Perinatal Quality Collaborative of North Carolina

Provide the facilitation, support and education necessary to deliver optimal care for infants with neonatal abstinence syndrome (NAS)/neonatal opioid withdrawal syndrome (NOWS) in the hospital and for the first six months of the newborn period. Aim: • Create a multidisciplinary hospital and community-based team focused on providing a standardized approach to the identification, evaluation, treatment, discharge and follow up of the infant with NAS/NOWS / • Hospitals will standardize the non-pharmacologic and pharmacologic care of the infant with NAS/NOWS using practices based either on Eat Sleep and Console (ESC) or the modified Finnegan scoring system. / • Hospitals will increase partnership with families or guardians in the care of NAS infants. Every infant with NAS/NOWS will have the opportunity to participate in a Safe Plan of Care. At discharge infants with NAS/NOWS will be referred directly by the hospital based medical team to a community based medical team that will be responsible for ongoing newborn acute and routine care, and support for families or guardians.

Secondary Aim	Primary Drivers	Secondary Drivers
1 Proper Identification	1.1 Each nursery has a protocol that defines indications and procedures for screening for infants at risk for withdrawal	1.1.1 Identification of eligible infants for toxicology testing 1.1.2 Type of toxicology testing 1.1.3 Process for communicating results to mother or caregiver 1.1.5 Criteria for Referral to Social Work and CMARC 1.1.6 Criteria for CPS referral
	1.2 Each nursery develops criteria for toxicology testing and referral of infant to CHild Welfare for a Plan of Safe Care	1.2.1 Toxicology testing should be completed on all the following infants: • Known maternal history for substance use (inclusive of alcohol) • Positive maternal drug screen • And the following criteria: o No/late prenatal care (<4 visits or after 16 weeks) o Symptomatic infants o Unexplained abruption 1.2.2 A Plan of Safe Care referral to Child Welfare should be made for infants • Affected by Substance Abuse: 1. Positive urine, meconium or cord segment drug screen with confirmatory testing in the context of other clinical concerns as identified by current evaluation and management standards. *Or* 2. The infant's mother has had a medical evaluation, including history and physical, or behavioral health assessment indicative of an active substance use disorder, during the pregnancy or at time of birth. • Affected by Withdrawal Symptoms: o The infant manifests clinically relevant drug or alcohol withdrawal. • Affected by Fetal Alcohol Spectrum Disorder(s) (FASD)
	1.3 Each nursery communicates activities to families	

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1 Proper Identification (cont)		1.3.1 Each nursery develops appropriate education to ensure staff competency and family understanding of NAS identification
	1.4 Each nursery identifies potential barriers to discharge on admission	1.4.1 Each nursery identifies: • PCP as early as possible after admission • Resources needed to support discharge of infant with mother/caregiver • As early as possible whether a report beyond referral for a POSC needs to be made to Child Welfare regarding infant safety or risk for neglect, whether CPS referral will be needed- differentiate between a notification to Child Welfare due to meeting critera in 1.2.2 or report to Child Welfare due to concern about infant being at risk for abuse or neglect prior to or upon discharge. See Title I of Child Abuse Prevention and Treatment Act; Public Law No: 114-198, The Comprehensive Addiction and Recovery Act of 2016
2. Proper Evaluation	2.1 Each nursery adheres to a standardized plan for the evaluation of infants at risk for or showing signs of withdrawal	2.1.1 Each nursery adopts either the Modified Finnegan assessment-scoring tool or Eat Sleep Console (ESC) Method 2.1.2 Each nursery develops evidenced based protocols for scoring to include but not limited to: • When to score • How to score • When to begin pharmacologic treatment

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2. Proper Evaluation (cont)	2.2 Each nursery standardizes practices related to scoring that will improve inter-observer reliability and provide consistency in scoring of the infant at risk for or showing signs of withdrawal	2.2.1 Competency training for staff for either Finnegan assessment or ESC methods done at orientation and annually 2.2.2 Units adopt a dual observation requirement before infants are started on pharmacologic therapy.
	2.3 Each nursery recognizes the importance of consistency with caregivers	2.3.1 Each nursery prioritizes infants with NAS/NOWS for primary nursing
	2.4 Each nursery communicates activities to families	2.4.1 Daily contact at bedside or by phone with parent or guardian 2.4.2 Employ standardized materials that educate families regarding scoring for Finnegan or ESC method 2.4.3 Develop programs to allow family/guardian to participate in Finnegan scoring or decision to administer medication for ESC.
3. Proper Treatment	3.1 All nurseries employ non-pharmacologic treatment techniques prior to initiation of pharmacologic treatment	3.1.1 Non-pharmacologic supportive measures started immediately after identification of at risk 3.1.2 Minimizing environmental stimuli including low noise, low light, limiting visitors, cluster care 3.1.3 Consider best location for hospitalization (Private room?) 3.1.4 Swaddling 3.1.5 Encourage Maternal Presence 3.1.6 Encourage Skin to Skin 3.1.7 Encourage Kangaroo Care 3.1.8 Lactation Support

