Pain and Opioid Use Disorder

Immersion Training in Addiction Medicine Program 2025

Addiction Medicine Lightening Rounds

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SCOPE of Pain — Safer/Competent Opioid Prescribing Education

Pain and OUD: General Considerations

- ~60% individuals seeking OUD treatment report chronic pain vs 20% of general population
- Pain is a risk factor for OUD with ~80% reporting pain as reason for initial opioid use
- Key symptom of opioid withdrawal is increased pain mediated by increased intracellular cAMP which facilitates pain transmission
- Methadone (oral) and buprenorphine (sublingual) confers analgesia for ~6-8 hours; patients on once daily dosing for OUD treatment will not feel analgesic effect beyond this

Nazarian A et al. *Neuropharm*. 2021
Higginbotham JA et al. *Front Syst Neurosci*. 2022

OUD and Increased Pain Sensitivity

- Patients with active OUD (in absence of withdrawal)…
  - have less pain tolerance (i.e., more pain sensitive) than peers in remission or matched controls
  - have less pain tolerance than siblings without an addiction history
- Patients taking medications for OUD (MOUD) (i.e. methadone, buprenorphine) have less pain tolerance than matched controls

Compton MA. *J Pain Symptom Manage.* 1994
Compton P et al. *J Pain Symptom Manage.* 2000
Compton P et al. *Drug Alc Depend.* 2001

Opioid Agonist Treatment (OAT) and Acute Pain

- Preclinical and clinical studies now suggest that **concurrent use of opioid analgesics in patients with OUD maintained on OAT (i.e., buprenorphine or methadone) is effective**
- Best available evidence suggests
  - Continue OAT (baseline daily opioid equivalence) during and after surgery to prevent withdrawal-mediated pain
  - Often have higher opioid analgesic requirements due to increase pain sensitivity and/or opioid cross tolerance between MOUD and opioid analgesic – may require dosing more frequent intervals
  - Addition of opioid analgesics will not compromise recovery; undertreated pain, however, can be a trigger for use and result in disengagement in care

Buonora MJ, et al. *Ann Intern Med*. 2025
Alford DP et al. *Ann Intern Med.* 2006

OAT and Chronic Pain

- Since Opioid Treatment Programs (methadone maintenance) only dose (dispense) methadone once daily, patients may require addition of short-acting opioid analgesics for pain if nonopioid analgesics are ineffective

  Note: it is illegal to prescribe at-home methadone for the treatment of OUD whether or not the patient has concurrent pain (Harrison Narcotics Act of 1914)

- Unlike methadone, buprenorphine can be prescribed in primary care and dosed multiple times per day to treat OUD and pain

Alford DP, Compton P, Samet JH. *Ann Intern Med* 2006.

Naltrexone Maintenance and Pain

- Opioid antagonist effect of oral naltrexone lasts up to 72 hours; IM naltrexone lasts at least 25 days
- For acute pain management:
  - STOP naltrexone (no taper required)
  - Multimodal: consider nonopioids and regional anesthesia
  - Use of agents like ketamine or lidocaine
  - If opioids needed, will require high doses with close monitoring of respiratory status

Edinoff AN, et al. *Curr Pain Headache Rep*. 2023

Summary

- Account for increased pain sensitivity in patients with OUD whether or not they are taking MOUD
- Continue buprenorphine or methadone during acute pain including surgery
- Consider split dosing buprenorphine for co-treating pain and OUD