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REVIEW

Opioid Use Disorder: Approach to Intrapartum and Postpartum Management

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Abstract

Purpose of Review The care of pregnant people with opioid use disorder (OUD) presents unique challenges that have escalated with the opioid epidemic in the USA. The pregnancy-related mortality attributable to OUD, as well as the increased contact with the healthcare system during pregnancy, make the opportunities for intervention and engagement in care in the intra- and postpartum period critical, particularly given that the birth hospitalization is an almost universal experience. We aim to summarize an evidence-based approach for intra- and postpartum care and to review the important controversies that remain.

Recent Findings The pregnancy-related mortality attributable to substance use, mostly OUD, is astounding at around 40% in many studies, and maternal mortality reviews have identified the postpartum period as being a particularly vulnerable time. In order to save lives, universal screening for substance use should be implemented using evidence-based approaches like SBIRT, and, when appropriate, medications for OUD (MOUD) should be offered. Trauma-informed multidisciplinary care and multimodal pain control remain cornerstones of the intrapartum period, while close follow-up and connection to resources are important in the postpartum period. The role of urine toxicology testing in pregnancy, opioid detoxification in pregnancy, and breastfeeding for patients in early recovery with ongoing illicit use remain controversial topics.

Summary While we have made progress in understanding the gravity of the problem and the challenges of caring for perinatal patients with OUD, devising impactful clinical solutions is limited by (1) the even greater challenges of recruiting and retaining birthing people with OUD in prospective research studies and (2) the social and environmental factors outside of the medical system that make the lives of many of these patients so hard. Any long-lasting solutions extend beyond the medical profession and require policy change and societal engagement.

Keywords Opioid use disorder · Perinatal substance use · Medication for opioid use disorder · Urine toxicology testing · Pregnancy-related mortality · Intrapartum management · Postpartum care

Introduction

A significant proportion of pregnancy-associated deaths are attributable to opioid use disorder (OUD) and overdose [1–3]. Stigma, comorbid mental health conditions, and social determinants of health often lead to inadequate prenatal care in patients with substance use disorders, and thus optimizing care during the birth hospitalization and postpartum period for patients with this chronic illness is of incredible importance. This can be a time of significant stress for the birthing person and their family, as well as for the obstetrical care team, but it is also a highly motivating time and opportunity for renewed intervention. Large, prospective studies are lacking, and most guidelines are based on retrospective data and expert opinion. Here, we aim to summarize current

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recommendations for intra- and postpartum care of patients with OUD and highlight some remaining controversies.

Definitions

Substance Use Disorder Substance use disorder, as defined by the DSM-5, is a chronic condition wherein an individual continues to use a substance despite harmful consequences. Given the lifelong chronic nature of the disease, periods of flare and remission are normal and expected. A substance use disorder (SUD) is subclassified by substance, e.g., opioid use disorder, alcohol use disorder, cocaine use disorder, stimulant use disorder, cannabis use disorder, and tobacco use disorder, with SUD being an umbrella term and also the term used when multiple substances are being used. Severity (mild, moderate, severe) is determined by the number of the 11 criteria met, and a patient is deemed in early remission if they have remained abstinent for 3–12 months and in sustained remission after 12 months. Classifying a substance use disorder in the chronic disease framework helps clinicians remain objective in their assessments and care plans.

Screening for SUD The American College of Obstetricians and Gynecologists (ACOG) and the United States Preventive Services Task Force (USPSTF) recommend universal screening for SUD in the form of a brief screening questionnaire [4, 5]. ACOG also recommends that obstetric providers use the evidence-based screening, brief intervention, referral to treatment (SBIRT) approach to manage perinatal substance use [4, 6, 7]. Of note, urine toxicology testing is not recommended as a screening tool, and the role of urine toxicology testing in pregnancy will be reviewed later. Various screening instruments can be utilized in pregnancy, including the Substance Use Risk Profile-Pregnancy (SURP-P), CRAFFT questionnaire, 5Ps questionnaire, Wayne Indirect Drug Use Screener, and the NIDA Quick Screen [8–11]. The goal of universal screening is to identify and refer patients for treatment as early as possible while reducing stigma and clinician bias. Implementation is challenging: one published example from a single prenatal practice at Boston Medical Center involving extensive SBIRT training of staff and multiple phases of expansion demonstrated feasibility but difficulty in sustaining documentation of brief intervention and referral to treatment [12•]. As with depression screening in pregnancy, clinicians cite time constraints and discomfort with brief intervention and referral to treatment as barriers to perinatal substance use screening [13, 14].

