Perioperative Management of Non-Pregnant Patients on Maintenance Therapy for Opioid Dependence

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Buprenorphine, methadone, and naltrexone are pharmacologic therapies indicated for maintenance treatment of opioid use disorder. The appropriate treatment of acute pain in patients on buprenorphine and methadone maintenance includes continuing the patient's baseline opioid requirements to avoid increased pain sensitivity associated with opioid withdrawal. Thus, daily opioid maintenance treatment requirements must be met before attempting to achieve analgesia. These patients have also been shown to have increased pain sensitivity and cross-tolerance to opioid analgesics, therefore adequate pain control will often necessitate higher opioid doses at shorter dosing intervals. All patients on buprenorphine and methadone maintenance should be co-managed with their buprenorphine or methadone provider during the pre- and post-procedure period. Addiction medicine is available for consultation to assist with recommendations for opioid use disorder management in the postoperative period.

These guidelines are designed for patients maintained on chronic opioids, buprenorphine, methadone or naltrexone therapy undergoing invasive procedures. There is currently a lack of evidence-based studies to direct the management of patients on buprenorphine, methadone, or naltrexone maintenance in the peri-procedural period. Below are guidelines using expert opinion based on pharmacological principles with the intent to avoid subtherapeutic acute pain management while also preventing opioid withdrawal and disruption of opioid use disorder management.

See Table 1 for recommendations for perioperative management.

For additional information or clinical questions contact the Addiction Medicine consult service at pager 6226 (NCAN).

References:

Reginald LD et al. Overriding the blockade of antinociceptive actions of opioids in rats treated with extended-release naltrexone. Pharmacology, Biochemistry and Behavior 2008;89:515-522.
Roberts DM, Meyer-Witting M. High-dose buprenorphine: perioperative precautions and management strategies. Anaesth Intensive Care 2005;33:17-25.
Alford DP, et al. Acute Pain Management for Patients Receiving Maintenance Methadone or Buprenorphine Therapy. Ann Intern Med 2006:144(2): 127-134.

Responsibility: Nurses, physicians, pharmacists

Other Related Guidelines or Policies: Methadone and Buprenorphine during Pregnancy, Epidural and Intrathecal Analgesia, Sedation and Pain Control – ICU, Pain Management (Adult), Patient-Controlled Analgesia (PCA) - Adult
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Table 1

Opioid Dependence Patient Category	Pre-operative Pain Recommendations	Post-operative Pain Recommendations
Chronic Pain on Chronic Opioid Therapy **Inclusion:** Patient on chronic opioids > 2 weeks or with other signs of physical dependence. Does not include patients taking occasional or prn opioids for breakthrough pain.	Continue standing opioid dose the day of surgery. Hold any usual PRN breakthrough opioid doses the day of surgery.	Continue equivalent chronic opioid dose (IV if patient strict NPO) with hold parameters for sedation. For acute postoperative pain, utilize multimodal pain management with non-opioid medications (NSAID, acetaminophen, epidural/spinal analgesia, nerve blocks) as indicated. If opioids are required for breakthrough pain, patients with history of chronic opioid use may require higher than usual doses due to cross tolerance. PCA's may be considered if pain is not adequately captured. This may be utilized with or without a basal component.
Methadone Maintenance Therapy	Confirm methadone dose with patient's methadone maintenance treatment program (MMTP). Continue usual dose of methadone the day of surgery. The patient may need to arrange home doses of methadone ("medical take home doses") with his or her MMTP if they are unable to go to the MMTP on the day of surgery. If this is not possible, the patient should receive his or her usual confirmed methadone dose in the pre-operative area.	Continue usual daily methadone dose. If the patient is strict NPO, they should receive 50%-75% of their usual methadone dose given IV, divided into 2-4 doses/day (e.g. if usual dose is 60 mg PO daily, appropriate IV doses would be approximately 15 mg IV BID or 10 mg IV TID). For acute postoperative pain, utilize multimodal pain management with non-opioid medications (NSAID, acetaminophen, epidural/spinal analgesia, nerve blocks) as indicated. If opioids are required for breakthrough pain, patients with history of opioid use disorder may require higher than usual doses due to cross tolerance and increased pain sensitivity. PCA's without basal component may be considered in addition to patient's methadone if pain is not adequately captured. Remember to discontinue other oral PRN opioids.

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		On discharge, the patient should be given a “last dose letter” addressed to the MMTP and whether any modifications have been made. The discharge case manager and patient may need to arrange for home doses of methadone (“medical take home doses”) with his or her MMTP if he or she is unable to go to the MMTP on the days of after discharge.
Buprenorphine Maintenance Therapy	Take AM dose of buprenorphine on the day of the procedure.	Continue patient’s home dose of buprenorphine post-operatively. Consider splitting patient’s totally daily buprenorphine dose into q8h schedule for better pain coverage. For acute postoperative pain, utilize multimodal pain management with non-opioid medications (NSAID, acetaminophen, epidural/spinal analgesia, nerve blocks) as indicated. If opioids are required for breakthrough pain, patients with history of opioid use disorder may require higher than usual doses due to cross tolerance and increased pain sensitivity. PCA’s without basal component may be considered in addition to patient’s buprenorphine if pain is not adequately captured. Remember to discontinue other oral PRN opioids.
Naltrexone (oral or depot) Maintenance Therapy	Discontinue oral naltrexone 72 hours before surgery. Discontinue depot naltrexone 1 month prior to elective surgery, if possible.	Utilize multimodal pain management with non-opioid medications (NSAIDs, acetaminophen, epidural/spinal analgesia, nerve blocks) as indicated. If surgery performed emergently or naltrexone was not discontinued prior to surgery, naltrexone should be discontinued postoperatively. If this occurs, higher than usual doses of opioids may be attempted to overcome naltrexone’s opioid antagonist effects. This must be done with close observation for respiratory depression.