID provider.
    - If the mother elects to breastfeed, virologic testing of infant will be performed at birth, 14-21 days, 1-2 months, 4-6 months. After discontinuation of breastfeeding, testing should be performed at 4-6 weeks, 3 months, and 6 months after discontinuation. The timeline of ART may also change and will be determined by peds ID.
    - Breastfeeding should be discontinued if mother has newly detectable viral load, mastitis, or bleeding/cracked nipples.

Establish HIV status.

- HIV RNA PCR – send in 1st few days (to detect in-utero infection) in high-risk infants and infants with mothers without prenatal care
- If negative, repeat at 14-21 days (to detect intrapartum infection)
- If negative, repeat at 1-2 months and 4-6 months (include recommendations in discharge summary)
- HIV Ab testing (HIV Antigen / Antibody Combo) can be performed at 18 months for confirmation of negative diagnosis
- HIV testing after discharge from the NBN / NICU will be done by Dr. Belhorn in the Pediatric HIV Clinic

Discharge Planning

- The Pediatric HIV Social Worker (telephone 919-962-4491) or Dr. Belhorn will schedule the follow-up appointment in the Pediatric HIV Clinic prior to discharge
- All HIV-exposed infants must have a PCP designated prior to discharge

References:

1. Panel on Treatment of HIV During Pregnancy and Prevention of Perinatal Transmission. Recommendations for the Use of Antiretroviral Drugs During Pregnancy and Interventions to Reduce Perinatal HIV Transmission in the United States. Department of Health and Human Services. Available at https://clinicalinfo.hiv.gov/en/guidelines/perinatal.
2. Church, JA. Performance of HIV-1 DNA or HIV-1 RNA Tests for Early Diagnosis of Perinatal HIV-1 Infection During Anti- retroviral Prophylaxis. *Pediatrics* 2012;130(Supplement 1): S53-54.
3. Committee on Pediatric AIDS. HIV Testing and Prophylaxis to Prevent Mother-to-Child Transmission in the United States.
   Pediatrics 2008; 122(5): 1127-34.
4. 2021. "Human Immunodeficiency Virus Infection ", Red Book: 2021–2024 Report of the Committee on Infectious Diseases, Committee on Infectious Diseases, American Academy of Pediatrics, David W. Kimberlin, MD, FAAP, Elizabeth D. Barnett, MD, FAAP, Ruth Lynfield, MD, FAAP, Mark H. Sawyer, MD, FAAP

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