Medication for OUD Medication for OUD (MOUD) refers to long-acting opioid therapy that alleviates the symptoms of opioid withdrawal, decreases cravings for illicit opioids, decreases risky behavior, and allows the individual to engage in recovery-oriented activities. Initiating and/or continuing MOUD is recommended by all the official organizations in the USA and is considered the standard of care in pregnancy [4, 8]. Duration of MOUD treatment in pregnancy has also been associated with improved pregnancy outcomes: a retrospective study of more than 13,000 pregnancies using Medicaid data showed a decrease in risk of overdose, a decrease in risk of preterm birth, and an increase in rate of postpartum MOUD continuation with increasing number of weeks on MOUD in pregnancy [15]. Methadone, a full agonist at the opioid mu-receptor, and buprenorphine, a partial agonist at the opioid mu-receptor, are the most well-studied and first-line options in pregnancy. The MOTHER trial (Maternal Opioid Treatment: Human Experimental Research), an international, multicenter double-blinded randomized trial, showed that buprenorphine-exposed neonates had shorter length of stay and lower doses of morphine for treatment for neonatal opioid withdrawal; however, patients in the buprenorphine arm also had a higher attrition rate [16]. Methadone is highly regulated and only available at opioid treatment programs, whereas buprenorphine can be prescribed by any provider who has opioid prescribing privileges. Medication choice should be largely guided by patient preference since many patients have lived experience with both treatments.

Buprenorphine-naloxone (brand name Suboxone), a sublingual film taken one to three times daily, is the most readily available formulation of buprenorphine, as the naloxone component reduces the risk of diversion [17, 18]. A buprenorphine mono product (brand name Subutex) is a sublingual tablet taken one to three times daily; this is also an option but may be less readily available and carries a risk of diversion. Buprenorphine is available in a long-acting injectable formulation, and a formulation with weekly and monthly dosing (Brixadi) was recently FDA approved and studied in pregnancy, with data forthcoming (Brixadi [buprenorphine extended-release] [package insert]. Burlington, MA: Braeburn Inc.; May 2023). The older monthly injectable formulation (Sublocade) is not recommended in the first trimester due to animal studies suggesting teratogenicity, unless the benefits appear to outweigh the risks in shared patient-provider decision-making (Sublocade [buprenorphine extended-release] [package insert]. Plymouth Meeting, PA: Indivior Inc.; Sep 2023). There is increasing data on the safety of naltrexone, an antagonist at the opioid mu-receptor, in pregnancy, currently in the form of a few case series and retrospective cohort studies [19–23].

Trauma-Informed Care Substance use and a history of trauma are closely linked [24–26], and thus, understanding how to assess for a history of trauma and how to care for patients with a trauma history is vital to pregnancy care for this patient population. Trauma-informed care training of staff is part of the ACOG patient safety bundle for obstetric care for patients with OUD [6]. When practicing

trauma-informed care, the health care provider operates under the assumption that every patient may have a history of trauma and understands how to make the patient, or trauma survivor, feel physically, emotionally, and psychologically safe and empowered in the health care encounter [27]. ACOG recommends that obstetricians and gynecologists universally implement a trauma-informed approach [28]. Pregnancy and the postpartum period are a time of heightened vulnerability for all, but particularly for patients with substance use, and a trauma-informed approach may encourage the patient to engage in care.

