Perinatal Quality Collaborative of North Carolina

NAS Action Plan

Overall Aim: Create a multidisciplinary hospital based community focused on providing a standardized approach to the identification, evaluation, treatment and discharge of the NAS infant and family. There will be a 75% increase in inter-rater reliability scoring of NAS infants in hospitals, 75% adherence to hospital based NAS non-pharmacologic and pharmacologic treatment bundles and there will be a 50% increase in partnership with families in the care of their NAS babies. The latter will be demonstrated by a bundle of process measures that includes support for breastfeeding, regular parent visitation, and parent participation in NAS scoring of infants. by 30-September 2015.

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 obtaining specimens for testing 1.1.4 Process for communicating results to mother or caregiver 1.1.5 Criteria for Referral to CPS 1.1.6 Criteria for Social Work consult
	1.2 Each nursery ensures proper toxicology testing	1.2.1 Develop order sets to include but not limited to: • Specimen chain of custody • Identification of testing method • Reason for testing
	1.3 Each nursery develops criteria for toxicology testing	1.3.1 Toxicology testing should be completed on all the following infants: • Known maternal history for drug use • 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
	1.4 Each nursery communicates activities to families	1.4.1 Each nursery develops appropriate education to ensure staff competency and family understanding of NAS identification

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1 Proper Identification (cont.)	1.5 Each nursery identifies potential barriers to discharge on admission	1.5.1 Each nursery identifies: • Identification of PCP • Center specific barriers • If CPS referral will be needed
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 Finnegan or Modified Finnegan assessment-scoring tool 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
	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 Adopt an inter-observer reliability program 2.2.2 Perform Inter-observer reliability testing for staff using the Finnegan/Modified Finnegan scoring tool (Neoadvances Inter-Observer Reliability Program) 2.2.3 Testing for staff done on employment to the unit and annually 2.2.4 Staff demonstrates 90% reliability
	2.3 Each nursery recognizes the importance of consistency with caregivers	2.3.1 Each nursery prioritizes NAS infants for primary nursing
	2.4 Each nursery communicates with family regarding evaluation processes	2.4.1 Develop standardized materials that educate families regarding scoring 2.4.2 Routinely educates families on NAS scoring 2.4.3 Teach families to score infants 2.4.4 Allow families to participate in scoring

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3. Proper Treatment	3.1 Each nursery employs non-pharmacologic treatment techniques prior to initiation of pharmacologic treatment	3.1.1 Non-pharmacologic supportive measures started immediately after identification 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 Skin to Skin 3.1.6 Holding and Kangaroo Care 3.1.7 Lactation Support 3.1.8 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 Obtain pharmacy consultation when considering medical therapy 3.2.2 Consider mother's drug exposure in selecting pharmacologic therapies 3.2.3 Initiation of first line medication: Morphine, Methadone or Clonidine. 3.2.4 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 Center defined Dosing 3.2.6 Center defined Initiation of second line medication: either Morphine, Clonidine or Phenobarbital 3.2.7 Center defined weaning parameters including which medication to wean first and dosing 3.2.8 Center defined escalation parameters including which medication to escalate first and dosing

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3. Proper Treatment (cont.)	3.3 Each nursery educates staff and parents on proper treatment	3.3.1 Develop standardized materials that educate families regarding treatment 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 at risk infants. 4.2 Each nursery adheres to a standardized plan for the discharge of infants and family/caregiver	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 at risk infants 4.2.1 Each center develops stability triggers for notification of proper organizations, family and PCP of pending discharge. 4.2.2 Each center develops infant and family/caregiver criteria for discharge to include but not limited to: • Identified caregiver • Medically stable with adequate weight nutrition • Two successful weans before discharge • 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 • Caregiver recognizes symptoms of withdrawal

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4. Proper Discharge (cont.)		• Caregiver is educated as to when to notify PCP if concerned • CC4C 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 4.3.2 Routinely educates families on NAS discharge to include • Normal infant care • Feeding infant • Non-pharmacologic treatments • Medication admiistration • Symptoms of withdrawal • When to notify PCP if concerned
5. Reduction in the % of NAS infants requiring pharmacologic intervention by 25%	5.1 Intensively promote partnership with families and staff methods that effectively treat newborn withdrawal without requiring medical therapy	5.1.1 Educate mothers whose infants are at risk for NAS about NAS scoring and potential treatment • Antenatal consults • Prenatal education at drug treatment centers 5.1.2 Develop a culture that encourages and supports breastfeeding rather than “permitting” breastfeeding. 5.1.3 Hospitalize infants in the most environmentally appropriate space • Low stim, low light, low noise • Develop staffing that supports infants when parents cannot be present (volunteers, care teams, primary nursing) • If single rooms not available in the NICU consider use of pediatric ward 5.1.4 NAS Scoring • Prioritize inter-rater reliability 5.1.5 Have infant scored by second nurse when score of 8 or more 5.1.6 Incorporate families