Buprenorphine Induction in the Emergency Department

Dan Quan, DO FACEP

Opioid Use Disorder

- Consider it a chronic, relapsing illness
  - Treatment is a chance to save a life
- Decreased mortality in those treated with Medication for Opioid Use Disorder (MOUD)
- 1 in 11 ED patients screen positive for OUD
- An overdose survivor or withdrawal patient presents with a critical intervention time

Have You Thought This?

- “They just need detox”
- “MOUD is replacing one drug with another”
- Buprenorphine normalizes neurochemistry and helps prevent overdose
- “Detox” delays recovery and treatment

Why Patients Continue to Use Opioids

- Dependence and Tolerance
  - Opioids increase dopamine in the reward pathways
  - Decreased dopamine due to the lack of opioid makes it feel unbearable
- Withdrawal Avoidance
  - Withdrawal is intense (pain, anxiety, nausea)
  - Fear of symptoms drives continued use
- Physical and Emotional Pain
  - Opioids are used to treat chronic pain or trauma
  - Provides a coping mechanism for emotional distress

Fentanyl

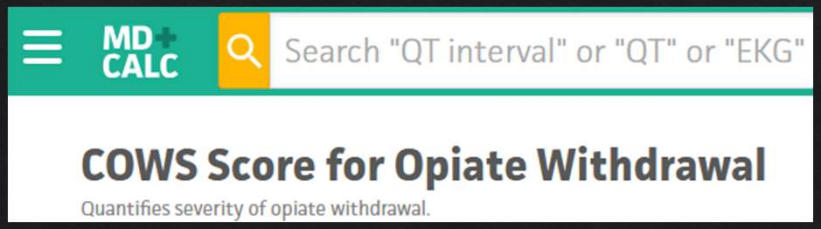
- Lipophilic → prolonged clearance
  - UDS positive for up to 7 days
  - Delays withdrawal onset, prolongs receptor competition
- Clinical Opiate Withdrawal Scale (COWS) may be unreliable
- High risk of precipitated withdrawal
  - Buprenorphine displaces fentanyl to cause sudden, severe withdrawal if fentanyl is still active
  - Fentanyl analogs have varied half-lives making withdrawal timing unpredictable
  - Consider a lower initial induction dose of buprenorphine

Eligibility for ED Induction

- Confirmed or suspected OUD
- COWS score ≥ 8-12 (mild-moderate withdrawal)
- Patient is alert and awake
- No acute instability
- Patient consents and is willing to start treatment
- Look out for false withdrawal signs
  - Symptoms like yawning or anxiety can be due to stress or other factors

COWS (Clinical Opiate Withdrawal Scale)

- Resting pulse rate
- Sweating
- Restlessness observation during assessment
- Pupil size
- Bone or joint aches
- Rhinorrhea or tearing
- GI Upset
- Tremor observation of outstretched hands
- Yawning observation during assessment
- Anxiety or irritability
- Gooseflesh skin



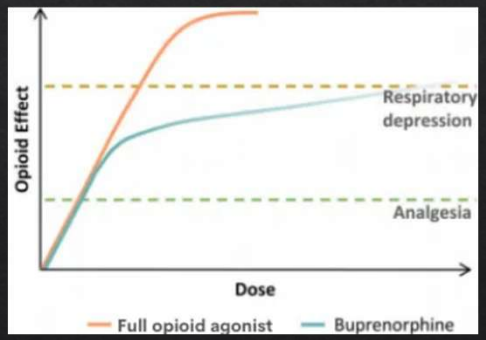
5-12 = mild
13-24 = moderate
25-36 = moderately severe
more than 36 = severe withdrawal

Adjunct Medications for Opioid Withdrawal

Symptom	Treatment
Tachycardia, diaphoresis, piloerection	Clonidine 0.1–0.2 mg
Nausea	Ondansetron 4–8 mg
Pain	Ibuprofen ± acetaminophen
Diarrhea	Loperamide 2 mg after each stool
Anxiety	Hydroxyzine 25–50 mg
Agitation	Haloperidol or Droperidol

Buprenorphine

- Mixed receptor agonist/antagonist
- High receptor affinity, slow dissociation
  - Binds tightly, blocks binding and displaces other opioids
- Ceiling effect on respiratory depression
- Long half-life (~37 hours)
- Reduces cravings and withdrawal
- Once-daily dosing possible
- Can get prescriptions at a pharmacy (DEA Schedule III)



Webster et al. 2020, Pain Medicine, 0(0), 1-10.

