PCSS Medications for Opioid Use Disorders

Providers Clinical Support System

PCSS-MOUD Online Case-based Learning Collaborative

Session 2: Strategies to Effectively Manage Complicated Opioid Withdrawal in the ED or Hospital

May 6, 2026 | 5:00 – 6:30 PM ET

Andrew Herring, MD
MPI BRIDGE Center at the Public Health Institute
Chief of Addiction Medicine, Highland General Hospital—Alameda Health System

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Housekeeping

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- PCSS-MOUD aims to increase the knowledge and skills of healthcare and counseling professionals about available evidence-based treatment approaches for substance use disorder (SUD) with a particular focus on opioid use disorder (OUD). PCSS-MOUD provides free training and mentoring to practitioners on the use of medications for OUD (MOUD) and the integration of these services into mainstream health care.

Funding for this initiative was made possible by cooperative agreement no. 1H79TI086770 from SAMHSA. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

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All disclosures have been reviewed, and there are no relevant financial relationships with ineligible companies to disclose.

All speakers have been advised that any recommendations involving clinical medicine must be based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in patient care. All scientific research referred to, reported, or used in the presentation must conform to the generally accepted standards of experimental design, data collection, and analysis.

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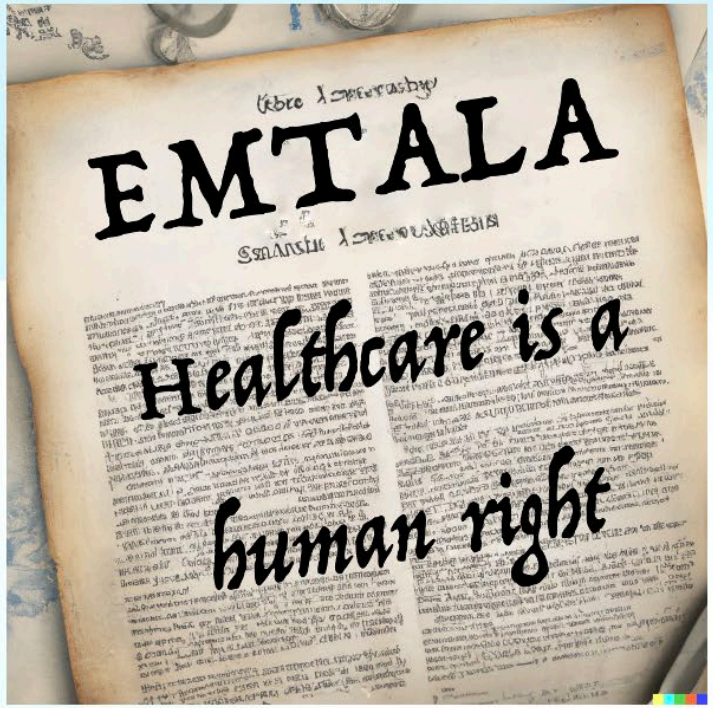
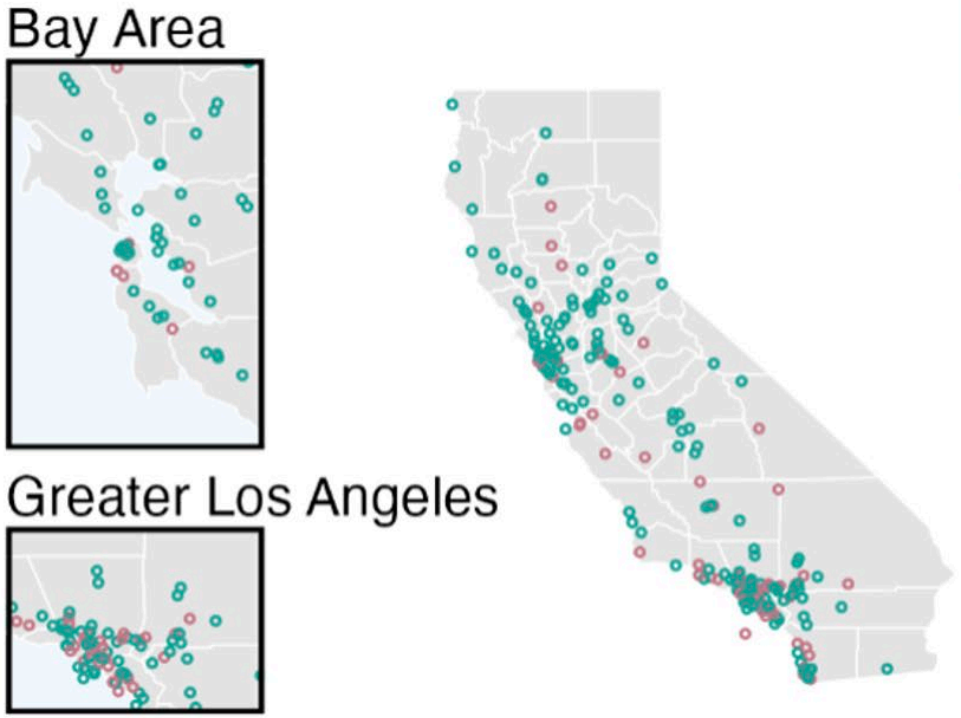
Disclosure to Learners

BRIDGE | Our Work | Tools | Trainings | Updates | About | Get Involved

I ❤ Emergency Departments





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Educational Objectives

At the conclusion of this activity participants should be able to:

1. Describe common conditions that complicate management of opioid withdrawal
2. Highlight strategies to effectively manage complicated opioid withdrawal in emergency department and hospital settings
3. Discuss case examples of opioid withdrawal syndrome, highlighting common challenges, gaps in evidence, and practical approaches

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Agenda

1 **Welcome & Introduction**

2 **Didactic Presentation & Facilitated Case Discussion**

3 **Learner Case Discussion & Q&A**

4 **Wrap-up & Announcements**

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Participation Ground Rules

- Please participate!
- Everyone's experiences differ: Assume the best intentions.
- Monitor your participation: Everyone is accountable.
- If someone says something that is not your understanding of the evidence, ask questions and do so respectfully.

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Complicated Opioid Withdrawal

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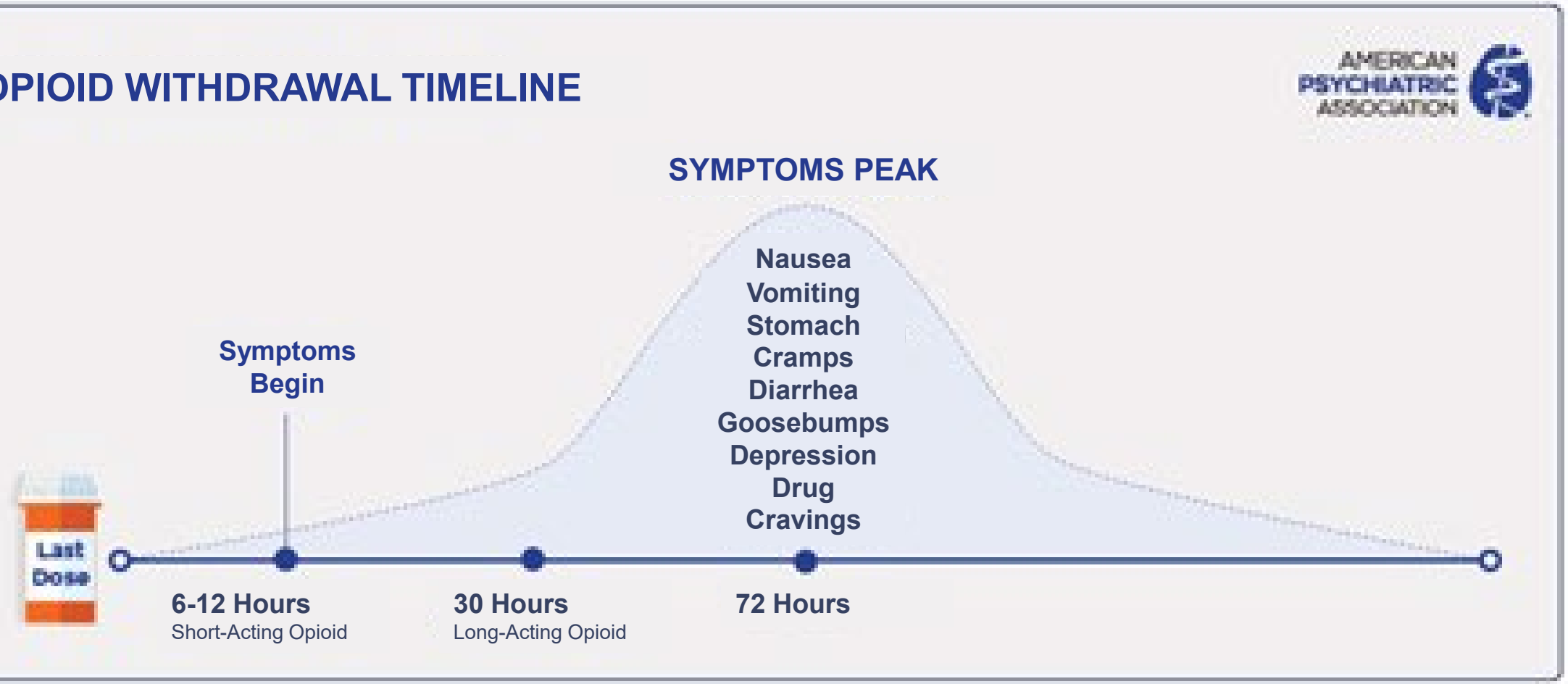
OPIOID WITHDRAWAL TIMELINE