Neonatal Abstinence Syndrome Neonatal abstinence syndrome (NAS) refers to the symptoms that a neonate may exhibit after prolonged in utero exposure to certain substances, and neonatal opioid withdrawal syndrome (NOWS) specifically refers to the symptoms a neonate may exhibit after prolonged opioid exposure. While the severity and risk of NOWS have not been associated with opioid dose, concomitant substances such as selective serotonin receptor inhibitors (SSRIs), benzodiazepines, and tobacco have been shown to potentiate NAS [29, 30]. The onset of these withdrawal signs depends on the half-life of the opioid, and signs include high-pitched continuous crying, decreased sleep, tremors, hyperactive Moro reflex, increased tone, seizures, feeding difficulty, loose stools, vomiting, sweating, fever, frequent yawning and sneezing, tachypnea, nasal stuffiness, and flaring [31]. A modified version of the Finnegan Neonatal Abstinence Scoring System (FNASS) has been traditionally used to assess severity of NAS and direct therapy; however, due to the subjectivity of the components, the scoring method has been considered to be vulnerable to clinician biases. The Eat Sleep Console (ESC) model [32] is a functional assessment that is simplified and more objective: (1) Can the infant eat at least 1 oz per feed or breastfeed well? (2) Can the infant sleep for at least 1 h? (3) Can the infant be consoled within 10 min? Interventions are recommended if not all three criteria are met, prioritizing non-pharmacologic interventions over pharmacologic treatment.

Intrapartum and Postpartum Clinical Management

The mitigation of stigma and bias and a trauma-informed multidisciplinary team approach including social work, nursing, obstetrics, anesthesia, neonatology, and potentially psychiatry or addiction medicine specialists are the cornerstones of care for patients with OUD through pregnancy and the postpartum period. For many patients, the birth hospitalization may be their first or second presentation to care in the pregnancy, which makes this a crucial, albeit challenging, opportunity to engage the patient in care. A roadmap for these recommendations is shown in Fig. 1.

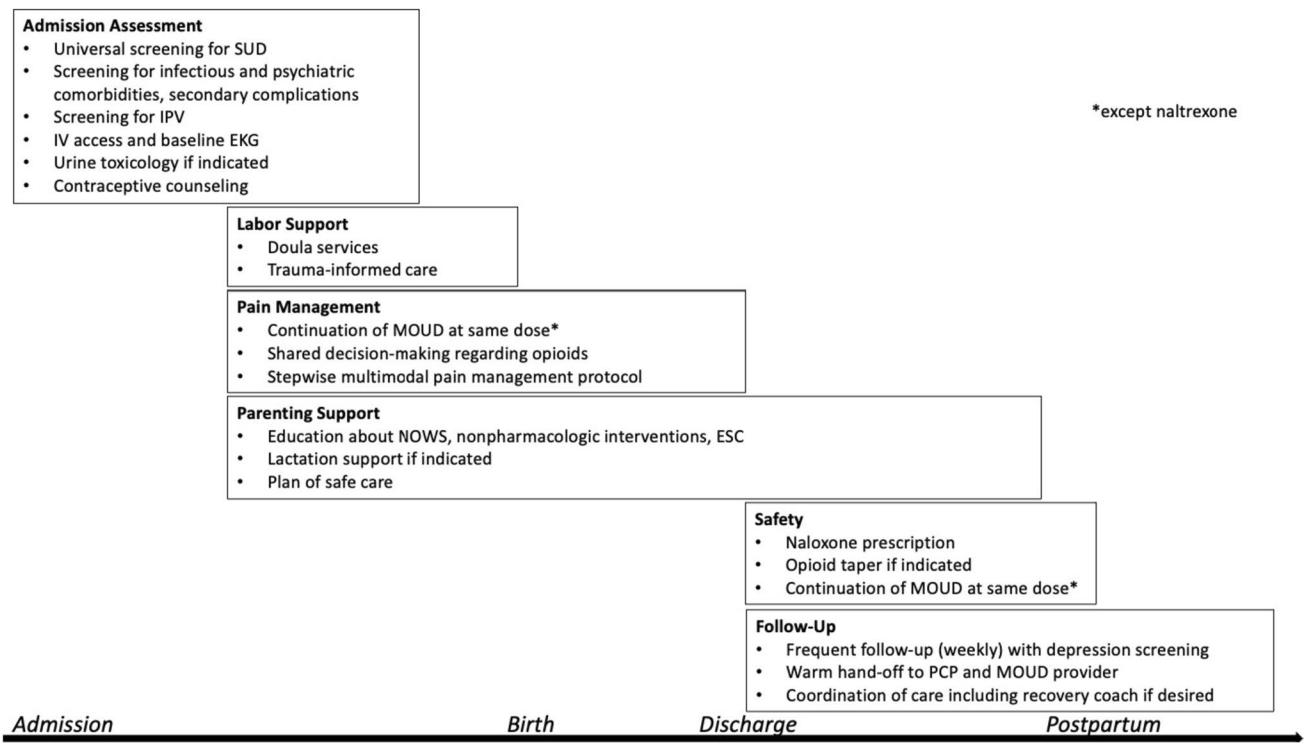

Fig. 1 Roadmap of recommendations for care of the patient with OUD in the intrapartum and postpartum period

