

NAS Neonatal Guidelines

NAS NEONATAL GUIDELINES: NEWBORN SCREENING AND ASSESSMENT				
	RECOMMENDATION	RATIONALE	QUALITY OF EVIDENCE & CLASSIFICATION OF RECOMMENDATIONS	IMPLEMENTATION CONSIDERATIONS
Screening	<p>6. Toxicology testing may be done on all known and suspected cases of NASⁱ, defined as follows:</p> <ul style="list-style-type: none"> • mothers identified by primary or obstetrical caregivers • mothers engaged in high-risk behaviour (i.e. taking street drugs) • mothers identified by child protection agencies or other community agencies • mothers who disclose illicit drug use in pregnancy • mothers who act in an intoxicated manner on admission or during office visits • mothers with a positive history of alcohol and/or drug use/abuse • mothers of newborns presenting with NAS symptoms 	<p>Screening in known and suspected cases of NAS is a highly effective way to identify drugs of abuseⁱⁱ.</p> <p>Results are critical to guide treatment, diagnose polydrug use, determine long term follow-up needs and identify social risks and referrals.</p> <p>Toxicology testing should supplement maternal self-report; therefore, it may not be needed in cases of maternal disclosure of substance use.</p>	II-1	<p><i>Algorithm for Assessment and Care of Infants at Risk of NAS</i></p> <p>Medical directive facilitates early sample collection by nurses.</p> <p>Training for practitioners that includes: physician order, importance of first sample for urine and meconium, collection method and storage of sample, consent requirements.</p> <p>There is no clear opinion regarding consent for testing.</p> <p>Support practitioners to develop a comfort level and confidence in discussing testing matters with women and their support person.</p>

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	<p>7. Toxicology screening includes the following, but does not limit additional testing deemed necessary by the physician:</p> <ul style="list-style-type: none"> a) Urine and meconium testing using first sample passed. b) Test urine for: cocaine (and its major metabolite benzoylecgonine), methamphetamine, amphetamine, canaboid, benzodiazepines, opioid narcotics and Oxycodone. 	<p>Urine testing detects recent exposure to drugs from the mother. The infant's first urine sample is best. A negative result should not be interpreted as lack of exposure because the drugs stay a short time in the urine.</p>	<p>II-2</p>	<p>Educate practitioners regarding testing methods and importance of collecting first urine and meconium samples after birth.</p> <p>Support practitioners to develop a comfort level and confidence in discussing testing matters with women and their support person.</p>

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Screening	<p>c) If the urine is positive do not repeat same tests on meconium. Test meconium only for fatty acid ethyl esters (FAEE).</p> <p>d) If urine is negative, test meconium for all substances listed in 2 b) and also for FAEE.</p>	<p>Meconium and neonatal hair tests are highly effective in identifying fetal exposure to drugs of abuse since the 2nd trimester.</p> <p>Meconium testing detects longitudinal drug and alcohol use. The infant’s first meconium is best. Collect and store for later analysis when a physician’s order is obtained.</p> <p>Meconium testing must specify the substances to be tested.</p> <p>The range of substances that meconium is tested for are important, not only to guide current treatment but also long term treatment, since not all long term effects may be known at the time of testing.</p> <p>Infants with NAS are at high risk for in-utero exposure to other drugs of abuse and also alcohol.</p> <p>Objective assessment and identification of infants at risk for Fetal Alcohol Spectrum Disorder (FASD) is very important for infants with NAS because women with drug addictions are substantially more likely to consume large amounts of alcohol which is associated with FASD. Meconium analysis of FAEE is a biomarker for heavy maternal drinking. Positive results put the child at high risk (40%) for FASD, a window of opportunity that should not be missed. Positive FAEE calls for neurocognitive follow-up of the child.</p>	II-2	

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	e) Hair testing, at the discretion of the physician, after 2 days postnatal if the opportunity to collect first urine and meconium samples has been missed.	Hair testing may be done up to 3 months of age, at which time neonatal hair sheds.	II-2	
	f) Positive test results for illicit substances require a duty to report to child protection services for further assessment.	The goal of screening is to achieve an accurate diagnosis for the purpose of treatment planning. Screening may create a conflict between maternal and neonatal interests. Professionals must report that a child is or may be in need of protection, even when the information is otherwise confidential or privileged. This duty applies although the information might be confidential, and overrides any provisions that would otherwise prohibit someone from making a disclosure (Child and Family Services Act (CFSA) 72. (1) and 72(7).) The duty specifically prevails over any provision of the Personal Health Information Protection Act (PHIPA) CFSA s. 72(9)		A person who has a duty to report must report directly to a child protection agency. That person may not rely on anyone else to report on their behalf.
Screening	8. Initiate in-patient psychosocial screening upon suspicion of use or abuse of substances. This may include: social work, spiritual care, child protection services, etc.	Psychosocial screening may trigger involvement of child protection services.	II-2	Educate clinicians regarding referral process.