AMERICAN PSYCHIATRIC ASSOCIATION



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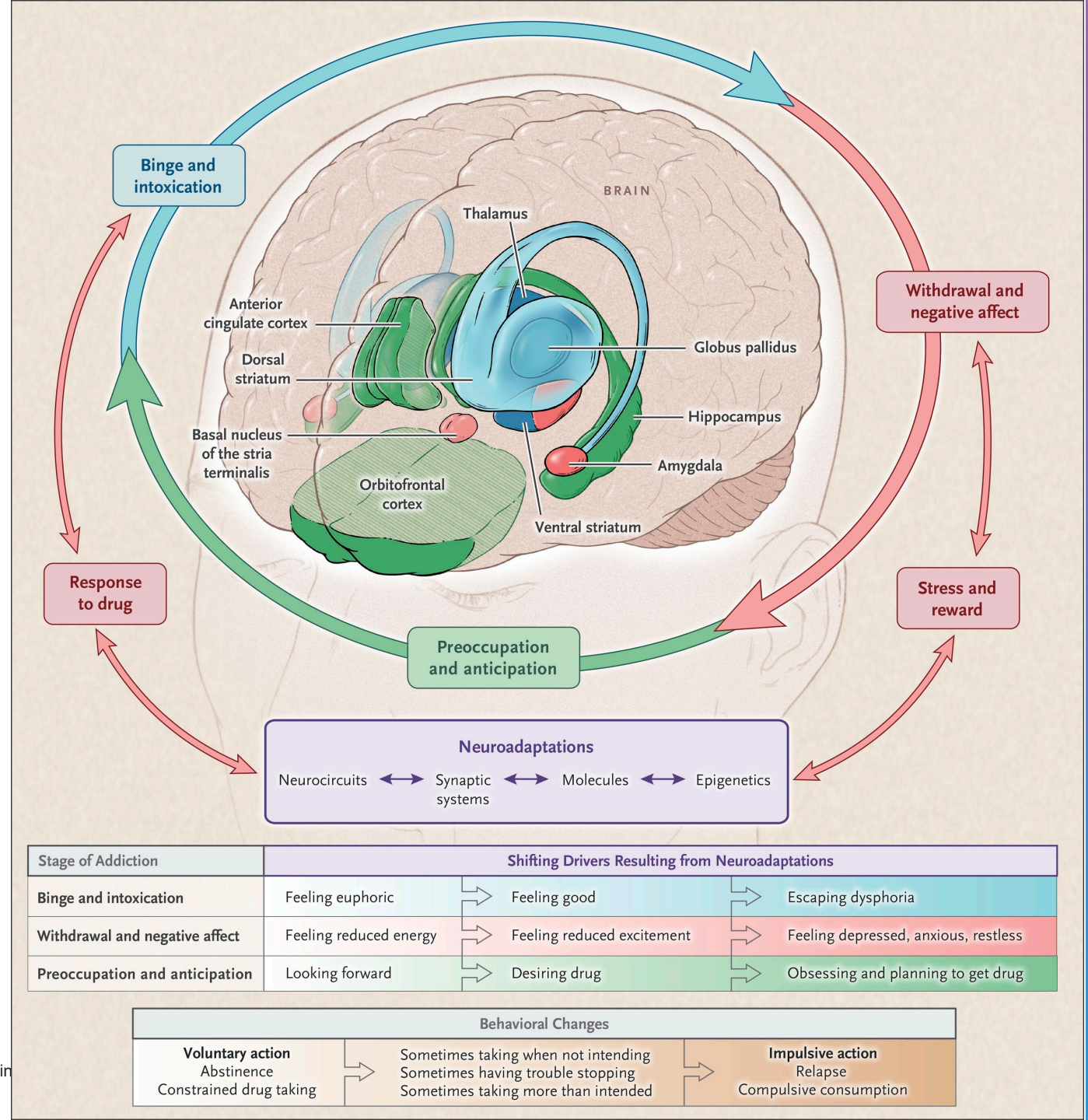
Highly Tolerant Individuals Present with Complicated Opioid Withdrawal

- The duration and magnitude of opioid exposure determines the severity of tolerance
- Opioid exposure induces wide reaching adaptive changes
- The magnitude of these changes (tolerance) represents the potential withdrawal of a given individual



Stage of Addiction	Shifting Drivers Resulting from Neuroadaptations		
Binge and intoxication	Feeling euphoric	Feeling good	Escaping dysphoria
Withdrawal and negative affect	Feeling reduced energy	Feeling reduced excitement	Feeling depressed, anxious, restless
Preoccupation and anticipation	Looking forward	Desiring drug	Obsessing and planning to get drug

Behavioral Changes		
Voluntary action Abstinence Constrained drug taking	Sometimes taking when not intending Sometimes having trouble stopping Sometimes taking more than intended	**Impulsive action** Relapse Compulsive consumption

Volkow, N.D., Koob, G.F. and McLellan, A.T., 2016. Neurobiologic advances from the brain

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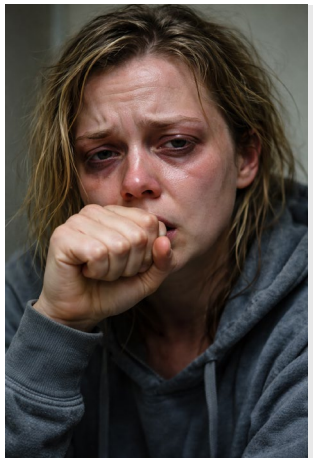
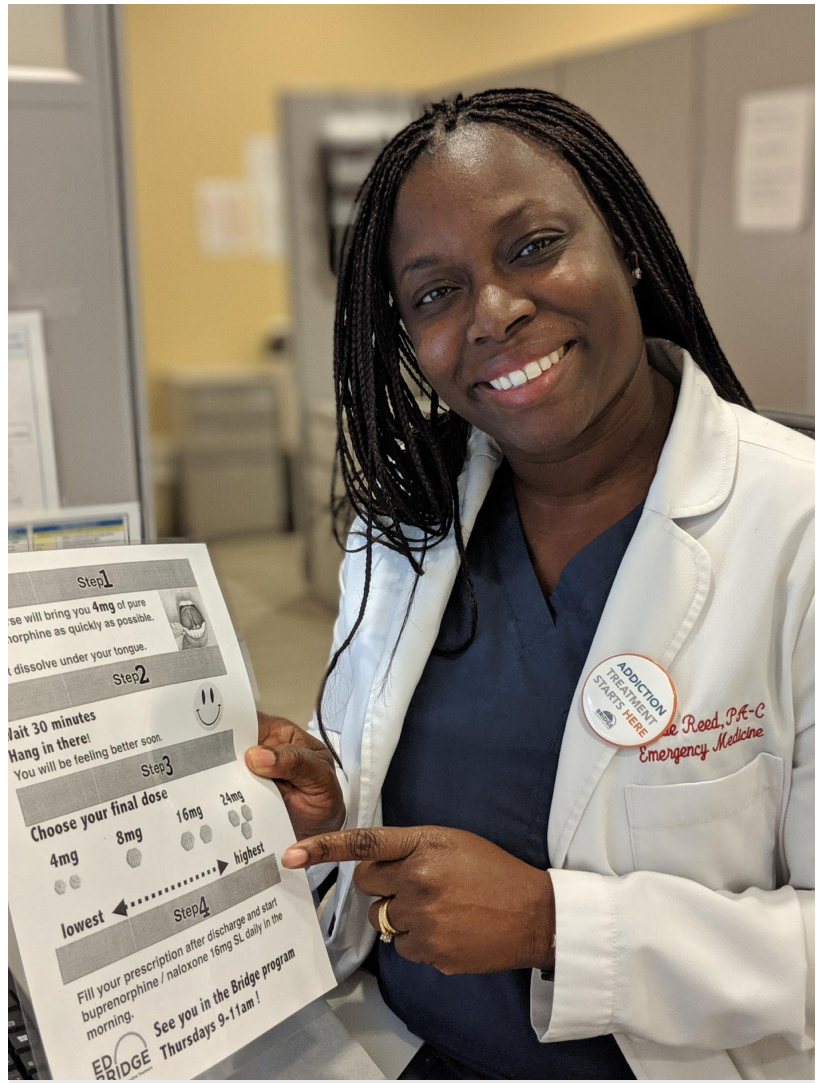
Let's Start Bup!



Smokes 30 fentanyl tablets per day for 6 years

Snorts 1/2 gm black tar per day for 2 years



Denae Reed, PA-C

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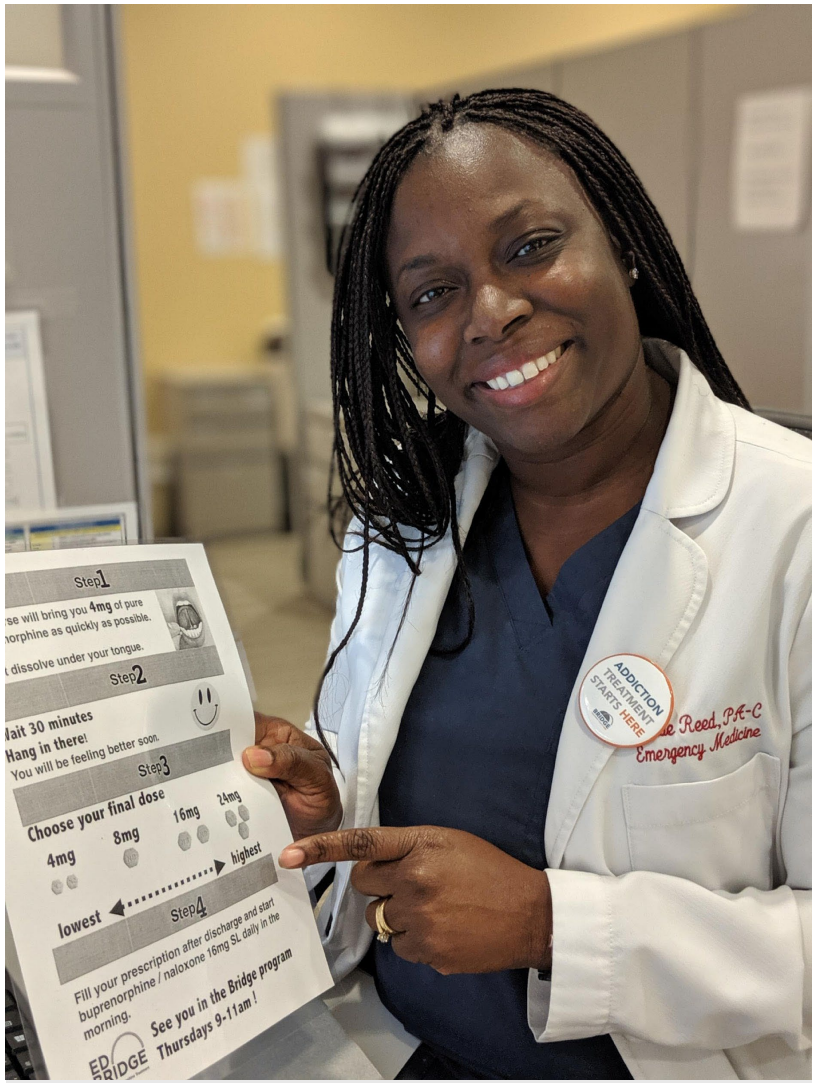
Snorts 1/2 gm black tar per day for 2 years

How would you start buprenorphine in this patient?



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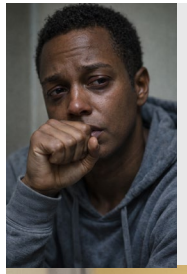
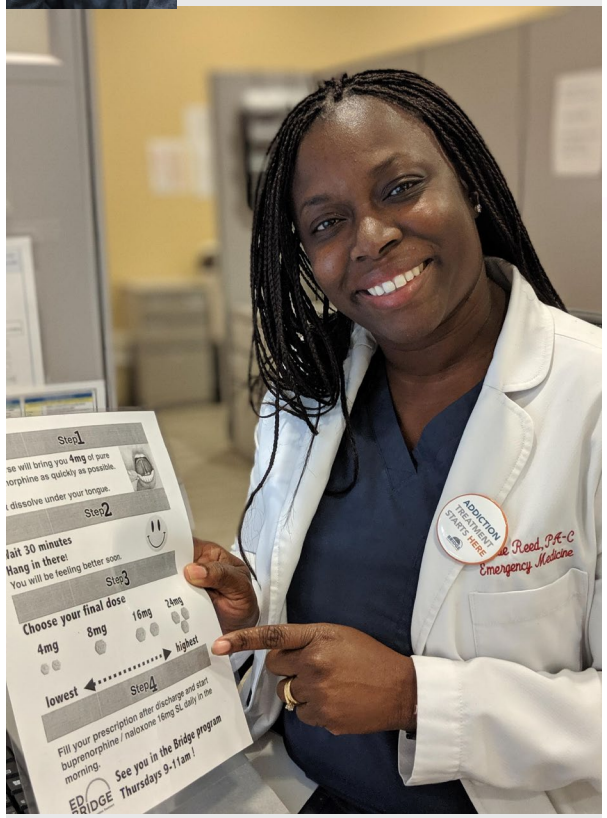
High-dose Rapid Start Bup



Snorts 1/2 gm black tar per day for 6 months



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Emergency Department Buprenorphine (Bup) Quick Start

Connect with your patient: Accurate diagnosis and treatment requires trust, collaboration, and shared decision making.