Buprenorphine Mechanism of Action

- Partial mu-opioid agonist
- Kappa opioid antagonist
  - ↓dysphoria, ↓ hallucinations, ↓ stress-induced relapse
- Delta opioid partial agonist
  - may contribute to mood stabilization and pain modulation
- ORL-1 receptor agonist
  - Help reduce reward and craving from opioids
  - Blunt some emotional drivers of relapse
  - Modulate pain independently from mu-receptor activation

Contraindications & Cautions

- Recent methadone (within 24–48 hrs)
- Sedated or intoxicated
- Severe hepatic dysfunction
- Benzodiazepine use (monitor closely)
- Mixed intoxication

Standard ED Induction Protocol

- Obtain COWS and if score is ≥ 8–12
- Explain and verbal consent
  - Helps to decrease withdrawal symptoms and cravings
- Start 4 or 8 mg SL buprenorphine/naloxone
  - Consider starting at 2 mg for fentanyl users
- Reassess in 45–60 minutes using COWS
- Give additional 4–8 mg doses if needed (COWS ≥ 8–12)
  - Usual 1st day dose is 8–12 mg
- Maximum total dose 32 mg

How Long Do I Monitor?

- Standard
  - 1–2 hours per dose
- High dose/severe cases
  - 4–6 hours, consider admission if symptoms are not controlled

Preparing for Discharge

- Stable vitals, tolerating PO, alert
- Prescribe 3-7 days
- Follow-up within 48 – 72 hours with a peer navigator and/or MOUD clinic
- Dispense naloxone

Precipitated Withdrawal

- Buprenorphine's high receptor affinity displaces full agonists
- Sudden worsening of withdrawal
  - Agitation, sweats, nausea, vomiting, diarrhea, etc.
- Recognize early
  - Symptoms worsen after 2–4 mg buprenorphine

Precipitated Withdrawal

- Escalate buprenorphine dose
  - 8 mg every 30–60 minutes per dose to 24–32 mg total
- Add withdrawal adjuncts, NSAIDs, fluids, benzodiazepines
- Consider admission if patient is uncontrolled

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Overcoming Fear of Prescribing Buprenorphine

- “I might do it wrong.”
- “I’m afraid of causing withdrawal.”
- “I’m enabling the patient.”
- Reality
  - You're treating a life-threatening disease
- Buprenorphine makes this safe and effective

Managing Acute Pain on Buprenorphine

- Continue baseline or decrease dose
- Use adjuncts (NSAIDs, ketamine, etc.)
- Short-acting opioids may require higher doses
- Split dosing for analgesia
- Hold only for severe surgical pain
- Full agonists are unlikely to cause precipitated withdrawal

What About Sympathomimetics?

- Assess if opioid withdrawal
  - Confirm at least 2–3 opioid specific findings
    - Yawning, rhinorrhea, piloerection, GI issues, cramping
- If there is uncertainty, delay initiation and continue monitoring
- Do not start buprenorphine until the patient is clearly in withdrawal

Common Questions

- Q: Can I prescribe buprenorphine from the ED?
- A: Yes. No X-waiver needed.

- Q: Recent fentanyl use?
- A: Wait for COWS ≥ 8–12

- Q: Pain and OUD?
- A: Yes—treat both, document clearly.

- Q: Patient uses methamphetamine or cocaine?
- A: Wait until symptoms are clearly opioid withdrawal before starting MOUD


Questions
dquan@aztox.com