



NEONATAL ABSTINENCE SYNDROME (NAS) CLINICAL PRACTICE GUIDELINES 2016

February 1, 2017 Webinar Questions & Answers

For more information and to download the 2016 NAS Clinical Practice Guidelines, please visit our website: <http://www.pcmch.on.ca/health-care-providers/maternity-care/pcmch-strategies-and-initiatives/neonatal-abstinence-syndrome/>

Q1. Every baby with NAS should be followed for developmental assessment. Is there a specialized clinic for these babies in Toronto or elsewhere in the province?

There are multiple neonatal follow-up clinics across Ontario, including Toronto. At St. Joseph's Health Centre in Toronto, for example, their clinic has an interdisciplinary team consisting of a neonatologist/paediatrician, nurse and speech/ language therapist who can monitor these babies throughout the first 2 years of life. The neonatal follow-up clinic provides extra help in addition to a family's primary care provider. The benefit of such extra assessments is that concerns can be identified early, so that interventions can be implemented sooner.

Q2. Why is morphine the drug of choice for babies in withdrawal rather than methadone or similar drugs?

In most studies, morphine was found to be the best medication to treat symptoms of opioid withdrawal. There are only a few studies using methadone or buprenorphine but there is not enough evidence to support the routine use of buprenorphine or methadone. As such, the majority of studies found that morphine is the agent of choice.

Q3. Is neonatal follow-up recommended for all babies exposed to maternal opioids or just those babies requiring treatment?

All infants exposed to opioids in-utero are considered at-risk for poor developmental outcomes and would benefit from being followed at a regional neonatal follow-up clinic. There is ongoing debate in the literature about how much of the adverse outcome is related to in-utero exposures versus environmental deprivation, but regardless, it is important for all exposed infants, even those who did not require morphine treatment, to have ongoing follow-up.

Q4. Please elaborate further on the successes of weaning neonates on morphine on an outpatient basis/ at home?

The possibility of weaning neonates on morphine at home is very dependent on the local resources and numerous patient factors. For example, weaning at home has been done in London (and the southwest region in general) for a long time. They have criteria in place that reflect their policy in terms of what is necessary for weaning at home. In London they usually have a well identified care provider who will be following-up with the family. They also have a stringent protocol in place for prescriptions and the follow-

up for prescriptions – families are sent home with a calendar and information on how to wean. Their protocol is for a 6-week asymptomatic wean, as opposed to a threshold wean – a threshold wean is when you are trying to wean the baby off of morphine fast, which is more difficult to do as they may rebound and may need more attention. The physicians in London also work closely with the pharmacy, so if a family comes in and wants to refill the medication early, this information is communicated to the physicians who are able to determine whether that is appropriate or if there are concerns about overuse of the medication (which could be a flag for a referral to children’s aid).

At St. Joseph’s in Toronto, on the other hand, they have difficulty sending babies home on morphine to wean. Sometimes women will come to the hospital from further distances and they may have difficulty identifying a care provider who will be able to follow the woman and baby once they are discharged home. Many of these women do not have an established family doctor or a doctor that they feel they can trust in the community, and as such, the care falls back on the hospital physicians.

Q5. A lot of the regional neonatal follow-up clinics are geared towards motor deficits and language deficits, so it can be tricky taking in all of these babies and seeing them at 4 months, depending on how the clinic is geared. As such, how useful is this model relative to other paediatric care models?

In regards to follow-up, it is very resource dependent. There are different models/ programs, with different resources, targeting different populations. Follow-up of NAS babies is a different type of follow-up that requires resources that may not be automatically available in regional neonatal follow-up clinics, as most focus on following-up babies that are born preterm or small for gestational age. The key, however, is that these babies are being followed-up by a care provider in some way, with particular attention on development.

Q6. Do you see withdrawal in babies of mothers on Paxil who screen negative for opioids, and if so, would you treat them in the same way?

We do see withdrawal/ symptoms in babies of women who have been on Paxil, but the experience can be varied and does not necessarily mimic NAS. As such, the standardized NAS scoring tool is not generally used to assess these babies. The babies can often have respiratory symptoms and pulmonary hypertension; but the symptoms overall tend to be short-lived, resolving in 48-72 hours, and therefore do not require any long-term treatments.