Opioid withdrawal* — NO → **Rx self-directed start:**
- Wait for severe withdrawal then start with 8-24+ mg SL.
- Rx per "Discharge" box below.

YES ↓

16 mg bup SL**
(range 8-24+ mg)

30-60 minutes ↓

Withdrawal improved? — NO → **If no improvement or worse, consider:**

Worsening withdrawal (common): Occurs with lower starting doses and heavy tolerance; improves with more bup (additional 8-16 mg SL).

Other substance intoxication or withdrawal: Continue bup and manage additional syndromes.

Bup side-effects: e.g., nausea or headache. Continue bup and treat side-effects with supportive medications.

Medical illness: Continue bup and manage underlying condition.

If sudden & significant worsening, consider precipitated withdrawal (rare): See box below.

YES ↓

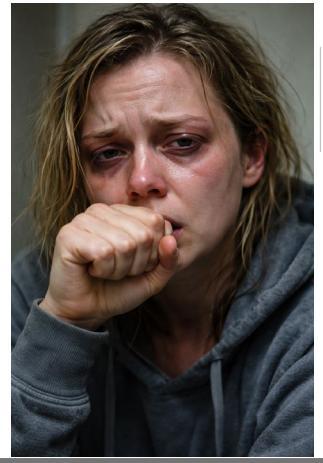
Administer 2nd dose
Additional 8-24+ mg SL bup

*Diagnosis Tips for Opioid Withdrawal:

1. **Look for at least two clear objective signs not attributable to something else:** large pupils, yawning, runny nose & tearing, sweating, vomiting, diarrhea, gooseflesh/piloerection, tachycardia.
2. **Confirm with the patient that they feel 'bad' withdrawal** and they **feel ready to start bup.** If they feel their withdrawal is mild, it is likely too soon.
3. **As needed, consider using the COWS (clinical opioid withdrawal scale).** Start if COWS ≥ 8 with ≥ 2 objective signs.
4. Withdrawal sufficient to start bup typically occurs 24-36 hrs after decreased/stopped use, but can vary from 6-72 hrs. Methadone withdrawal commonly takes longer.

**Bup Dosing Tips:

1. Respect patient preference. Shared decision making, flexibility, and collaboration are essential.
2. Heavy dependence/tolerance (e.g., fentanyl) may need higher doses of bup.
3. Low dependence/tolerance may do well with lower doses of bup.
4. Starting bup may be delayed or modified if there complicating factors:
   - Altered mental status, delirium, intoxication
   - Severe acute pain, trauma, or planned surgery
   - Severe medical illness
   - Long-term methadone maintenance



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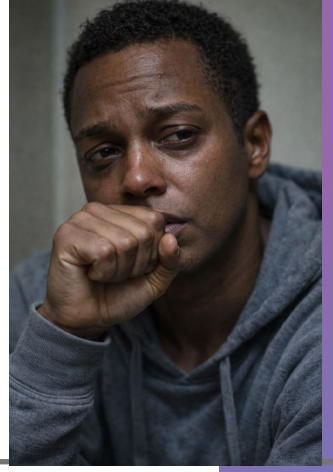
Withdrawal Assessment is a snapshot only



COWS 8

Withdrawal intolerant

Slower less predictable
Treatment response

Opioid sensitive

Withdrawal tolerant

Rapid response

Predictable

BUPRENORPHINE
(bupe, subs)

WHAT CAN BUPE DO FOR ME?

- Reduces cravings and withdrawal
- Protects against opioid overdose
- Treats pain and stabilizes energy

You can pick buprenorphine up at a pharmacy like **any other medication.**

Buprenorphine can be tablets, films, or injections

SO YOU WANT TO TRY BUPE?

Would you consider an INJECTION?

YES

Direct to inject

Once you're in mild withdrawal, you can start a weekly injection. After that first week, you can stay with injections or switch to films or tablets if you prefer.

NO

How much WITHDRAWAL can you handle?

VERY LITTLE

LOW dose tabs or films

Start bupe 1 week before stopping other opioids, either:

- **7 day:** take bupe 2 times a day most days
- **4 day:** take bupe 4 times a day

I CAN TOUGH IT OUT

HIGH dose tabs or films

Stop opioids, then when withdrawal gets severe, start bupe and increase dose over 1-2 days.

Withdrawal (e.g., runny nose, body aches, nausea, etc.) is treatable. Make a plan with your provider.

SOURCE(S): Coffin, P., & San Francisco Department of Public Health., n.d.

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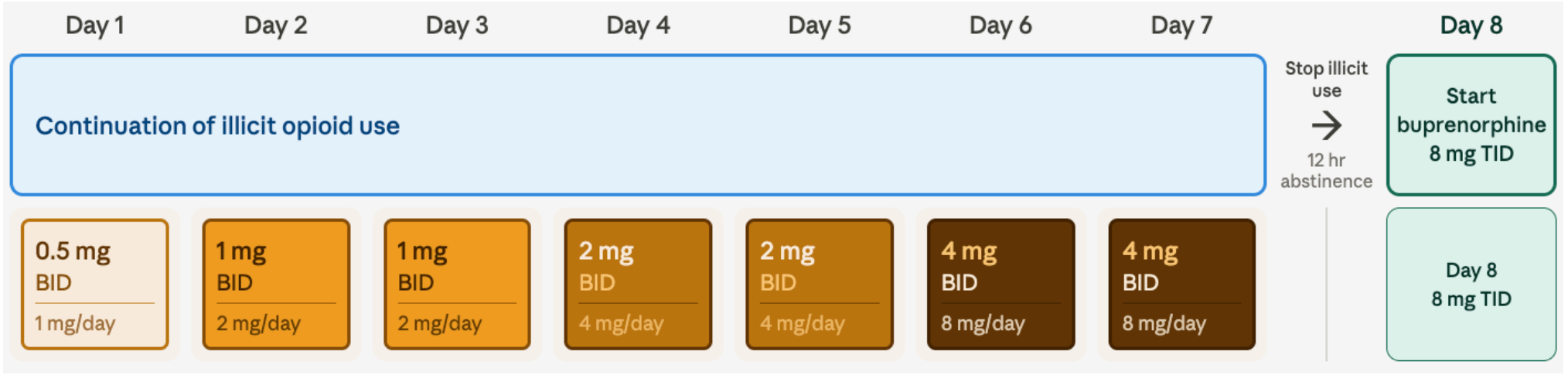
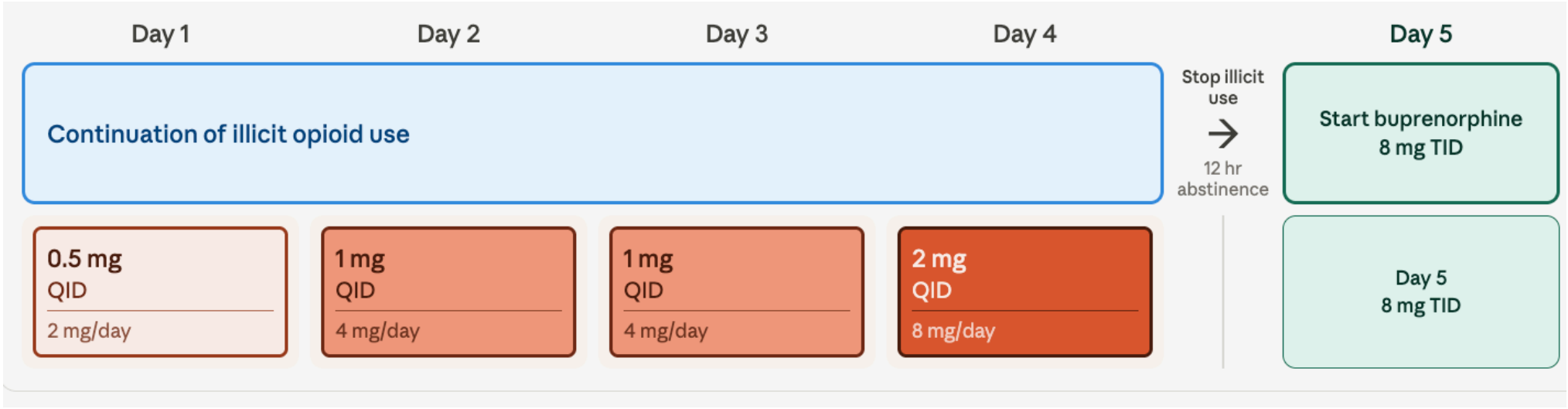
Low-dose buprenorphine start

7 day



4 day



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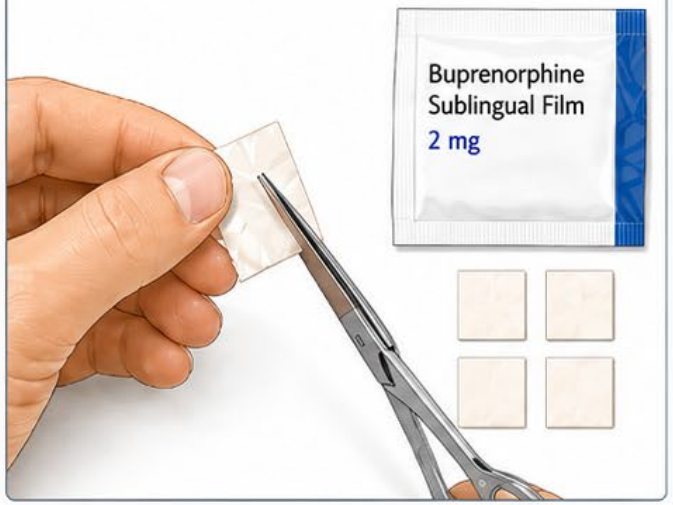
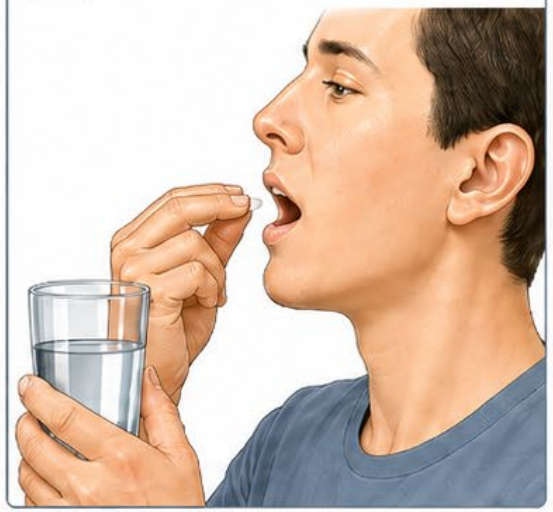
Low-dose buprenorphine options

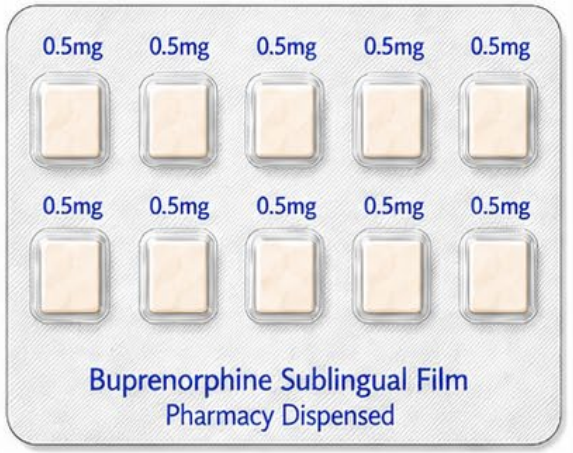
A Cut a 2 mg film 4 ways.



