



Guidelines for Peripartum Pain Management for Patients with Opioid Use Disorder

Background

Opioid use disorder (OUD) in the 21st century has grown to affect a significant portion of birthing people in Northern New England. The spectrum of opioid use disorder has pervasive consequences on the health and wellbeing of birthing families, including the risk of relapse and fatal overdose. From 2019-2023, the New Hampshire Maternal Mortality Review Committee determined approximately half of pregnancy-related deaths were due to drug overdose. We believe the peripartum period is a crucial time to affect outcomes, particularly as patients with OUD are faced with challenges such as increased risk of severe peripartum pain and the consequences of exposure to opioids. Birth outcomes and experience are further complicated by psychiatric comorbidities and social determinants of health. To optimize outcomes for pregnant people with OUD, special attention must be given to many aspects of their peripartum care. This includes prenatal preparation, management of medications for OUD, options for providing adequate intrapartum and postpartum pain relief, psychosocial support, as well as post-delivery planning and follow up.

The goal of these guidelines is to briefly summarize the current scientific knowledge on this topic and to provide general considerations when caring for parturients with OUD. Recommendations here are most applicable in the setting of a hospital birth with anesthesia services, however the principles can be applied to a wide range of birth settings. Of note, the ability to provide many of the techniques safely requires specific resources, such as specially trained health care personnel, equipment, monitoring capabilities, and protocolization. Lastly, it should be recognized that this is an area of active research and recommendations are likely to evolve over time.

Antenatal preparation

The antenatal period provides important opportunities to counsel patients with OUD and establish resources to mitigate peripartum risks. Multidisciplinary expertise and communication are essential to this process.

- Patients should be encouraged to meet with an anesthesiologist to understand peripartum pain management options for both vaginal and cesarean delivery. This consult can allay fears, build rapport, and allow for care coordination.
- It can be helpful to plan for the possible need for an opioid prescription at discharge for ongoing pain management outside of the hospital setting. For instance, patients can identify a reliable and responsible support person to help with administration.
- Nicotine use disorder has been identified as an important driver of birth outcomes and acute pain risks. Nicotine cessation counseling should be offered as well as planning for peripartum nicotine replacement.

Management of Medication for OUD

Medication for opioid use disorder (MOUD) has been shown to increase adherence to prenatal care, reduce illicit drug use and improve obstetric outcomes. As such, buprenorphine (Subutex), buprenorphine with naloxone (Suboxone) or methadone is usually continued throughout the pregnancy. For similar reasons, it is generally recommended to continue a patient's MOUD at the same dose during the peripartum period, even though these medications result in opioid tolerance and hyperalgesia.

- Addiction specialists may recommend increasing doses or dividing doses during pregnancy due to increased clearance and volume of distribution.
- Of note, methadone causes dose-dependent QTc prolongation, which can increase the risk of arrhythmia when administering other QT prolonging medications.
- Ideally patients on naltrexone PO should hold this medication for 72 hours before their scheduled cesarean delivery or prior to their anticipated vaginal deliveries. Vivitrol, a depot injection of naltrexone, is expected to last 6 weeks. The decision to stop Vivitrol in anticipation of delivery should be thoroughly discussed.
- Discharge counseling and support for continuation of MOUD is crucial. This includes ensuring sustainable access to MOUD immediately upon discharge.

Labor analgesia

Although the overall severity of labor pain has been shown to be similar to patients without OUD, there is evidence to suggest that the spectrum and quality of the experience of pain during labor differs significantly. Many patients with OUD have specific concerns regarding their options for labor analgesia and the potential for opioid exposure.

- All pregnant patients with OUD should be afforded the opportunity to have an epidural for labor pain management, barring true medical contraindications.
- Nitrous oxide can be safely utilized per usual institutional protocols.
- Intravenous opioids can be offered after a risk/benefit conversation regarding possible increased risk of postpartum return to non-medical opioid use.
- Intravenous opioid PCA is an alternative for patients who have a contraindication to neuraxial anesthesia. This technique is expected to be effective for patients on MOUD given the high affinity of the opioids typically utilized (fentanyl, remifentanyl, sufentanyl), although increased dosing may be needed. Given the potential for respiratory depression and sedation, appropriate monitoring is recommended.
- Many patients in recovery from OUD wish to avoid exposure to opioids. It should be emphasized that epidural solution with low concentrations of opioid, usually fentanyl, has significant advantages over epidural solution with local anesthetic (e.g. bupivacaine) alone. This includes improved labor analgesia, decreased local anesthetic consumption, and reduced motor blockade. Importantly, this small amount of epidural opioid has a very different systemic pharmacokinetic profile compared to intravenous administration, resulting in a lack of central nervous system effects such as euphoria, somnolence, or triggering of cravings. Nevertheless, an option for epidural solution without opioid should be available as patients may strongly prefer this after thorough discussion.
- Partial opioid agonists, such as nalbuphine and butorphanol, which are commonly used for pruritis related to neuraxial opioids, should not be utilized in patients receiving MOUD due to the risk of precipitating withdrawal.

