Guidelines for the Care of Mother-Infant Dyads affected by Substance Use Disorder

Background:

- Per the 2012 U.S. Survey on Drug Use and Health, 5.9% of pregnant women use illicit drugs and 8.5% consume alcohol.[1] Of note, opioid use during pregnancy rose nearly 5-fold between 2000 and 2009, with the annual rate of neonatal abstinence syndrome (NAS) diagnosis increasing almost 3-fold during this period.[2]
- NAS is a postnatal drug withdrawal syndrome, primarily caused by maternal opioid use.[2] Intrauterine exposure to certain drugs can produce signs of withdrawal or toxicity and is associated with congenital anomalies, fetal growth restriction, increased risk of preterm birth, as well as long-term neurobehavioral outcomes.[5]
- While the Finnegan Score for Neonatal Abstinence Syndrome (FNASS) has been used as the primary means for guiding the management of infants with NAS since the mid-1970s, this system has not been validated and requires the evaluator to unswaddle and disturb the infant, which counters the American Academy of Pediatrics (AAP) recommendation of optimizing first-line non-pharmacologic interventions.[6] As such, UNC Newborn Nursery has adopted the **Eat Sleep Console (ESC)** approach to assess infants at risk for NAS. ESC has shown to be an effective method for limiting pharmacologic treatment compared to the FNASS approach and may lead to reductions in length of stay.[6] **Any baby with known opiate exposure or a positive opiate screen should be placed on the ESC Protocol** unless followed by the intensive care unit **(see separate document).**
- There is compelling evidence that a woman's substance use is linked to experiences of trauma and violence and, as such, healthcare providers should utilize trauma-informed care to promote improved outcomes for women and their infants.[3]
- Dyads affected by substance use require support through health and social services.[3] The goal of screening for substance use disorders is to identify women to help them to receive treatment if needed.[4] Given that provider suspicions for screening are subject to conscious and unconscious biases, when screening for substance use beyond universal screening measures, the use of explicit drug testing criteria is crucial for avoiding demographic or other profiling and discrimination.[4]

- **The guideline herein refers to the following:**

    A. Maternal drug screening and newborn drug exposure screening
    B. Electronic medical record system coding
    C. Breastfeeding recommendations
    D. Clinical monitoring
    E. Depiction of breastfeeding and monitoring recommendations based on type of neonatal drug exposure
    F. Child Protective Services (CPS) reporting
    G. Discharge planning

A. Screening for Substance Use/Exposure

- Of note, while formal consent is not required for drug screening of mothers and infants as it is covered under the UNC Hospital General Consent for Treatment, if the mother-infant dyad meets the criteria outlined below for drug screening, a drug test should be offered in discussion with the patient whenever possible.

Who to screen:

- Drug screening is **recommended** for mothers (and newborns of mothers) with any of the following: [5,7–15]
  - A known substance use disorder in the past three years
  - Absent, inadequate, or late prenatal care (defined for this protocol as fewer than 4 antenatal visits or first visit in third trimester)
  - Placental abruption
  - A new diagnosis of hepatitis C or B, HIV, or syphilis within the last three years
  - Mothers with prescribed opiates, benzodiazepines, and/or stimulants during pregnancy
    - If maternal drug screen on admission is negative for all substances other than those prescribed, a drug screen for newborn **is not needed**.
  - Mothers exhibiting symptoms of active substance use (i.e. altered mental status suggesting influence/withdrawal from illicit drugs or physical attributes concerning for illicit drug use such as IV track marks)
  - Newborns exhibiting symptoms concerning for withdrawal (i.e. high pitched crying, increased muscle tone, exaggerated moro reflex, irritability, tremors, seizures, frequent yawning/sneezing, poor feeding, uncoordinated/constant sucking, vomiting/diarrhea, poor weight gain, increased sweating, temperature instability, mottling)
  - While other factors may additionally prompt drug screening per Licensed Independent Practitioner clinical concern**, if substance use screening occurs outside of the above criteria, the clinical concern prompting screening must be documented by the provider.**

Maternal:

- Urine drug screening
  - A confirmatory test will need to be ordered for maternal UDS screening, if further analysis is needed.