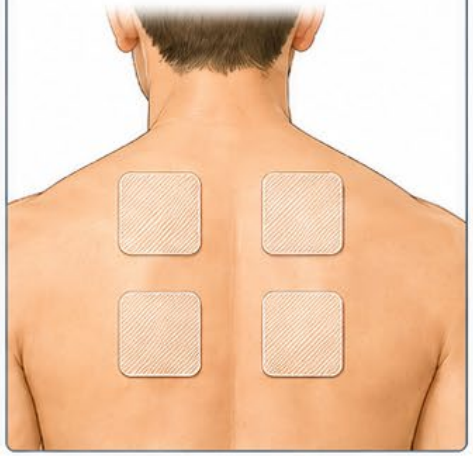
B Swallow a 2 mg tablet or film.



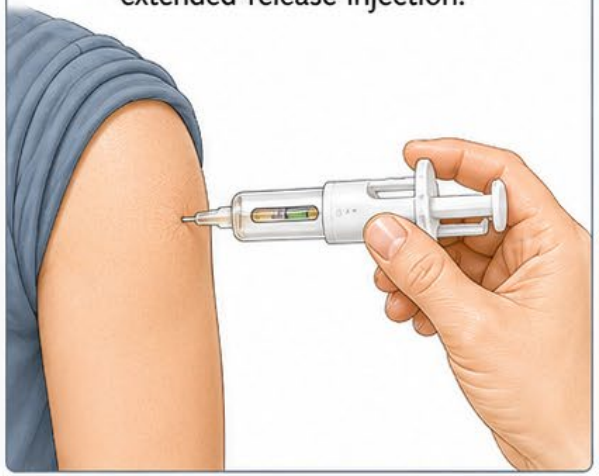
C Pre-made pharmacy blister packs.



D Place four 20 mcg/hr transdermal buprenorphine patches on the upper back.



E Low-dose weekly extended-release injection.



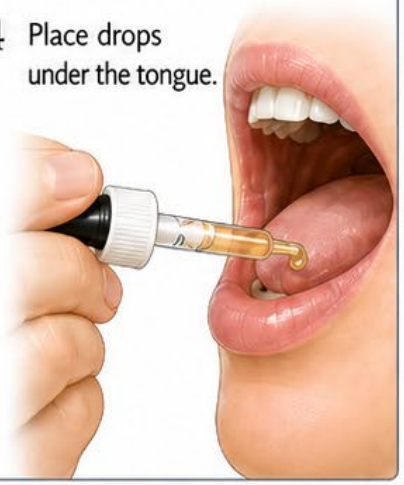
F Mix sublingual film in liquid and administer as drops under the tongue.

1 Add film to solution.

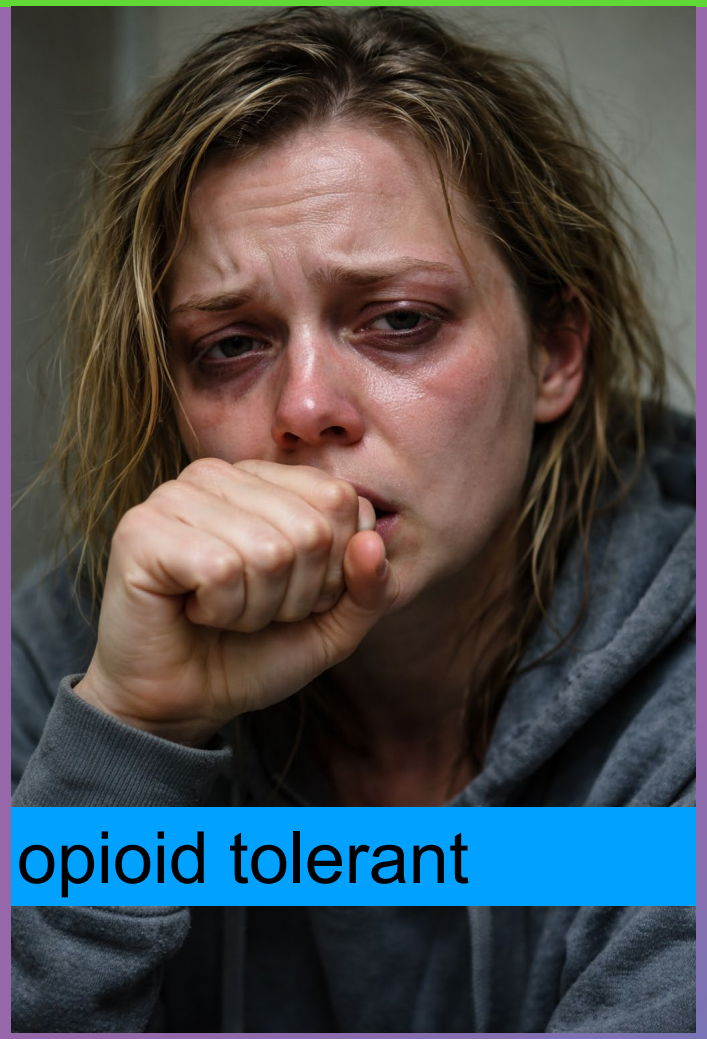
2 Shake or swirl until dissolved.

3 Draw up solution.

4 Place drops under the tongue.

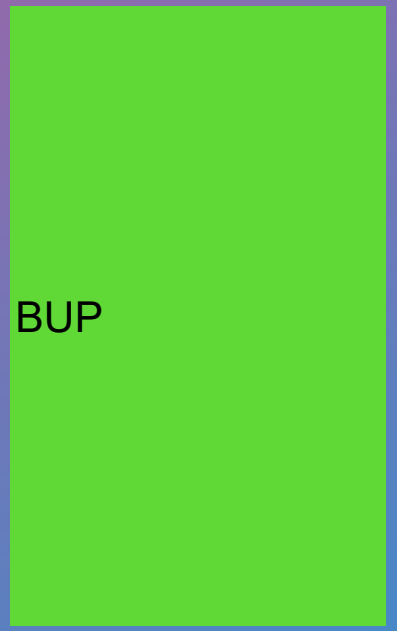


High-dose is the only Option



opioid tolerant

“Microdose”



“Macrodose”

High-dose is the only Option

Treatment Bundle Over Three Days[1]

Maximize pain control & withdrawal treatment with opioid analgesics throughout bup initiation

Day 1	Day 2	Day 3

Opioid Continuation [2]

Example Regimen: (*see page 2 for alternatives*)

1. Morphine ER 30–60 mg PO q8h scheduled
2. Morphine IR 15–30 mg PO q4h PRN
3. Morphine 10–20 mg IV q4h PRN

Low-Dose Bup Initiation (Day 1)[3]

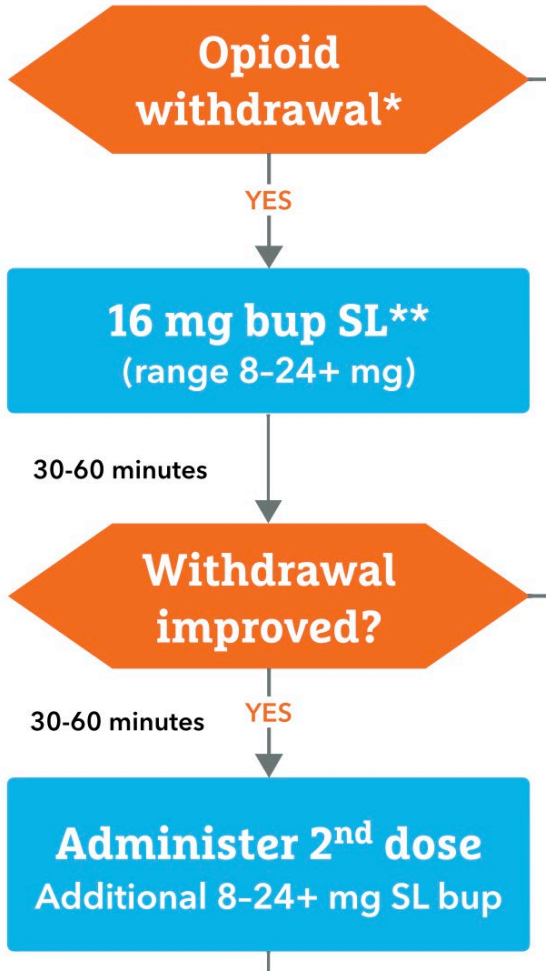
Bup 0.5 mg SL q3h x 8 doses
(q4h x 6 doses is OK)[4]

Low-Dose Bup Initiation (Day 2)

Bup 1 mg SL q3h x 8 doses
(q4h x 6 doses is OK)[4]