Admission Assessment Universal screening for substance use should be performed at the time of admission for birth in the form of a validated questionnaire as reviewed above. We recommend against screening for substance use with urine toxicology testing due to a high rate of false positives, biases in testing, and minimal clinical utility as discussed further below. Urine toxicology testing at admission may be helpful for patients on MOUD in anticipation of child welfare investigations to demonstrate objective evidence of adherence to treatment. If ordered, informed consent must be obtained as per a 2001 Supreme Court legal precedent (Ferguson v. Charleston [33]), and the test should be performed prior to neuraxial analgesia as fentanyl in the epidural has been shown to transmit to maternal urine in intra- and postpartum specimens [34•]. Ideally, if toxicology testing is planned during the birth hospitalization, we recommend discussing this recommendation and obtaining the patient's consent prior to the hospitalization.

Screening for comorbidities is an integral part of the admission assessment. If a patient has been homeless, then tuberculosis screening is indicated. Rapid testing for HIV, hepatitis B and C, and syphilis should be performed if not done in the third trimester. The patient should also be asked about any prior past cardiac complications, including endocarditis and valvular disease. Intravenous access can often be challenging and should be assessed early in the admission to allow for adequate time to obtain access. Given that methadone, cocaine, and other psychiatric medications can have effects on the conduction system of the heart, a baseline EKG should be obtained. Screening for intimate partner violence (IPV) and comorbid mental health conditions is important for all pregnant people but especially in this population given the high prevalence. The patient's preferences for contraception should be addressed as soon as possible to allow for the opportunity to place immediate postpartum long-acting reversible contraception if desired. If unsure prior to birth, a contraceptive plan should be in place prior to discharge, and the discussion around contraception should be motivated by patient empowerment and respect for their wishes.

Labor Support and Interventions If doula services are available, these should be offered to the patient [26]. Free doula services are increasingly being seen and trialed as a health equity intervention [35–39]. Given the high rate of trauma in this patient population, a history of trauma should be assumed, and patient autonomy should be prioritized. Patient preferences should be elicited; all interventions should be explained in detail; and cervical exams, bodily exposure and provider numbers should be minimized whenever possible [40]. A patient may elect cesarean, and, after thorough patient education (i.e., dispelling myths about pain management) and patient counseling, this wish should be respected, as it may be motivated by a history of sexual trauma.

MOUD MOUD should be continued with the exception of naltrexone, which will block the effects of opioids used for labor analgesia. Long-acting injectable formulations should be discontinued 4 weeks prior to the anticipated birth, at which point the patient can be transitioned to the shorter acting oral formulation. The shorter acting formulation should be discontinued 3 days prior to the anticipated birth. A timed induction of labor may be advantageous for planning discontinuation of naltrexone. In the event of an unscheduled birth for a patient actively taking naltrexone, non-pharmacologic methods should be maximized, and anesthesia providers should be consulted for opioid management options.

If methadone and buprenorphine are being prescribed, they should be continued at the same dose and should not utilized for labor analgesia or any related procedures [4, 41••]. If a patient is not prescribed MOUD at the time of the birth hospitalization, interest in treatment should be assessed, and either methadone or buprenorphine, depending on patient preferences and local resources, can be initiated utilizing COWs scoring for titration. Fentanyl's infiltration into the drug market and its pharmacologic properties have made initiation of buprenorphine challenging. The traditional buprenorphine induction protocols require mild to moderate withdrawal symptoms prior to initiation to avoid precipitating withdrawal. The potency and short half-life of fentanyl make targeting this particular time window very challenging, and the lipophilic properties of fentanyl make its clearance unpredictable, meaning that precipitated withdrawal can occur even outside of the withdrawal timeframe based on last use [42, 43]. Newer low-dose "microdosing" induction protocols have been devised where small doses of buprenorphine are administered with a slow increase over a 7–10-day course, overlapping with an agonist that is being tapered down [42, 43]. Low-dose induction protocols have not been studied in pregnancy but offer a promising option. For patients with active, ongoing opioid use not yet interested in MOUD treatment, we recommend COWs scoring and initiating shorter acting opioids in labor to address withdrawal symptoms in a rapid fashion.