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3. Proper Treatment (cont)		3.1.9 Breastfeeding and the provision of expressed human milk should be encouraged if not contraindicated for other reasons
	3.2 Each nursery develops and adheres to a center defined standardized plan for the pharmacologic treatment of the infants at risk for or showing signs of withdrawal	3.2.1 Consider mother's substance exposure in selecting pharmacologic therapies 3.2.2 Hospitals identify standard first line medication: Morphine, Methadone or Clonidine. 3.2.3 Obtain pharmacy consultation when considering medical therapy 3.2.4 For Finnegan centers medications will be initiated based on the following process in scoring: Average of any 3 consecutive scores is >/=8 or average of any 2 consecutive scores is >/=12 3.2.5 Hospitals develop standard pharmacologic protocols whether ESC or Finnegan based. Includes weaning and escalation parameters, and drug to be used if a second medication required.
	3.3 Each nursery educates staff and parents on proper treatment	3.3.1 Develop standardized materials that educate families regarding ESC methodology 3.3.2 Routinely educates families on NAS treatment
4. Proper Discharge	4.1 Each nursery has a standardized minimum length of stay for all infants at risk for opioid withdrawal.	4.1.1 At risk is defined as including known antenatal drug exposure, a positive drug test or clinical signs or symptoms 4.1.2 Adhere to AAP length of stay standard of 4-7 days for all infants at risk for opioid withdrawal

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4. Proper Discharge (cont)	4.2 Each nursery adheres to a standardized plan for the discharge of infants and family/caregiver	4.2.1 Each center develops stability triggers for notification of proper organizations, family and PCP of pending discharge. 4.2.2 Each center includess infant and family/caregiver criteria for discharge to include but not limited to: • Identified caregiver • Medically stable with adequate weight nutrition • Clearance from all hospital or outside agencies (social work, CPS etc.) • Home situation reviewed • PCP identified and verbally updated with handoff • Follow-up appointments made or caregiver notified of needed follow-up appointments • Outpatient resources identified • Determine if outpatient meds/treatment (i.e. methadone) available in community pharmacy • Caretaker demonstrates normal infant care • Caretaker demonstrates ability to adequately feed infant • Caregiver demonstrates non-pharmacologic treatments • Caregiver provides return demonstration of medication administration • If caregiver is in recovery for opioid use disorder, have visiting nurse administer • Caregiver recognizes symptoms of withdrawal • Caregiver is educated as to when to notify PCP if concerned • CMARC referral
	4.3 Each nursery develops appropriate education to ensure staff competency and family understanding of discharge	4.3.1 Develop standardized materials that educate staff and families regarding discharge

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4. Proper Discharge (cont)		4.3.2 Education for families on NAS discharge includes: • Normal infant care • Feeding infant • Non-pharmacologic treatments • Medication administration if applicable • Symptoms of withdrawal • When to notify PCP if concerned
	4.4 Each nursery assures every family receives education regarding all elements of safe sleep for newborns	4.4.1 A discussion of safe sleep practices and the risks of unsafe sleep practices is conducted with the mother/parents/caregivers prior to discharge 4.4.2 Standardized materials are given to mother/parents/caregivers prior to discharge as a reference 4.4.3 Consider incorporating the safe sleep calculator into discharge discussions regarding safe sleep
5. Safe Sleep Practices	5.1 Each hospital models all elements of safe sleep for newborns	5.1.1 AAP 2022 safe sleep recommendations are incorporated into policy 5.1.2 Annual training updates include review of AAP 2022 safe sleep recommendations 5.1.2 AAP 2022 safe sleep recommendations are incorporated in to practice and measured via safe sleep audits which include: • Infant in supine position • Infant in a crib, or bassinet with a firm flat mattress; the head of bed should be flat • Sleeping space free of extra items, including loose blankets, pillows, bumpers, and stuffed toys • Infant sleeps in their own sleep space and not with another person

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5. Safe Sleep Practices (cont)		• modifiers for care in the unit are acceptable and explained 5.1.3 Consider partnering with Cribs for Kids' National Safe Sleep Hospital Certification program
	5.2 Each hospital assures a discussion with all mothers/parents families regarding the importance of safe sleep practices (100%)	5.2.1 Use of crib cards affirming safe sleep practices 5.2.2 Documentation of safe sleep counseling in all infant charts at discharge 5.2.3 Use of safe sleep calculator
	5.3 Each hospital assures mothers/parents receive reference materials regarding the importance of safe sleep	5.3.1 Distribution of Safe Sleep sheet information discussing reasons for safe sleep and recommended safe sleep practices