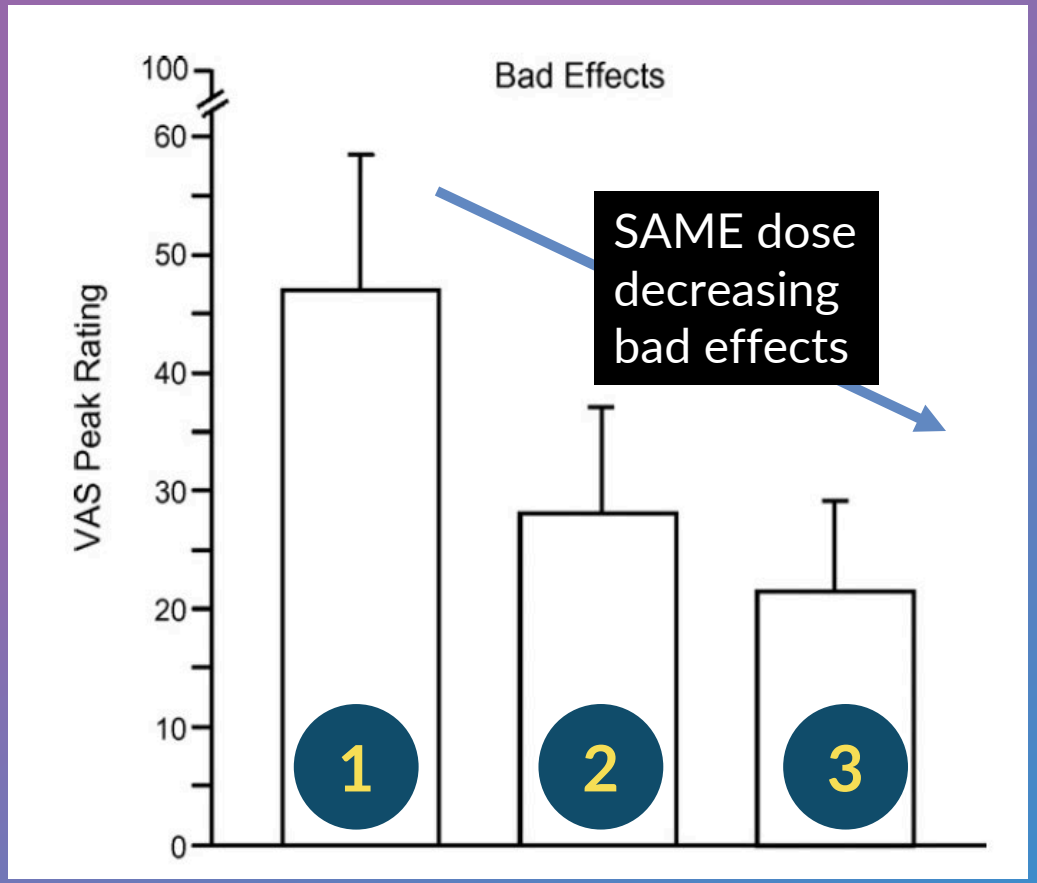
Low-Dose Bup Initiation (Day 3)

Bup 8 mg SL TID or
Injectable XR bup
(e.g., 300 mg SQ)



Buprenorphine administration facilitates positive effects of subsequent doses

The more you take BUP, the more it "feels" like a full agonist

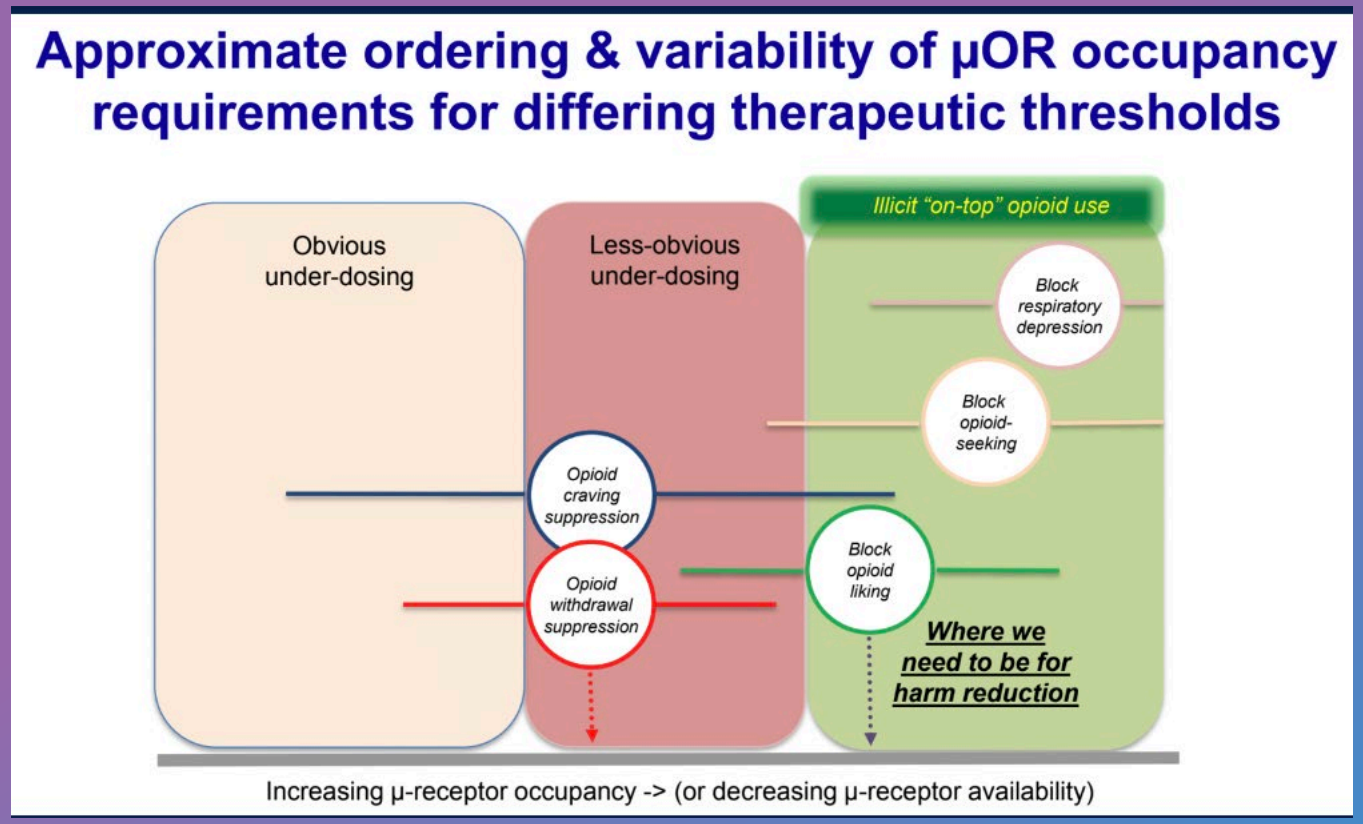


Sublingual buprenorphine/naloxone precipitated withdrawal in subjects maintained on 100mg of daily methadone: Rosado et al 2007 PMID: 17517480

Higher dose buprenorphine associated with improved retention

Mark Greenwald

"Partial agonist misconception"



- **Buprenorphine Dose and Time to Discontinuation Among Patients With Opioid Use Disorder in the Era of Fentanyl. Chambers et al.** PMID: 37721749

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Rapid Methadone Initiation

31-year-old woman presenting with opioid withdrawal. She expresses that she prefers methadone over buprenorphine, she was in a program over a year ago and she was doing well so left her program.

Use: 5 bags of fentanyl a day

COWS: 14

Urine: opiates and fentanyl

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Treatment and ED Course:

Rapid Methadone Titration for suspected high tolerance

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Opioid use disorder w/ daily fentanyl use, alert, wants methadone & no complicating factors*

↓

New Start

↓

First Dose: methadone 40 mg

- *30mg if OUD w/ suspected low tolerance*
- *20mg if unsure*

- ☑ Fentanyl user
- ☑ In withdrawal
- ☑ In the ED

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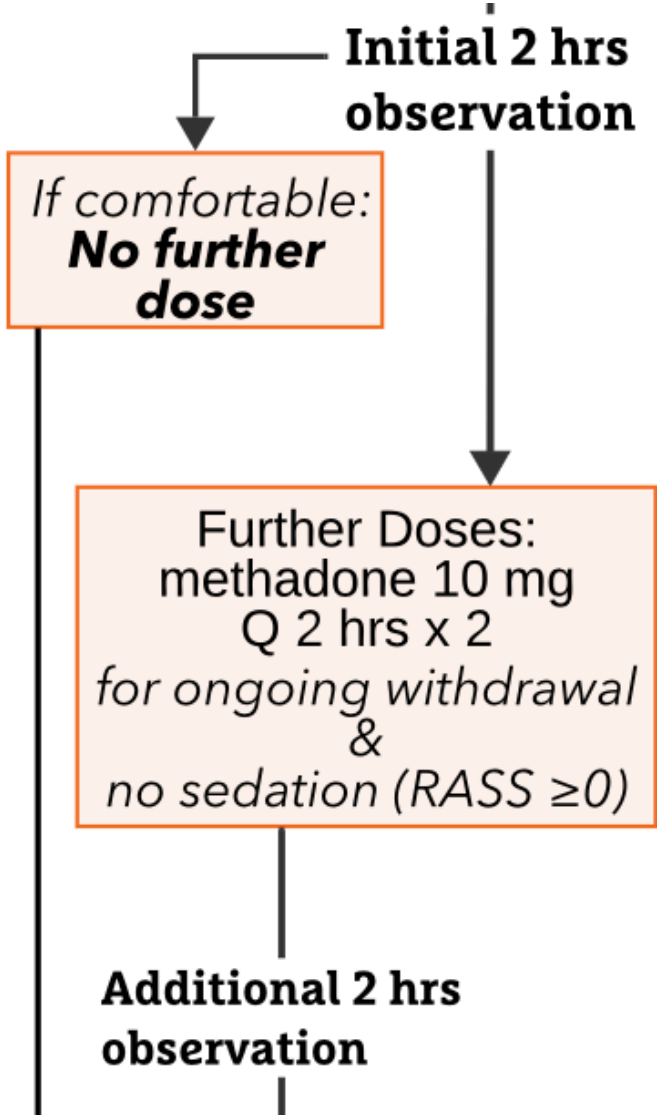
Treatment and ED Course:

Total 60 mg in ED on day one



- ☑ Fentanyl user
- ☑ In withdrawal
- ☑ In the ED

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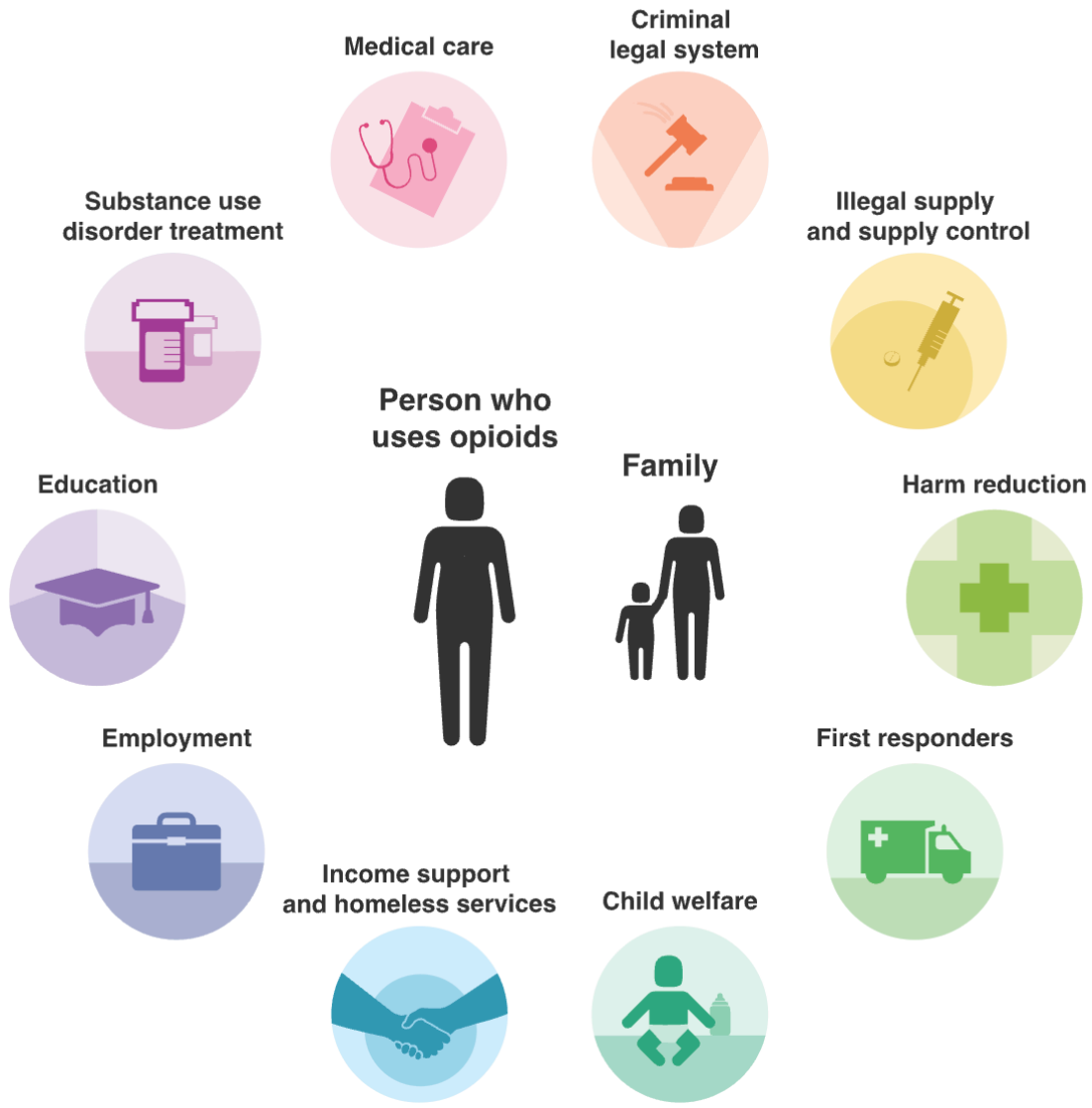
"It is not always clear who is responsible for coordinating among ecosystem components or managing the transition from one component to another"



