Pain and Withdrawal Management in Hospitalized Patients with Opioid Use Disorder

Purpose: The goal of this pilot pathway is to provide evidence-based, safe, and compassionate treatment of pain and opioid withdrawal for hospitalized or emergency department patients with active opioid use disorder (OUD).[1–7] *Patients with OUD have substantial opioid tolerance and require higher doses of opioids for effective analgesia compared to opioid-naïve patients.*[8,9]

General approach: Treat pain and withdrawal with a combination of methadone or buprenorphine, short-acting opioids, and non-opioid adjuvants.

1. **Providers: Assess for active opioid use disorder (OUD):**
    - Assess for and document OUD using DSM-5 criteria. This pathway is only intended for patients with active OUD, not for those with opioid misuse but without OUD.
    - Document patient's report of current substance use. This should include substance type (including nicotine, alcohol and drugs other than opioids), amount & frequency of use, and route of administration.
    - Obtain urine drug test.
    - Check PDMP.

    Nurses: Monitor withdrawal, sedation, and pain:
    - Clinical Opioid Withdrawal Scale (COWS): Use COWS to monitor for withdrawal at least every 8 hours (preferable every 4 hours) and as needed for withdrawal symptoms.
    - POSS or RASS: Use POSS or RASS to monitor for sedation every 4 hours or per unit standard.
    - Pain: Document pain scores every 4 hours or per unit standard.

2. **Offer methadone or buprenorphine**

    Methadone and buprenorphine are the most effective long-term treatments for OUD and should be offered to all hospitalized patients with OUD.[2,5,8] *However, methadone or buprenorphine dosed for OUD will not be sufficient for analgesia in most patients.*[8,9]

    To manage concurrent pain: consider dividing total daily dose of methadone/buprenorphine by three and giving q8h, using short-acting opioids in addition to methadone/buprenorphine, and using non-opioid therapies. Patients who decline methadone or buprenorphine should still be offered short-acting opioids for pain or withdrawal (see Short-Acting Opioid Pilot Pathway).[2–4,6]

    - Methadone:

        Methadone takes 4 hours for peak effect and, for new starts, at least 5-7 days of daily dosing to reach steady-state levels that are therapeutic for withdrawal and craving.[8]
        - If currently enrolled in methadone at an outpatient opioid treatment program, confirm dose and continue per formulary methadone guidelines. Consider dividing the total daily dose to optimize analgesia.
        - For new methadone start, give 20mg PO methadone once followed by 10mg once PRN for max 30mg in first 24hrs. This will not be sufficient for withdrawal or pain in most patients (see Short-Acting Opioid Pilot Pathway below). After confirming intent to

continue methadone maintenance, consult psychiatry for dose escalation plan. Refer to formulary methadone guidelines for details.

- Buprenorphine:

  Buprenorphine is a partial opioid agonist with strong binding affinity to mu-opioid receptors. If a patient has other opioids (eg., oxycodone, heroin, fentanyl) in his/her system when newly starting buprenorphine, ≥2 mg of buprenorphine will displace the other opioids and precipitate withdrawal. However, if a patient is continued on outpatient buprenorphine with <24h between doses, other opioids can be given to supplement for analgesia and will not precipitate withdrawal.

  - If currently taking buprenorphine, confirm dose using the PDMP and continue.
  - For a new buprenorphine start, refer to the buprenorphine induction pathway.

    For micro-dosing induction, give other opioids concurrently with buprenorphine. For traditional induction transitions from illicit opioids, ensure patient has COWS >12 before giving buprenorphine. Wait until at least 1 hour after total daily dose of buprenorphine is ≥4mg before giving short-acting opioids.