Pain Management Following Vaginal Delivery

As with labor pain, studies suggest that the severity of pain following vaginal delivery tends to be similar to pregnant patients without OUD. However, given the potential for significant pain and the associated impact, patients with OUD require special attention to postpartum analgesia.

- Conventional treatment with acetaminophen and NSAIDS is advised.
- Consideration should be given to complications such as high-grade perineal lacerations or procedures such as postpartum bilateral salpingectomy, which may increase pain management needs unexpectedly.
- Discharge planning with close follow up is essential for patients who have severe postpartum pain or require opioid therapy while hospitalized.

Anesthesia for Cesarean Delivery

There is a paucity of high-quality evidence to guide anesthetic options for cesarean specific to patients with OUD. As for all pregnant patients undergoing cesarean delivery, neuraxial anesthesia (e.g. spinal and/or epidural anesthesia) is typically preferred over general anesthesia due to lower overall risk of complications. Neuraxial anesthesia is also associated with improved postoperative analgesia, making it especially preferable in patients with OUD. Of note, there is increasing awareness regarding the incidence and impact of intraoperative pain during cesarean delivery, however it is unknown if patients with OUD are at increased risk.

- Preoperative patient counseling should address common intraoperative sensations such as pulling and pressure. As part of this discussion, patients should be encouraged to report if these sensations are uncomfortable or painful to allow for prompt treatment, including possible conversion to general anesthesia.
- The gold standard of long acting neuraxial opioids (e.g. morphine or hydromorphone) should be used for all patients receiving neuraxial anesthesia for cesarean delivery unless there is a contraindication. As there is little evidence for increasing or decreasing the dosing of neuraxial opioids in this patient population, it is reasonable to utilize standard dosing. Notably, some leading institutions have established protocols for higher doses of morphine (250 – 300 mcg intrathecal or 3 mg epidural) or hydromorphone (150 mcg intrathecal or 1.5 mg epidural).
- The addition of intrathecal or epidural alpha-2 adrenergic agonists (epinephrine, clonidine or dexmedetomidine) may provide improved intraoperative and postoperative analgesia.
- A regional truncal block (e.g. Quadratus Lumborum or Transverse Abdominus Plane) is strongly recommended for patients who do not receive long acting neuraxial opioid. It should be noted that these blocks generally provide minimal coverage of visceral pain and should be regarded as insufficient for postoperative analgesia on their own. The value of these blocks for patients with OUD who receive long acting neuraxial opioid is unknown.
- Partial opioid agonists, such as nalbuphine and butorphanol, which are commonly used for pruritus related to neuraxial opioids, should not be utilized in patients receiving MOUD due to the risk of precipitating withdrawal.

Pain Management Following Cesarean Delivery

Most studies comparing post cesarean delivery pain show that patients receiving MOUD require substantially more opioids after cesarean delivery than non-opioid dependent patients. Due to the

increased risk of severe postoperative pain and the associated repercussions, patients with OUD who undergo cesarean should be offered both standard analgesic therapy and additional opioid sparing techniques as resources allow. For patients with significant postoperative pain and/or opioid requirements during hospitalization, the importance of discharge planning cannot be over-emphasized. A plan for weaning opioid therapy, maintaining MOUD, and close follow up is essential to minimize the impact of severe postoperative pain and the risk of return to non-medical opioid use.

- Scheduled, maximum dosing of acetaminophen and NSAID is highly recommended unless there are specific contraindications. If ordered as needed, these medications tend to be underutilized.
- Systemic opioids: Oral oxycodone may be offered as needed in addition to the above. Increased dosing may be required. Oral hydromorphone may be more effective when patients are on MOUD due to its high affinity for the mu opioid receptor.
- Patients who receive opioids, including MOUD, in addition to long acting neuraxial opioid should be monitored for respiratory depression and sedation. For example, Society of Obstetric Anesthesia and Perinatology (SOAP) guidelines recommend q1h assessments for the first 12h and q2h assessments for 12-24h.
- Low thoracic and lumbar epidurals can provide excellent postoperative analgesia and allow for additional dosing of long-acting epidural opioid (e.g. morphine) 18-24 hours after the initial dose. Importantly, lumbar epidural local anesthetic frequently causes lower extremity weakness, which may prevent the patient from ambulating. Programmed intermittent epidural bolusing (PIEB) with a low concentration local anesthetic (such as 0.0625% bupivacaine) may minimize motor block. Patients with lower extremity motor block should be encouraged to sit at the bedside and dangle their feet. After assessment for degree of motor block, they may also be safe to stand or walk with assistance. Low thoracic epidurals are less likely to result in substantial lower extremity motor blockade or urinary retention, making this strategy preferable to lumbar epidural if epidural analgesia is planned for multiple postoperative days.
- Intravenous low dose ketamine infusion (0.05 – 0.4 mg/kg/hr) can be a helpful analgesic adjunct. Patients should be counseled on the potential for dysphoria and hallucinations at higher doses, which quickly resolves with decreasing or discontinuing the medication.
- Lidocaine patches or intravenous infusion can be considered, although evidence on the effectiveness outside of the general surgical population is sparse.
- Gabapentin is not routinely recommended.

References:

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