Stein, Bradley D., et al. "America's opioid ecosystem: How leveraging system interactions can help curb addiction, overdose, and other harms." *Rand Health Quarterly* 10.4 (2023): 1.

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Bridge Model: Safe Discharge and effective linkage

Patients started on Methadone in the ED and Discharged Home

- May be discharged if alert without sedation (RASS ≥0) after ≥ 2 hrs of observation after last dose.
- Provide navigation assistance to link to (OTP) methadone clinic next day.
- May return for 3 consecutive days to be administered methadone or be dispensed a 3 day supply. *See page 2 for details on coordinating treatment with OTPs and the DEA 72 hr rule.*
- Methadone may not be prescribed at discharge for the treatment of OUD.
- Patient should have naloxone 4 mg/0.1 ml in hand at discharge.

Low-Barrier Treatment

Connection to Care and Community

Culture of Safety Planning


Empowering NAVIGATORS
Reach people in need and
link them to clinicians

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When to be careful

Complicating Factors*

- Respiratory distress, sedation, allergy
- Benzodiazepine or alcohol intoxication.
- Known QTc ≥500 (ECG not required to start).
- Medically unstable (e.g. sepsis, severe liver dz, cardiac dz, hx of ventricular arrhythmias).
- Advanced age (>70 yrs) with medical comorbities

Dosing notes

- Expect peak sedation at 4+ hrs.
- Stacking occurs with daily dosing due to very long half-life (>24 hrs).
- If NPO consider IV. Oral to IV conversion is 2:1 (caution: increased QTC prolongation with IV)
- Methadone has many significant drug-drug interactions. Always check. *See page 2.*
- Do not start high-dose bup (≥2 mg) if also taking methadone. *See page 2 for details.*

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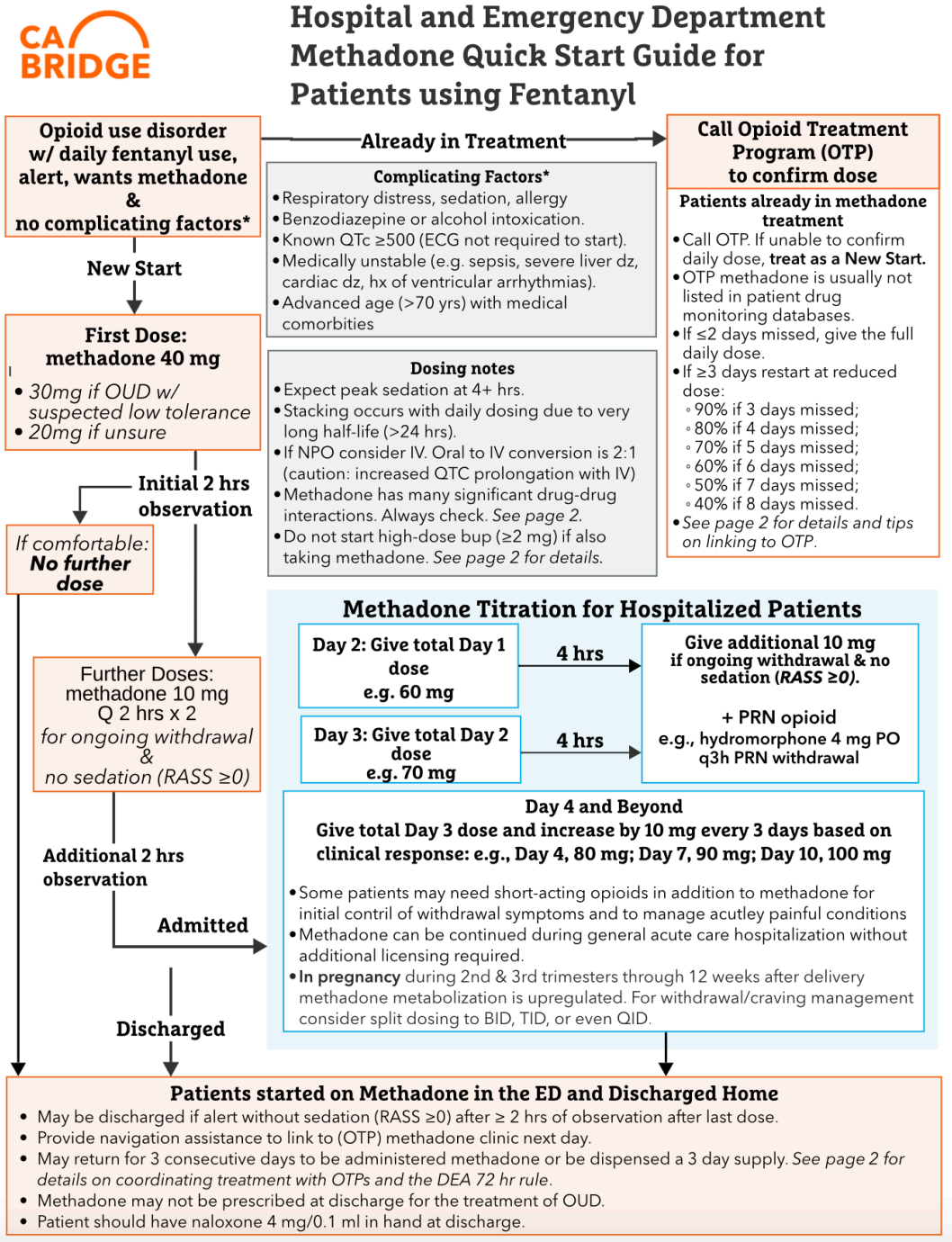
Putting it all together



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Deputies at bedside

“Took a swing” at paramedics

+ diarrhea
+ vomiting
+ akathisia

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50 years old
20+ yrs @ 180mg methadone daily

Took a pill prescribed by his PMD

“Had a panic attack”

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CASE REVIEW

Takotsubo Cardiomyopathy Due to Iatrogenic Methadone Withdrawal

Faisal B. Saiful, MD,[1] James Lafferty, MD,[2] Chin Hee Jun, MD,[1] Sumaya Teli, MB, ChB,[3] Srinivas Duvvuri, MD,[2] Saakshi Khattri, MD,[1] Tariq Bhat, MD[1]

[1]Department of Medicine and [2]Division of Cardiology, Staten Island University Hospital, Staten Island, NY; [3]University of Sheffield School of Medicine, Sheffield, UK

Lemesle F, Lemesle F, Nicola W, Pierre Jonville-Béra A. First case of stress cardiomyopathy as a result of methadone withdrawal secondary to drug-drug interaction. The American Journal of Emergency Medicine. 2010 Mar;28(3):387.e5-6. DOI: 10.1016/j.ajem.2009.07.007. PMID: 20223408.

Critically Ill

Precipitated opioid withdrawal

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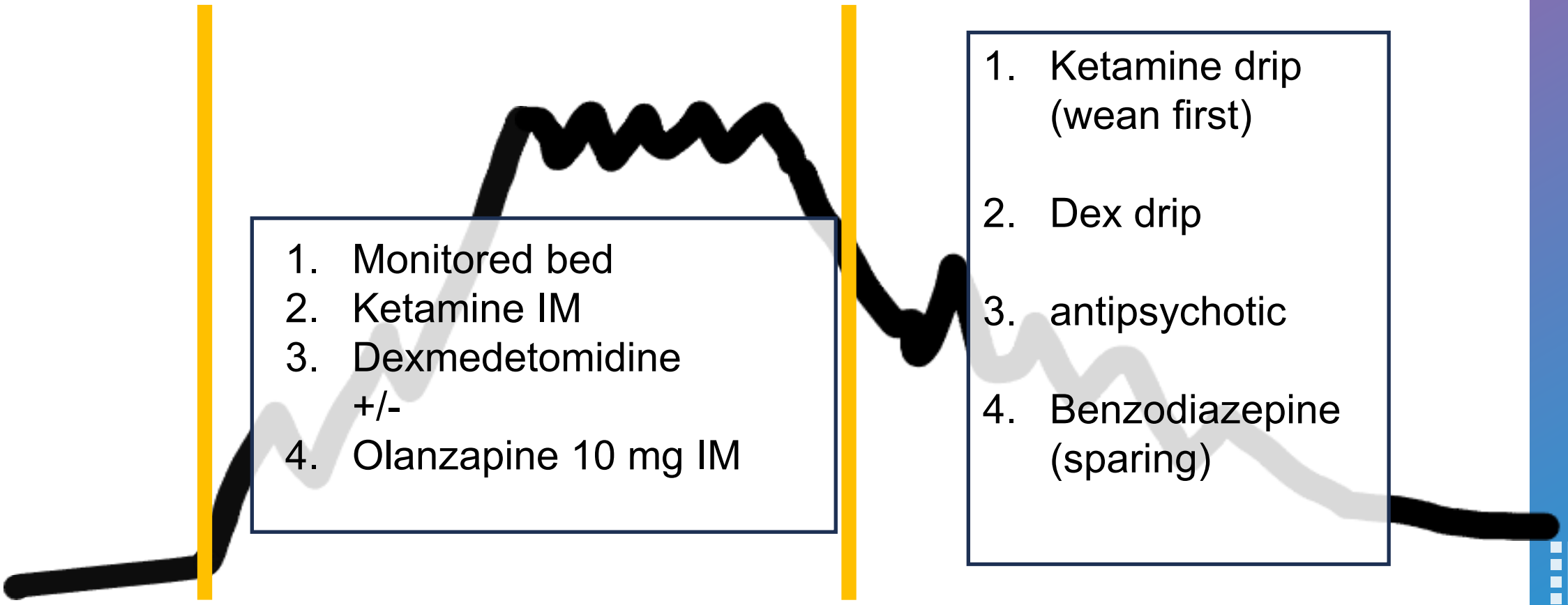
Naltrexone Precipitated Withdrawal In Methadone