Pain Management Studies have shown that patients prescribed methadone and buprenorphine require significantly more opioids immediately postpartum, partly because of their opioid tolerance and partly because patients on MOUD are much less likely to receive long-acting intrathecal morphine [44]. On the one hand, patients may want to avoid opioids due to a history of OUD; on the other hand, undertreated pain can be a risk factor for return to use. Thus, patients' preferences regarding opioid use for pain control

during the hospitalization should be reviewed prior to initiating opioid therapy. Enhanced recovery after cesarean protocols have helped reduce postpartum opioid requirements without affecting pain scores [45, 46], and having a standardized protocol with a stepwise multimodal pain management plan and shared decision-making approach is particularly important for patients with OUD. The Alliance for Innovation in Maternal Care (AIM) thus has included standardized pain management protocols for patients with OUD in the maternal safety bundle for perinatal SUD [47•]. Other therapies that may have benefit for post-cesarean pain in particular are music, aromatherapy, intra-operative ketamine, transversus abdominus plane blocks, neuraxial clonidine, gabapentin, abdominal binders, or continuation of neuraxial analgesia post-operatively [44]. Nalbuphine (Nubain) and butorphanol (Stadol) should be avoided in patients prescribed buprenorphine as the partial antagonist properties of these medications can precipitate withdrawal. Adjusting the daily buprenorphine dose to be every 8 h instead of once or twice a day can also be a useful adjunct for acute pain management.

NOWS Multiple quality improvement (QI) projects have shown that Eat Sleep Console (ESC) reduces neonatal length of stay and need for morphine administration [48, 49, 50•]. However, it is not clear what part of ESC — the functional assessment, rooming in, breastfeeding support — makes the difference [31, 51, 52], and at the time of this publication, there are no long-term outcomes data available for infants treated with the ESC approach. Having a standardized approach is recommended [53], and institutions should have a written protocol for the care of opioid-exposed newborns [31]. Obstetricians should be aware of their institutions' policies and should help prepare pregnant patients for the possibility of neonatal toxicology testing and the required neonatal observation period, as this can be a very stressful time for the birthing person and their family. Postpartum, many patients are guilt stricken and sensitive to stigmatization by hospital staff when their infants are exhibiting signs of NOWS. Having a supportive provider team can help patients maintain perspective at a time when much of the focus is on the infant. Obstetrical providers should advocate for lactation support for patients who are stable in recovery and want to breastfeed, as breastfeeding has been shown to decrease the severity and duration of NOWS [54].

Discharge Regardless of whether patients are prescribed MOUD at discharge, a naloxone prescription and harm reduction teaching at discharge are paramount for reducing pregnancy-associated mortality due to overdose. The FDA has approved naloxone as an over-the-counter medication, but the cost is still prohibitive for many patients. Prescriptions will help patients with certain insurance, notably Medicaid, obtain naloxone for a fraction of the over-the-counter price. Opioid prescriptions at discharge should be a result of shared decision-making, and often a taper with close interval follow-up can be useful.

A family care plan or plan of safe care, mandated by the federal government, is often viewed as being punitive but can help with resource allocation when done in a patient-centered way. Ideally, the plan of safe care should be written prior to the birth hospitalization. Social work should be involved early on during the hospitalization, and social determinants of health (transportation, food, housing) should be assessed so that the patient can be linked to community organizations and supports. The length of postpartum care coverage for Medicaid-insured patients varies by state, and the obstetricians should be aware of their state policies as this can be an additional barrier to receiving care during this critical period.

Follow-Up Short interval follow-up, ideally weekly initially, and screening for postpartum depression are recommended [4, 41••]. The obstetrician should provide a warm hand-off to a PCP and/or MOUD provider. Patients who are unable to obtain a PCP and/or MOUD provider should continue care with their obstetrician given the high rates of mortality in the first year postpartum. If available, a peer recovery coach, ideally a person with lived experience in the perinatal space, can also be a very helpful resource in supporting patients during pregnancy and the postpartum period.

