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**Opioid Use Disorder in Pregnancy**

As in the general population, the rate of opioid use and misuse during pregnancy have increased. ACOG released a Committee Opinion (CO No. 711) in August 2017 updating many of the best practices for care of the pregnant patient with opioid use or a substance use disorder.

**Background**

In the 2019 National Survey on Drug Use and Health, 5.8% of pregnant women reported use of an illicit drug within the past month. While marijuana use accounts for the vast majority, approximately 0.4% of pregnant women reported opioid use within the past month.

ACOG defines opioid use disorder (OUD) as "a pattern of opioid use characterized by tolerance, craving, inability to control use, and continued use despite adverse consequences." OUD during pregnancy has been associated with perinatal complications including fetal growth restriction, placental abruption, preterm delivery, intrauterine fetal demise, meconium staining, intrauterine infection and inflammation (chorioamnionitis), and neonatal abstinence syndrome (NAS)/neonatal opioid withdrawal syndrome (NOWS).

Laws surrounding OUD in pregnancy vary by state. In Ohio, substance use in pregnancy is not grounds for civil commitment, and the Ohio Court of Appeals has held that drug use itself (in the absence of other neglect or risk of harm) does not constitute child abuse or endangerment.

**Screening for OUD**

ACOG and ASAM both recommend that all pregnant women should be screened for substance use with a validated screening tool at the time of entry to care. We use the 5Ps Prenatal Substance Abuse Screen for Alcohol and Drugs as part of the intake at the time of the first prenatal visit (see Box 1). A positive screen should prompt a short conversation, further elaborating the patient's answers. The patient is then referred to treatment, if indicated. ACOG does not recommend routine urine drug testing as a screening tool for OUD, and screening only based on risk factors may lead to increased stereotyping and stigma and may also miss cases of intermittent illicit use.

**Management of OUD during Pregnancy**

Most elements of prenatal care are similar for women with OUD to those without a history of use. Modifications to routine prenatal care should be based on the patient's risk behaviors and her comorbid conditions. These may include:

- Screen all patients for comorbid depression, anxiety, or other mental health conditions. Provide referral to treatment if indicated
- Screen all patients for other barriers to care. Engage additional team members such as nursing case managers, social workers, and community health workers as needed

- Patients with a history of opiate use (even if not currently using) should be tested for hepatitis B and C and HIV, in addition to routine prenatal labs
- Patients with ongoing drug use should be re-tested for hepatitis B and C and HIV in the third trimester
- Patients with ongoing IV drug use who are not immune to hepatitis B should be offered vaccination during pregnancy
- Patients with a history of incarceration should be offered tuberculosis testing, if not recently obtained
- Screen for tobacco use at every visit and offering interventions geared towards tobacco cessation
- Patients with OUD are at increased risk of fetal growth abnormalities, particularly intrauterine growth restriction. While screening third trimester serial sonography is not currently standard of practice, a low threshold for referral for ultrasonography should be maintained
- Anticipatory guidance on breastfeeding and contraception should be reviewed in the third trimester
- Anticipatory guidance from a pediatrician or neonatologist regarding the infant's course (e.g. expected duration of hospitalization and possible treatment for NAS)

**Medication Assisted Therapy during Pregnancy**

Medication-assisted treatment (MAT) with either methadone or buprenorphine is the preferred form of treatment of OUD during pregnancy. MAT prevents withdrawal symptoms, decreases rates of resuming use, and improves adherence to both prenatal care and addiction treatment programs. In addition, receiving both MAT and prenatal care decreases the risk of obstetric complications.

- Methadone: a slow acting full mu opioid agonist. Generally dispensed daily by a registered treatment program
    - Considerations for pregnancy: it is common for the dose to need to be increased during pregnancy to minimize withdrawal symptoms, even among women who have been stable on a dose for a long time outside of pregnancy. Due to metabolic changes in pregnancy, some patients will do better on a split dose
    - Neonatal considerations: rates of NAS do not appear to correlate with maternal methadone dose, so minimizing maternal dose for neonatal benefit is not recommended. There may be lower rates of NAS for babies born to those taking split-dose methadone
    - Adverse effects: methadone is associated with prolonged QT and other arrhythmias; an EKG is frequently recommended prior to induction and care must be taken regarding polypharmacy