Acute

1. Monitored bed
2. Ketamine IM
3. Dexmedetomidine
   +/-
4. Olanzapine 10 mg IM

Residual

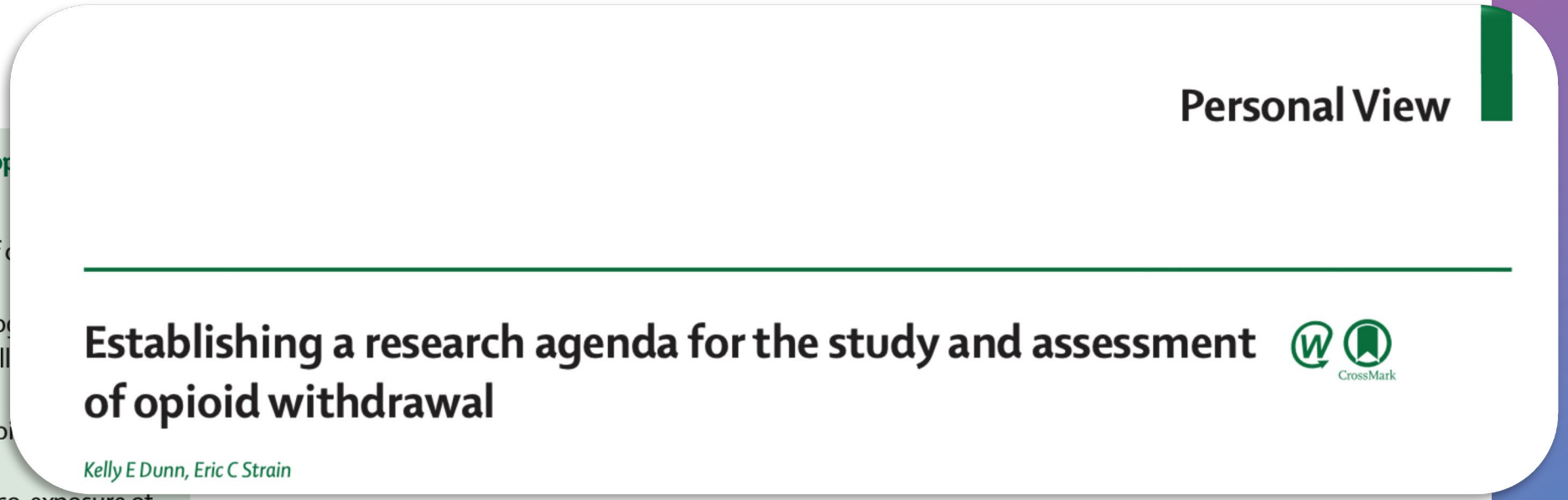
1. Ketamine drip (wean first)
2. Dex drip
3. antipsychotic
4. Benzodiazepine (sparing)



24 mg SL BUP

Worsening Sweats
Feels bad
Wants to vomit

What is Precipitated Withdrawal?



Personal View

Establishing a research agenda for the study and assessment of opioid withdrawal

Kelly E Dunn, Eric C Strain

***Panel 2:* Establishing a research agenda for op withdrawal**

- Develop a unified operational definition of withdrawal
- Examine opioid withdrawal symptomatolo exposure to different opioids, particularly ill manufactured fentanyl
- Examine and characterise precipitated opioi expression and treatment
- Understand the relative contribution that co-exposure of opioids with other drugs (eg, stimulants) or adulterants (eg, xylazine) has on opioid withdrawal expression and treatment
- Examine individual variation in withdrawal expression and different opioid withdrawal phenotypes
- Characterise the protracted opioid withdrawal syndrome
- Identify biomarkers associated with the severity of opioid withdrawal
- Identify predictors of the severity of opioid withdrawal
- Understand the association between specific signs and symptoms of opioid withdrawal and treatment attrition or opioid relapse

Dunn KE, Strain EC. Establishing a research agenda for the study and assessment of opioid withdrawal. Lancet Psychiatry. 2024 Mar 20:S2215-0366(24)00068-3. doi: 10.1016/S2215-0366(24)00068-3. Epub ahead of print. PMID: 38521089.

Differential Dx

Worsening withdrawal (common): Occurs with lower starting doses and heavy tolerance; improves with more bup (additional 8–16 mg SL).

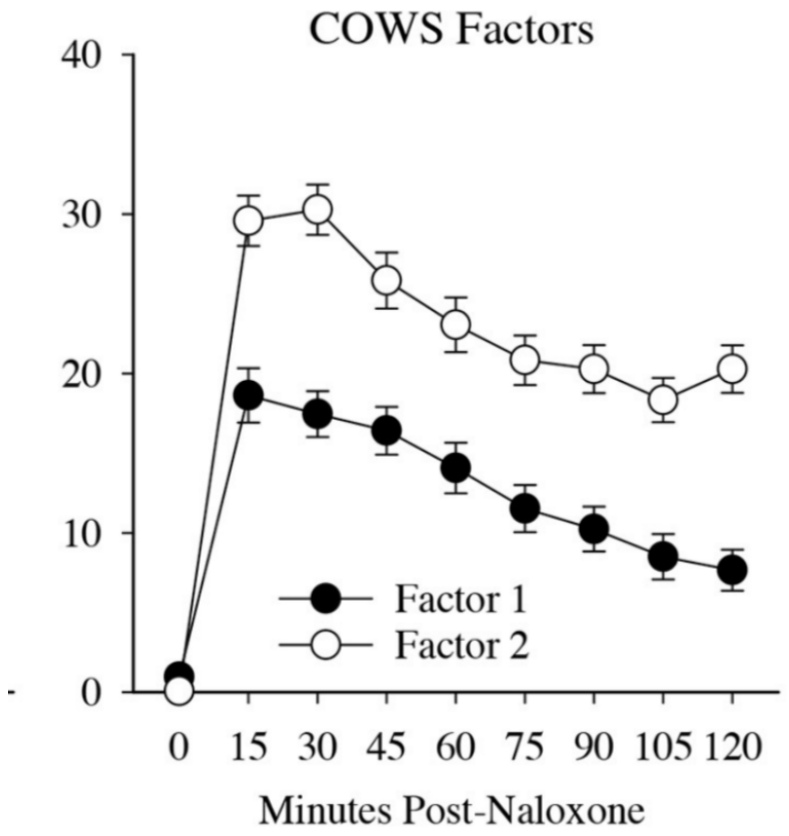
Other substance intoxication or withdrawal: Continue bup and manage additional syndromes.

Bup side-effects: e.g., nausea or headache. Continue bup and treat side-effects with supportive medications.

Medical illness: Continue bup and manage underlying condition.

If sudden & significant worsening, consider precipitated withdrawal (rare): See box below.

Abrupt significant withdrawal worsening (COWS increase of ≥ 5/6)



Dunn, Kelly E., et al. "Operational definition of precipitated opioid withdrawal." *Frontiers in Psychiatry* 14 (2023): 1141980.

Precipitated withdrawal was rare ≤1%
9 out of 1,200

Precipitated withdrawal was rare ≤2%

March 30, 2023

Incidence of Precipitated Withdrawal During a Multisite Emergency Department–Initiated Buprenorphine Clinical Trial in the Era of Fentanyl

Gail D'Onofrio, MD, MS[1,2,3]; Kathryn F. Hawk, MD, MHS[1,3]; Jeanmarie Perrone, MD[4]; Sharon L. Walsh, PhD[5]; Michelle R. Lofwall, MD[5]; David A. Fiellin, MD[1,2,3]; Andrew Herring, MD[6]

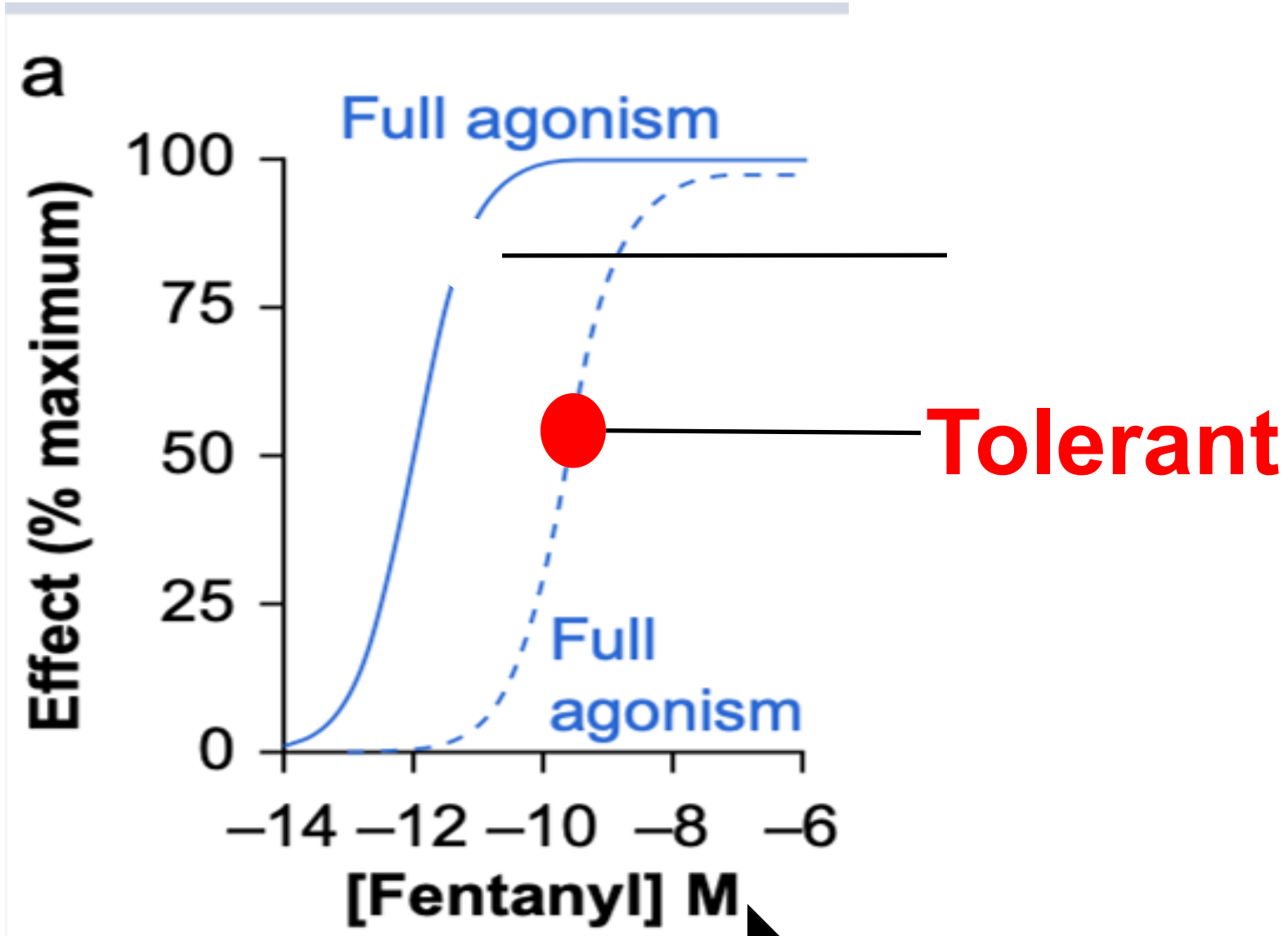
JAMA Network | Open™

Research Letter | Substance Use and Addiction

High-Dose Buprenorphine Initiation in the Emergency Department Among Patients Using Fentanyl and Other Opioids