Ongoing Controversies

The general approach to intrapartum and postpartum management reviewed above is summarized in Fig. 1. The most pressing controversies regarding the effective, equitable, and compassionate care of patients with OUD in the perinatal period are the role of urine toxicology testing, detoxification in pregnancy, and breastfeeding for patients in early recovery.

Urine Toxicology Testing Urine toxicology testing has significant limitations with potentially serious social and legal consequences and thus should not be used as a universal screening tool for substance use disorder. Currently, there are no published guidelines with respect to perinatal urine toxicology testing, and some institutions have instituted universal urine toxicology testing on labor and delivery to mitigate clinician bias, while others perform targeted urine toxicology testing based on clinical rationales.

The limitations of urine toxicology testing are multifold. First, the test is only assessing for a recent exposure and not a substance use disorder, unlike the verbal or written questionnaires. For example, in a recent Kaiser Permanente cohort from North California, the self-reported cocaine

use in the prior month was higher than the positive urine toxicology test rate. This is logical as the toxicology test can only detect recent use [55]. Second, commonly used medications in obstetrics can lead to false positive results [48]. For example, a patient prescribed labetalol can test positive for amphetamines and fentanyl; quetiapine can cause a false positive test for methadone; and sertraline can cause a false positive test for benzodiazepines. Third, many tests have not been validated in pregnancy, and thus, the timing of the window of exposure may not be the same as in non-pregnant individuals [56]. Fentanyl specifically has been shown to have variable metabolism in pregnancy: a case report showed delayed clearance of norfentanyl, a fentanyl metabolite, to 70 days after last use in a pregnant person [57], and a cohort study from the same institution showed much quicker metabolism of fentanyl to its main metabolite in pregnant as compared to non-pregnant people [58]. Fourth, there are iatrogenic reasons for a positive toxicology screen, as fentanyl from the epidural has been shown to be detected in maternal and neonatal toxicology tests [34•]. Fifth, misinterpretation is common. Immunoassay screening tests are much cheaper and quicker and thus performed first, but positive results need to be confirmed by liquid or gas chromatography–mass spectrometry testing, which is more expensive, takes longer to result, and is not always performed reflexively by the hospital laboratory unless requested by a provider. Opioid immunoassays also do not detect the synthetic opioid fentanyl, which has to be ordered separately. Due to these limitations, universal urine toxicology testing should not be performed and is not recommended by ACOG [4, 8].

However, the problem with targeted testing by clinical rationale in birthing patients is that there is significant clinician bias, specifically racial bias, which leads to worsening inequities in Child Protective Services involvement, decreased patient trust, and disengagement from care. Multiple recent retrospective studies have shown that black and indigenous patients were significantly more likely to have a urine toxicology test sent during a birth hospitalization, regardless of substance use history, and were less likely to have a positive result than white patients [59•, 60, 61]. Clinician biases in disproportionately drug testing black patients have also been shown in the pediatrics literature, with a recent study of more than 26,000 newborns showing that low-risk black newborns were more likely to have drug testing than low-risk white newborns but were no more likely to have a positive drug test [62]. Furthermore, obstetric rationales for testing such as preterm labor, hypertension, and abruption may be more prevalent in socially at-risk populations but have not been associated with positive toxicology tests. The only scenarios that have been associated with a positive test are a current or recent history of substance use and potentially inadequate prenatal care [60, 63, 64]. At one institution, implementation of a standardized urine drug testing policy on labor and delivery reduced testing rates in general and reduced disparities in testing based on race [65].

If utilized, providers should aim to use urine toxicology testing as a tool to spark a patient-centered conversation and as an opportunity to engage patients in care and refer them to treatment. Urine toxicology testing can be considered after informed consent is obtained in the following clinical scenarios: (1) for patients with a substance use history to help demonstrate objective evidence of sobriety; (2) for patients with active substance use to test for other substances (as street drugs are often contaminated and can interfere with medications given on L&D); (3) to demonstrate adherence to MOUD. A positive test should not be viewed as a treatment failure but rather an opportunity to respond with harm reduction strategies, changes in the treatment plan, and additional support. In summary, based on the current limited data available, it is not entirely clear which patients should undergo urine toxicology testing on labor and delivery. Testing can have significant repercussions for the birthing person and their family; therefore, the risks and benefits should be carefully weighed before recommending the test and obtaining consent.