- Buprenorphine: a partial mu opioid agonist. May be given as monotherapy or as combined therapy with naloxone (primarily to prevent injected illicit use).
    - Considerations for pregnancy: monotherapy has long been recommended to avoid fetal exposure to naloxone, but recent studies suggest safety of combination product during

pregnancy with a lower risk of injected misuse or diversion. This is a relatively recently approved medication for pregnancy, so long-term risks are not known
    - Neonatal considerations: several studies have suggested less severe NAS for infants born to moms treated with buprenorphine than methadone
    - Adverse effects: patients already receiving methadone should not be transitioned to buprenorphine, as it may precipitate withdrawal. There are rare reports of hepatic dysfunction, so it should not be used in patients with severe liver dysfunction

- Naltrexone: a nonselective opioid receptor antagonist. Used to block the euphoric effects of opioids. Primarily used to assist in maintaining abstinence. Available in oral (short-acting) or injectable (long-acting) forms
    - Considerations for pregnancy: for women on naltrexone prior to pregnancy, the risks of resuming use with discontinuation must be balanced with the limited available data on neonatal risks. Given the recommendation against medically supervised withdrawal (see below), research on this drug poses significant ethical concerns
    - Neonatal considerations: studies are extremely limited but have not demonstrated abnormal birth outcomes
    - Adverse effects: the main risks with this therapy are directly related to risks of resuming use if the patient were to leave treatment

Medically supervised withdrawal is not recommended due to high risk of resuming use, ranging as high as 60-90% in some studies. Use episodes following withdrawal are associated with a high risk of accidental overdose due to loss of tolerance and increase risks of communicable disease transmission, obstetric complications, and lack of prenatal care. Recent studies do not confirm the historical association between medically supervised withdrawal and fetal demise or preterm delivery, but long-term data are lacking. For a patient who declines MAT or for whom MAT is not readily accessible, the patient and her provider should have a discussion using shared decision-making regarding these risks.

Naloxone is a short-acting opioid antagonist which is mostly used for rapid reversal of opioid effects in the setting of opioid overdose. Rapid maternal withdrawal may contribute to fetal stress, but maternal overdose is life-threatening and fetal effects are  if a dose of naloxone is needed for prevention of maternal death. Ohio laws permit distribution of naloxone to family members, friends, or “other individual[s] ho may be in a position to assist an individual who may be at risk of experiencing an opioid-related overdose.” Criminal immunity is also limited for those administering naloxone and summoning emergency services for someone experiencing a drug overdose, though the limits on immunity are more restrictive in Ohio than in many other states.

**Intrapartum/Postpartum Management of OUD**

At our institution, all patients admitted to Labor & Delivery are routinely screened with a urine drug screen. Many routine drug screens do not include fentanyl, buprenorphine, or methadone, so verbally screening all patients for drug use on admission may be reasonable.

Women on MAT should be continued on their dose while admitted to the hospital. Under optimal circumstances, the dose should be confirmed with the patient's MAT provider. However, the dose should not be withheld to await confirmation as it may not be feasible to confirm the patient's home dose in a timely fashion.

Mixed opioid agonist/antagonists such as butorphanol (Stadol), nalbuphine (Nubain), and pentazocine (Talwin) can precipitate acute withdrawal in patients on an opioid agonist and should be avoided. Epidural or spinal anesthesia should be offered to these patients if appropriate.

Postpartum, women with OUD frequently require higher doses of pain medication than their opioid-naïve counterparts. For women on MAT, consideration should be given to dividing the regular dose into every 6-8 hour intervals to provide higher basal pain control. Multimodal pain control – including acetaminophen, NSAIDs, and short-acting opioids – is recommended. Studies are mixed on the utility of transversus abdominus plane (TAP) blocks after cesarean section, but may be reasonable. Tramadol and codeine-based analgesics should be avoided in patients who are breastfeeding.

Patients may breastfeed while on MAT. Those who are actively using illicit drugs are discouraged from breastfeeding. HIV is a contraindication to breastfeeding where regular access to both formula and safe water is present. Breastfeeding is not contraindicated in women with hepatitis C as there is no evidence of direct viral transfer through breast milk. If the patient's nipples are cracked and/or bleeding, pumping and discarding milk is recommended to minimize neonatal exposure to maternal blood.

MAT should be continued into the postpartum period in most cases. Significant dose decreases immediately postpartum are generally not recommended, but may be required where sedation becomes a significant side effect, with peak of effects occurring 2-6 hours after each dose. Patients are at much higher risk of resuming use in the postpartum period, which may be mitigated by continuing MAT. Women with a history of OUD are also at higher risk of postpartum depression and other postpartum mood disorders; at our institution, patients on MAT have a close interval follow-up visit (1-2 weeks postpartum) where they are screened for postpartum depression with the Edinburgh Postnatal Depression Score or a similar validated tool.

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