There are some misconceptions about the use of the standardized NAS scoring tool and its associated treatment protocol with morphine, leading some care providers to use the tool for other disorders that follow exposure to other substances, even if the mother is not using opioids. The scoring and treatment protocol with morphine is not meant to be used for other exposures, such as SSRIs. This guideline is specifically focused on exposure to opioids and not other substances.

Q7. If a mother continues to take methadone and is breastfeeding, are there any considerations when the baby is weaned off breast milk to formula?

Based on the literature, there are no concerns. A small amount of the methadone ingested by the mother will be detected in breast milk. Since breastfeeding is a weaning off process, the amount of methadone that the baby is exposed to is gradually reduced and the baby will not experience a sudden withdrawal syndrome similar to NAS.

Q8. Should women who are on methadone attempt to reduce their methadone dosage if they are motivated and stable in order to reduce the risk and severity of NAS?

We know from a published review of the literature that there is no direct correlation between maternal methadone dose and the severity of NAS. As such, there is no reason to reduce maternal methadone dose since it will not reduce NAS. However, lowering a methadone dose can lead to instability and put the pregnant woman at risk of relapse, as documented by most studies. Therefore, the goal of methadone dosing during pregnancy is to maintain the pregnant woman on a dose that is comfortable for 24 hours and reduces the risk of relapse.

Women who are maintained on low doses of methadone, such as up to 10mg of methadone, at the start of the pregnancy and who are stable clinically and socially, may be considered for weaning off methadone during the pregnancy in order to prevent NAS from occurring. On the other hand, women who are on higher doses of methadone are not likely to be weaned off by the end of the pregnancy and therefore, a detoxification should not be attempted.

Q9. Is there a dose-effect relationship for methadone and NAS? What percent of babies whose mothers are on methadone end up requiring morphine?

There is no direct correlation. Non-pharmacological interventions are recommended for all newborns. Pharmacotherapy is only indicated in newborns who have more severe withdrawal. The rate of treatment could be anywhere from 30% to 50%, or higher, depending on what study you are reading or what institution you are referring to. There are local variations and variations over time, depending on opioids being used.

In London, for example, after moving to a new hospital that facilitated non-pharmacological interventions (e.g., quieter setting), they noticed a significant reduction in medical treatment as a result.

Q10. For how many years is developmental follow-up recommended, if it is available?

In Ontario, follow-up at the neonatal follow-up clinics is generally funded for 2 years, which may not be long enough to detect any adverse outcomes. Based on limited long-term follow-up studies, language delays and behaviour issues become more problematic once they reach school age. This means that these children benefit from continuity of care with a single provider who can monitor their development over time.

It is also important to keep in mind that not all the risks are related to the opioid exposure, as social environment also contributes to these outcomes. Many of these children may have attention deficit hyperactivity disorder and other learning disabilities, for example, but these conditions could be due to either genetics or environmental deprivation. Attachment/ bonding are other areas of interest that may be impacted around birth, which will also affect infant health outcomes.

Q11. Since non-medical measures have reduced the need for treatment, do you keep mothers and babies together and promote skin-to-skin contact?

Definitely! Mothers and babies should room-in together for as long as possible, and babies should only be moved to special care nurseries when they require pharmacological treatment. In London, for example, rooming-in is even possible in the NICU, so the mother can move into the baby's room.

Across Ontario, more and more hospitals now have rooming-in initiatives on mother-baby units (or paediatric units), with staff receiving training on how to care for these families (e.g., use of the standardized NAS scoring tool). Such initiatives have seen dramatic decreases in the numbers of babies that actually require morphine.

Studies from BC have shown that long-term maternal stay while the baby is in withdrawal is associated with lower rates of NAS treatment. Other programs that are also being studied include the cuddlers program, where volunteers can provide contact and comfort the infant when the mother is not available.

Q12. Do the babies do better long-term if they are maintained without morphine for NAS? What are the long-term effects of morphine?

There is no literature identifying any long-term developmental issues related to the need for NAS treatment with morphine. As previously discussed, any negative long-term effects are due to the in-utero exposure to opioids and other substances, as well as, social and environmental issues.

General Thoughts & Conclusions

The goals of NAS treatment are two-fold: 1) to ensure safety and manage the withdrawal, and 2) to facilitate success for the family. It is an opportunity to intervene and work with the mother and the family as much as possible to get them into a healthy lifestyle.

The overall recommendation is to make NAS care as consistent as possible across the province, but recognizing that the implementation of the recommendations has to occur with local resources in mind.