Detoxification in Pregnancy Historically, medication-assisted detoxification in pregnancy was contraindicated as it was thought to lead to increased fetal stress and stillbirth, based largely on a case report [66, 67]. Evidence from more recent observational studies did not show an increased risk of stillbirth; however, there were high rates of return to use, low rates of completion of detoxification, and high rates of patients lost to follow up [68]. Several studies reporting on detoxification in pregnancy included patients who were institutionalized and underwent involuntary detoxification [68]. Currently, all the governing organizations recommend MOUD as the first-line treatment. Further research is needed to understand the safety of detoxification in pregnancy, and providers should be clear that it is not recommended at this time. Despite recommendations, patients will continue to request detoxification in pregnancy, often motivated by societal guilt, stigma, and concern for fetal harm. Providers should counsel patients on the evidence pointing against detoxification in pregnancy but also be able to provide support for the patient's decision and honor their autonomy.

Breastfeeding Breastfeeding has been shown to be associated with decreased NOWS severity, reduced need for pharmacotherapy for NOWS, and decreased neonatal length of stay in infants born to people with OUD [54]. Per the American Breastfeeding Medicine (ABM) protocol, in the absence of other contraindications to breastfeeding, breastfeeding should be encouraged if a patient has had no active substance use in 90 days prior to birth; breastfeeding

is contraindicated if there was active substance use in the 30 days prior to birth; and breastfeeding should be evaluated carefully if the last use occurred in the 30–90 days prior to birth [69]. The World Health Organization guidelines for perinatal substance use are much less specific and recommend breastfeeding for patients with substance use "unless the risks clearly outweigh the benefits," with the additional comment that substance use alone is not necessarily a contraindication to breastfeeding [70].

Institutions vary in how they interpret the ABM and WHO guidelines. For example, the Northern New England Perinatal Quality Improvement Network and the Illinois Perinatal Quality Collaborative guidelines state that "a recommendation should be made to abstain from breastfeeding only if a woman expresses an intent to continue substance use and refuses substance use treatment" [71, 72]. These guidelines seem reasonable given the limitations of urine toxicology testing and are consistent with the findings of a recent study examining the concordance of urine toxicology testing in pregnancy and postpartum [73]. In this retrospective cohort study of about 500 patients with OUD receiving prenatal care at a multidisciplinary perinatal substance use clinic, positive postpartum urine drug tests were not associated with positive urine drug tests at various points in pregnancy [73]. Specifically, third trimester urine drug tests were not predictive of illicit use postpartum, but there was a correlation between positive urine drug tests at the birth hospitalization and postpartum substance use [73]. These findings suggest that perhaps the ABM protocol should be revised to recommend breastfeeding support except in the setting of active substance use, defined as positive urine toxicology at birth or by patient report, not defined as a positive urine toxicology test in the prior 30–90 days. Patients with OUD already have other barriers to breastfeeding that make breastfeeding rates in this population lower than in other postpartum patients; these barriers include history of sexual trauma, infant withdrawal symptoms, a heightened pain experience, and recovery activities (74). More specific guidelines for recommending, encouraging, and supporting breastfeeding in this patient population are needed.

Conclusions

In light of the impact of the opioid epidemic on birthing people and their families, it is most important that obstetrical care providers understand the evidence-based ways to screen for and treat OUD in the perinatal period. Prospective research is limited at this time, and most of this review is drawn from retrospective data, expert opinion, and extrapolated evidence from non-pregnant individuals. Considering the challenges in studying this cohort of patients, clinicians need to collaborate on regional and national levels to share lessons learned and best practices to make the treatment of OUD in the perinatal period more equitable, compassionate, and effective. Bias and stigma need to be addressed with increased provider education and implementation of protocols for pain management, NOWs monitoring, and urine toxicology testing. And on an individual level, any encounter with the health care system should be viewed as an opportunity to screen for substance use and engage in treatment of this cyclical, chronic condition.

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Compliance with Ethical Standards

Ethics Approval Not applicable.

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- • Of importance
- •• Of major importance

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