3. Offer short-acting opioids

Short-acting opioids should be part of acute pain treatment for most hospitalized patients with OUD.[9,10] *They should be offered to treat acute pain whether or not patients also accept buprenorphine or methadone.*[2–4]

- Use Short-Acting Opioid Pilot Pathway

4. Offer non-opioid adjuvants

Non-opioids should be part of a multi-modal approach to pain and withdrawal management. However, they should not be the sole treatment of pain and withdrawal because patients with OUD lose tolerance while hospitalized, increasing the risk of post-discharge overdose.[3,8]

- When not contra-indicated, consider ordering scheduled acetaminophen (1g PO q6-8h), NSAIDs like ketorolac, and non-pharmacologic strategies (ice, heat, massage) for pain; clonidine for withdrawal symptoms; ondansetron for nausea; loperamide for diarrhea; dicyclomine for stomach cramps; and hydroxyzine for anxiety.

5. Harm reduction

- Take-home Narcan**:** Utilize MyPennPharmacy or other means to provide Narcan nasal spray to patients as soon as possible (eg. on admission) due to the high risk of an unplanned, patient-directed discharge. Co-pays should be covered through PA supplemental Narcan coverage. If further assistance is needed, ask SW for help with co-pay assistance.

Short-Acting Opioid Pilot Pathway – for HUP and PPMC Only

Whenever you use this pathway, please fill out this two-question form so that we can track outcomes and improve this document:

Note 1 – Context: Patients with OUD have substantial opioid tolerance and require higher doses of opioids for effective analgesia than opioid-naïve patients.[8,9] In our experience, the mu-opioid agonism from 1 bag of heroin/fentanyl in Philadelphia as of 2022 is approximately equivalent to 50-100mg PO oxycodone (18-36mg PO hydromorphone).

Note 2 – Legal concerns: There is no legal restriction to administering short-acting opioids to hospitalized patients with OUD to treat acute pain.[6,11] Short-acting opioids can also be administered to treat withdrawal as an "incidental adjunct" to medical or surgical care of hospitalized patients.[6,7,11]

Note 3 – Dose adjustments: The doses below are suggested for most patients with untreated OUD and illicit opioid use based on the potency of illicit opioids in Philadelphia. Consider lower doses for:

- Patients using prescription opioids or those using less than 1 bag/day of illicit opioids
- Patients with impaired renal or hepatic function
- Frail patients
- Patients receiving other sedating medications

Note 4 – Patients taking methadone or buprenorphine:

- *Patients on home methadone or buprenorphine who are also using illicit opioids*: continue methadone or buprenorphine and use doses suggested below.
- *Patients enrolled in outpatient methadone or buprenorphine who are not using illicit opioids:* use shared-decision making with patients to decide whether to use short-acting opioids for acute pain and, if so, if there is an opioid they'd like to avoid based on prior misuse. If used, we suggest starting at half the dose suggested below (eg., oxycodone 10mg).
- *Patients interested in starting methadone or buprenorphine*: follow guidance below for short-acting opioids. When ready to start buprenorphine or methadone, there are three options:
    - Methadone: refer to Penn Formulary for UPHS recommended protocols.
    - Buprenorphine micro-dosing: preferred method for patients with concomitant analgesic needs, unless patient wishes to use traditional approach. See Penn Pathways.
    - Standard buprenorphine initiation: Wait for 1 hour after total daily dose of buprenorphine is $\geq$ 4mg before starting short-acting opioids per guidance below. See Penn Pathways.

Note 5 – Intravenous formulations: If IV formulation of short-acting opioids are required, we recommend a hydromorphone PCA with suggested starting dose 0.5mg basal, 0.5mg demand every 15 minutes with 4-hour lockout of 10mg. If symptoms remain uncontrolled, increase the demand dose to 1mg and the 4-hour lockout to 18mg.

Short-Acting Opioid Guidance

Whenever you use this pathway, please fill out this two-question form so that we can track outcomes and improve this document:

1. **<u>For all patients at HUP or PPMC:</u>** Ask for expert assistance by sending a Cureatr to the "Opioid Use Disorder and Acute Pain" group Mon-Fri 8am-5pm. While waiting for assistance, follow steps below.