Infant:

- Urine drug screening
  - Positive urine toxicology screens will be automatically confirmed for babies (with the exception of cannabinoids).
  - Of note, buprenorphine and norbuprenorphine is not routinely tested for on the urine drug screen. Accordingly, if testing for Suboxone is desired due to a concern for Suboxone abuse, “buprenorphine and metabolite” testing will additionally need to be ordered as a send out laboratory confirmation test.
- Meconium drug screening

- Meconium drug screen results are reflexively confirmed and the results should be received within 3-5 days. Meconium must be collected before contaminated by transitional human milk or formula. While meconium is not conclusive, it is more likely than urine to identify infants of maternal substance use as compared to infant or maternal urine. [5,16,17]

B. Electronic Medical Record Coding

The following ICD 10 codes should be used when coding neonatal drug exposure:

- P96.1 (drug withdrawal, infant of dependent mother)
- P04.49 (newborn affected by maternal use of other drugs of addiction)
- P04.14 (newborn affected by maternal use of opiates)

C. Breastfeeding

- Breastfeeding is **not recommended for mothers** with active substance use disorders who test positive for illicit substances at the time of delivery or at any point during pregnancy and who are not actively enrolled in a substance use treatment program. However, breastfeeding can be recommended during hospitalization for a mother who is incarcerated at the time of delivery and expected to return to the correctional facility and is therefore unable to enroll in a substance use treatment program.

- Mothers who are well-controlled on medication assisted treatment (MAT) such as methadone or Suboxone/Subutex should be encouraged to breastfeed.

- In the case of an active cannabinoid substance use disorder, breastfeeding is not recommended. In some cases, mothers who test positive for cannabinoids may not be diagnosed with an active substance use disorder and, in these cases, mothers who wish to breastfeed may be encouraged to do so, however, should be counseled on the risks associated with breastfeeding and cannabinoid use. Potential risks of maternal cannabinoid use with breastfeeding may include the potential to negatively affect brain development and result in hyperactivity, poor cognitive function, and other long term consequences.[18–21]

- Women who do not currently meet criteria for breastfeeding but are committed to breastfeeding may wish to use a breast pump to stimulate their milk supply and maternal breastmilk should be discarded. Breastfeeding should be discouraged until all of the following criteria are met:
  - The mother is engaged in a substance use treatment program
  - The mother has three consecutive negative toxicology screens
  - The mother has not used substances for at least 30 days

- Of note, breastfeeding may be discouraged in the case of prescribed medication exposure based on the risks to the infant. In the cases of prescribed medications (i.e. prescribed opiates in the setting of chronic pain), a breastfeeding medicine consult may be

warranted. Per InfantRisk Center, no more than one opioid at a time and no more than 30 mg oxycodone per day is recommended for safe breastfeeding.

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- The American Academy of Breastfeeding Medicine (ABM) has a helpful statement on other contraindications:[22] https://abm.memberclicks.net/assets/DOCUMENTS/PROTOCOLS/21-drug-dependency-protocol-english.pdf

Urine drug screens during pregnancy	**Urine drug screen at delivery**	**Enrolled in substance use treatment program**	**Breastfeeding recommendation**
Negative	Negative	Yes	Encourage
Positive > 30 days before delivery	Negative	Yes	Encourage- *see section E related to breastfeeding recommendations in the setting of cocaine use
Positive < 30 days before delivery	Negative	Yes	Express and discard until 30 days after last use and 3 negative toxicology screens
Positive or negative	Positive	Yes	Discourage; may express and discard until 30 days after last use and 3 negative toxicology screens
Positive or negative	Positive	No	Discourage
Positive for cannabinoids	Positive or negative for cannabinoids	Yes or no	Cannabis use disorder: Discourage; may express and discard until 30 days after last use and 3 negative toxicology screens No cannabis use disorder: Recommend discontinuing marijuana use, counsel on risks to infant neurodevelopment

D. Monitoring

- Neonatal withdrawal most commonly results from intrauterine opioid exposure, however, signs characteristic of neonatal withdrawal have been attributed to variety of drugs.[5]

Clinical Features of the Neonatal Abstinence Syndrome[5]	
Neurologic Excitability	Gastrointestinal Dysfunction
• Tremors • Irritability • Increased wakefulness • High-pitched crying • Increased muscle tone • Hyperactive deep tendon reflexes • Exaggerated moro reflex • Seizures • Frequent yawning/sneezing	• Poor feeding • Uncoordinated/constant sucking • Vomiting, diarrhea • Dehydration • Poor weight gain • Autonomic signs • Increased sweating • Fever, temperature instability • Mottling

- Non-pharmacological measures to minimize stimulation such as swaddling, low lights, decreased noise, pacifier use and small frequent feeds should be encouraged and parents should be taught these measures.

- If symptoms of withdrawal occur prior to 24 hours of life, other causes should be considered such as hypoglycemia, sepsis, Selective Serotonin Reuptake Inhibitor (SSRI) exposure, tobacco exposure, electrolyte abnormality, neurologic abnormalities, and/or other etiologies.