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Scoring	<p>9. The Modified Finnegan Scoring Toolⁱⁱⁱ should be used to assess suspected or known cases of NAS. Modified Finnegan Scoring System</p> <p>a) Score known or suspicious cases of NAS based on the criteria listed in recommendation 1.</p> <p>b) Initiate scoring upon establishing suspicion and beginning testing.</p> <p>c) Score for minimum of 72 hours if score remains under the treatment threshold of 8. If the child does not reach treatment threshold within 72 hours they become eligible for discharge.</p> <p>d) In cases of methadone exposure, infant to be observed for 120 hours since onset of withdrawal may be delayed.</p> <p>e) Score with each care interaction, typically q 2-4 hrs. Initiate pharmacologic treatment if the average of 3 scores is ≥ 8 or the average of two scores or two consecutive scores are ≥ 12. Continue scoring during treatment and weaning. After treatment has been discontinued, scoring should continue for 48-72 hours.</p> <p>f) Mother- baby dyad care should be supported with rooming-in until the infant requires pharmacological treatment in the Special Care Nursery.</p>	<p>The purpose of using a scoring tool is to enable a systematic, objective, periodic and thorough evaluation of the infant to support their care needs and identify the need for pharmacologic therapy. The modified Finnegan Scoring Tool is designed to quantify the severity of NAS and to guide treatment in full term infants^{iv}. It is universally used, captures all possible domains, has a robust cut-off for initiation of treatment and is sensitive and specific for follow-up. It is the most comprehensive of available scoring tools and is the most validated.</p> <p>The modified Finnegan Scoring Tool is user friendly with training in its use. Modified Finnegan Scoring System</p> <p>Withdrawal symptoms occur in up to 85% of methadone exposed infants^v however onset of symptoms may be later than with other opioids.</p>	II-1	<p>Clearly identify who is responsible for administering the Finnegan Tool.</p> <p>All mother-baby nurses will require training to effectively use the scoring tool so that disruption of mother baby dyad care will be minimized.</p> <ul style="list-style-type: none"> ● Infant must be awake and calm for testing to be done ● If infant is sleeping, wait until they wake up ● Observe infant undisturbed for approximately 1 minute, undress to continue observations then redress, swaddle and observe again for approximately 1 minute. <p>Mother-baby nurses should be taught non-pharmacological treatment techniques.</p> <p>Consideration for workload on the mother baby unit will be required when the nurse is caring for an infant with NAS.</p> <p>Identify a resource person with extensive knowledge and experience to support questions and difficult cases on a consultation basis.</p>

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	<p>g) If a methadone exposed infant does not withdraw in hospital, they will require referral for ongoing monitoring for NAS as an out-patient.</p> <p>h) The mother and caregivers should be educated about observing for signs of withdrawal after discharge.</p>			
	<p>10. Encourage participation of parents, family and care providers even when baby is in nursery.</p> <p>During the weaning process or when monitoring is discontinued, and when family or facility circumstances permit, all efforts should be made to promote care-by-parent opportunities.</p>	<p>Pediatric units may be utilized, where available, to promote care-by-parent opportunities.</p>		
	<p>11. If parents wish to discharge their infant against medical advice the child protection agency should be notified to complete a risk assessment.</p>	<p>This action is not unique to the NAS population. However the risk to an infant with NAS may be considerably greater than in other clinical situations.</p>	<p>II-2</p>	

ⁱ Murphy-Oikonen J, Montelpare W, Southon S, Bertoldo L, Persichino N. Identifying Infants at Risk for Neonatal Abstinence Syndrome. 2010. J Perinat Neonat Nurs; 24(4):366-372

ⁱⁱ Murphy-Oikonen J, Montelpare W, Southon S, Bertoldo L, Persichino N. Identifying Infants at Risk for Neonatal Abstinence Syndrome. 2010. J Perinat Neonat Nurs; 24(4):366-372

ⁱⁱⁱ Jansson L, Velez M, Harrow C. The Opioid Exposed Newborn: Assessment and Pharmacologic Management. J Opioid Manag. 2009; 5(1): 47-55

^{iv} Jansson L, Velez M, Harrow C. The Opioid Exposed Newborn: Assessment and Pharmacologic Management. J Opioid Manag. 2009; 5(1): 47-55

^v Murphy-Oikonen J, Montelpare W, Southon S, Bertoldo L, Persichino N. Identifying Infants at Risk for Neonatal Abstinence Syndrome. 2010. J Perinat Neonat Nurs; 24(4):366-372