2. **<u>Initiation</u>** (requires q2h reassessments for first 4-8 hours)

Step 1: Discuss with patient: set expectations about what can and cannot be continued on discharge (see Discharge Plan below) and, together with the patient, choose a short-acting opioid.

While hospitalized, any short-acting opioid can be used. We recommend immediate release oral formulations because they have lower risk of dose-stacking. Hydromorphone has the strongest binding-affinity for mu-opioid receptors and offers better analgesia for patients taking buprenorphine or methadone.[12] *We also list doses in terms of oxycodone given its familiarity.*

Step 2: Order scheduled oxycodone IR 20 mg (or hydromorphone PO 8 mg) q4 hours orally (PO).

Step 3: Give scheduled oxycodone IR (or hydromorphone PO).

Step 4a: Two hours after scheduled dose, reassess and administer additional oxycodone IR 10 mg (or hydromorphone PO 4mg) for patient-reported severe pain or withdrawal.

Step 4b: If patient required additional oxycodone IR 10mg (hydromorphone PO 4mg), increase scheduled doses by oxycodone IR 10 mg (hydromorphone PO 4 mg).

Step 5: Repeat Steps 3 and 4 with q2h reassessments for the first 4-8 hours. As long as the patient is reporting severe pain or withdrawal symptoms and is not sedated, you may increase scheduled oxycodone (or hydromorphone PO) per Step 4. Symptoms might not fully resolve; the goal is to relieve intolerable symptoms. Dosing should be guided by sedation and functional goals. There is no maximum dose.

3. **<u>Maintenance & Tapering</u>:**
    - Once patient reports that pain and withdrawal are resolved or tolerable, continue scheduled short-acting opioids. COWS monitoring can be discontinued. Continue monitoring for sedation and pain.
    - Strongly encourage patients to transition to methadone or buprenorphine.
    - With the patient and the care team, regularly revisit anticipated discharge plans (see Discharge Planning below).
    - <u>Short-acting opioid tapers & transitions to methadone or buprenorphine (this process often takes days, so please plan ahead as much as possible)</u>:
        - *Patients starting methadone maintenance:* most patients can taper down short-acting opioids over days while methadone is increased to levels therapeutic for withdrawal and cravings (generally 60-120mg/day).
        - *Patients starting buprenorphine maintenance:* If starting buprenorphine after short-acting opioids have been initiated, use micro-dosing. After buprenorphine doses are therapeutic for withdrawal and cravings (generally 16-24mg/day), most patients without acute pain can taper off short-acting opioids over 24-72 hours.

- *Patients who decline methadone and buprenorphine:* engage in shared decision-making with patients about whether to slowly taper while hospitalized or to abruptly stop on discharge. A slow taper will reduce tolerance and might increase overdose risk on discharge if the patient resumes illicit opioid use.

4. <u>Discharge Planning</u>

- *Patients discharged to the community and newly started on buprenorphine or methadone:* Patients without ongoing acute pain should have short-acting opioids tapered prior to discharge per the guidance above. Those with ongoing acute pain can be provided with a short taper (generally ~3-5 days) of short-acting opioids, if necessary.
- *Patients discharged to the community who decline methadone and buprenorphine:* In general, we do <u>not</u> recommend prescribing short-acting opioids for these patients on discharge.
- *Patients discharged to nursing or physical rehabilitation facilities*: These patients cannot be discharged on short-acting opioids for withdrawal management. They should be strongly encouraged to transition to methadone or buprenorphine, and teams should work with unit SWs to find facilities that accept patients who newly start these treatments. On discharge, patients can continue to receive short-acting opioids for acute pain, but a taper should be prescribed with clear instructions provided to the patient, the nursing facility (in the discharge summary), and to the receiving provider (verbally via doc-to-doc handoff).
- <u>All patients should be counseled that their tolerance will have decreased while hospitalized</u> and will face a higher risk of overdose if they resume illicit opioid use. All patients with OUD should be provided with Narcan nasal spray prior to discharge.

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