- Counsel the parents regarding withdrawal symptoms and when they may occur:

    - Neonatal withdrawal symptoms from heroin typically begin within 24 hours after birth, while withdrawal from methadone often begins between 24-72 hours of age.[5,23]
    - There is a not a well-defined NAS following exposure to cocaine, however, neurobehavioral abnormalities occur in neonates with cocaine exposure most frequently on the second and third postnatal days.[5,24,25]

- All babies with opioid exposure at any point during pregnancy who are on the ESC protocol should be **monitored in the hospital for at least 72 hours**. Additionally, **babies born to mothers with a positive urine toxicology screen at the time of delivery for other illicit substances known to be associated with neonatal withdrawal symptoms should also be observed for at least 72 hours.**

E. Depiction of breastfeeding and monitoring recommendations based on type of neonatal drug exposure

F. CPS Reporting

Recommendations based on substance of use	Maternal toxicology	Infant toxicology	Breastfeeding	Eat, Sleep, Console	Child Welfare involvement
Prescribed opiates/MAT	Obtain UDS	If maternal UDS is appropriate, no need for infant screening	Encourage breastfeeding if desired. If concern for risk to infant, consider consult to breastfeeding medicine	Observe for at least 72 hours	Not indicated
Cannabinoids	Obtain UDS if use reported during pregnancy or if diagnosed with Cannabis Use Disorder in the past 3 years	If maternal UDS is negative, no need for infant screening. If maternal UDS is positive, obtain urine and meconium	Cannabis use disorder: discourage No cannabis use disorder: provide counseling related to risks to infant neurodevelopment	Not indicated	Initiate CPS report if infant UDS or meconium is positive
Cocaine	Obtain UDS if use suspected during pregnancy or if known substance use in the past 3 years	Obtain UDS and meconium if maternal UDS is positive or if known substance use in the past 3 years	Discourage breastfeeding if known use during pregnancy or positive toxicology for mom/baby*	Not indicated	Initiate CPS report if maternal or infant UDS is positive or if concern for active SUD
Opiates not actively prescribed (including MAT)	Obtain UDS if use suspected during pregnancy or if known substance use in the past 3 years	Obtain UDS and meconium if maternal UDS is positive or if known substance use in the past 3 years	Discourage breastfeeding if known use during pregnancy or positive toxicology for mom/baby**	Observe for at least 72 hours	Initiate CPS report if maternal or infant UDS is positive or if concern for active SUD
Polysubstance use (including at least one substance not prescribed)	Obtain UDS if use suspected during pregnancy or if known substance use in the past 3 years	Obtain UDS and meconium if maternal UDS is positive or if known substance use in the past 3 years	Discourage breastfeeding if known use during pregnancy or positive toxicology for mom/baby*	Observe for at least 72 hours	Initiate CPS report if maternal or infant UDS is positive or if concern for active SUD
*Unless enrolled in a **residential** treatment program or incarcerated **Unless enrolled in a treatment program or incarcerated					

At UNCH, women who have an active substance use disorder at the time of delivery should be referred to **social work** as soon as possible.

- A CPS report is required for mothers who were diagnosed with an active substance use disorder during pregnancy, **and are not currently engaged in treatment**
    - Mothers who are actively involved in adequate residential or outpatient treatment for their substance use disorder **do not** require a referral to CPS unless the infant's drug screen is positive.

- A CPS report should also be made for babies who test positive for illicit substances that were not actively prescribed during pregnancy.
    - Babies who test positive for a prescribed MAT such as methadone or buprenorphine (Suboxone, Subutex) prescribed through a treatment program **do not** require a referral to CPS.
- Fetal Alcohol Syndrome or Fetal Alcohol Spectrum Disorders
    - This is rarely diagnosed at UNCH in the first year but if a diagnosis is documented, a referral should be made to CPS.

G. Discharge Planning

- Women who are stable after a vaginal delivery need to be discharged after 48 hours based on insurance coverage. Accordingly, for those babies who require additional monitoring, the parents may remain with the baby in a boarder room at the discretion of the clinical team and pending bed availability. Infant transfer to a pediatric ward may be considered for further monitoring.

- The OB team should arrange a MAT bridge therapy if needed for mothers who are discharged while their infant remains hospitalized.

- Discharge should be confirmed with the unit social worker if there is CPS involvement. There may be discharge-related guidance in the treatment team sticky notes. If there is not clear documentation stating that CPS is aware of the plan for the patient's discharge, the unit social worker or the on-site/on-call social worker should be contacted to confirm the plan with CPS prior to discharge.

- In some instances, the baby may remain in the hospital longer than medically necessary to ensure a safe discharge.

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