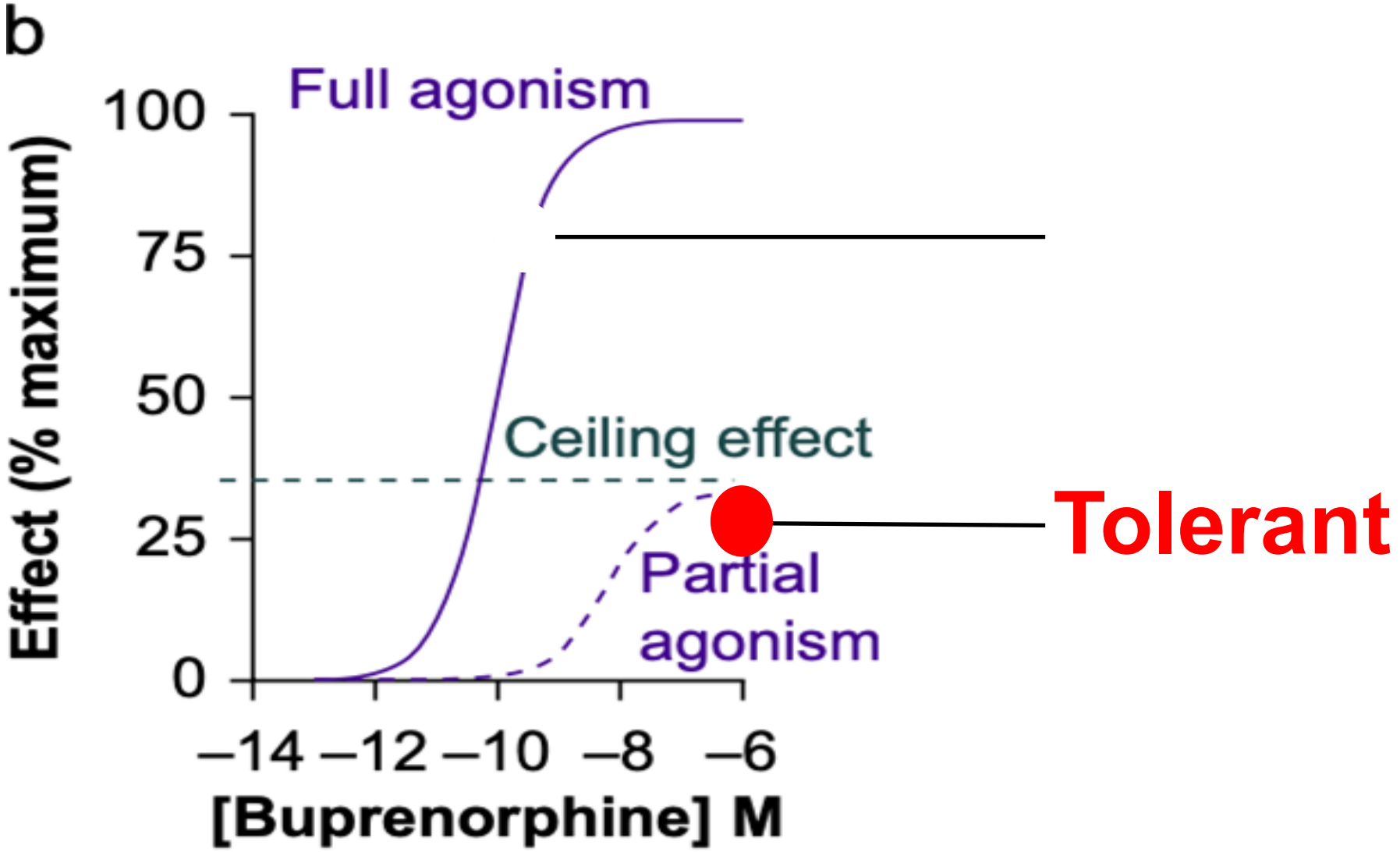
Hannah Snyder, MD; Brendon Chau, MPH; Mariah M. Kalmin, PhD; Melissa Speener, MPH; Arianna Campbell, PA; Aimee Moulin, MD, MAS; Andrew A. Herring, MD

What is happening?



Samways DSK. Clarifying intrinsic efficacy, partial agonism, and full agonism: the case of buprenorphine. Br J Anaesth. 2024 Feb;132(2):431-432. doi: 10.1016/j.bja.2023.10.041. Epub 2023 Dec 1. PMID: 38042727.

What is happening?

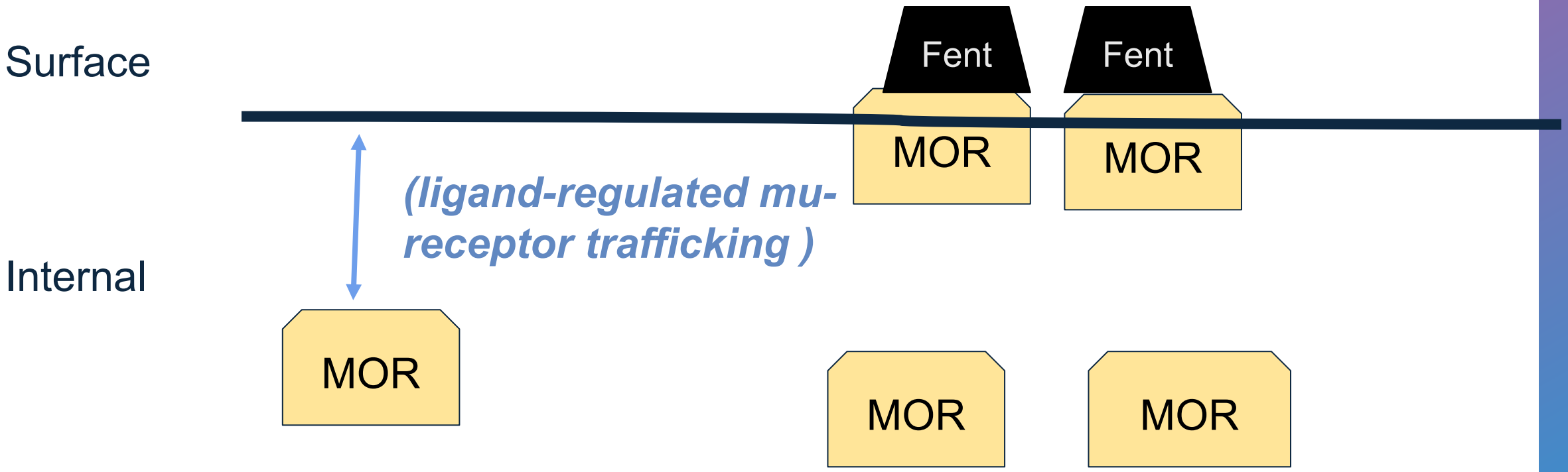


Tolerance

Samways DSK. Clarifying intrinsic efficacy, partial agonism, and full agonism: the case of buprenorphine. Br J Anaesth. 2024 Feb;132(2):431-432. doi: 10.1016/j.bja.2023.10.041. Epub 2023 Dec 1. PMID: 38042727.

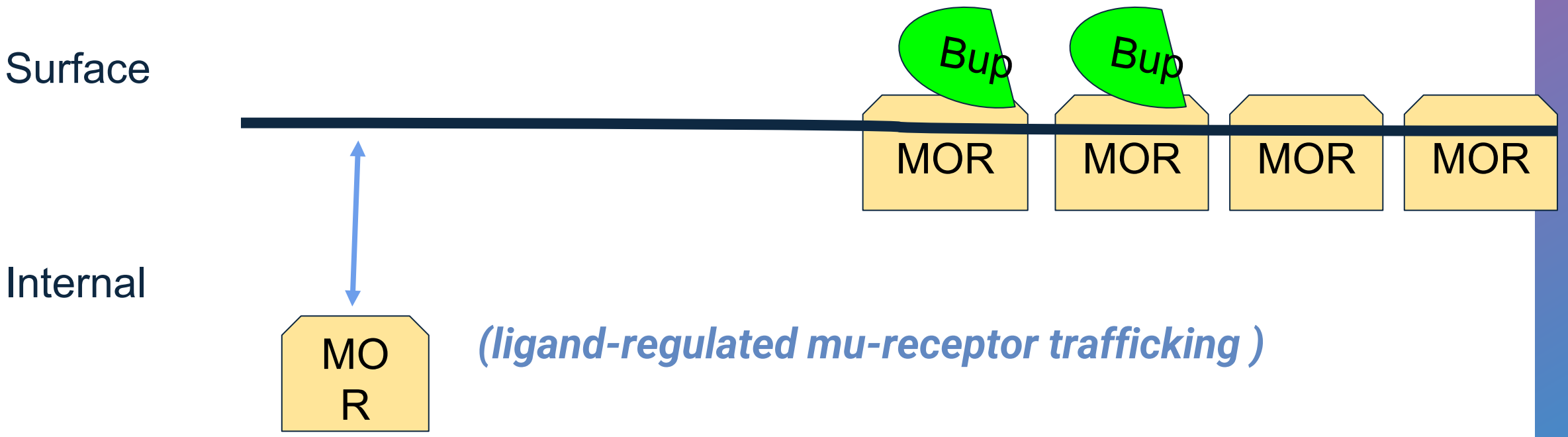
Fentanyl decreases Surface MOR expression

~ 35% decrease in 1 hr vs 10% decrease by morphine



Zaki PA, Keith DE Jr, Brine GA, Carroll FI, Evans CJ. Ligand-induced changes in surface mu-opioid receptor number: relationship to G protein activation? J Pharmacol Exp Ther. 2000 Mar;292(3):1127-34. PMID: 10688632. AND https://pubmed.ncbi.nlm.nih.gov/9600641/ AND https://pubmed.ncbi.nlm.nih.gov/9618424/ AND https://pubmed.ncbi.nlm.nih.gov/19108502/ AND https://pubmed.ncbi.nlm.nih.gov/23553842/

Buprenorphine increases Surface MOR expression



(ligand-regulated mu-receptor trafficking)

Zaki PA, Keith DE Jr, Brine GA, Carroll FI, Evans CJ. Ligand-induced changes in surface mu-opioid receptor number: relationship to G protein activation? J Pharmacol Exp Ther. 2000 Mar;292(3):1127-34. PMID: 10688632.

Two-part theory of Precipitated Withdrawal

COWS

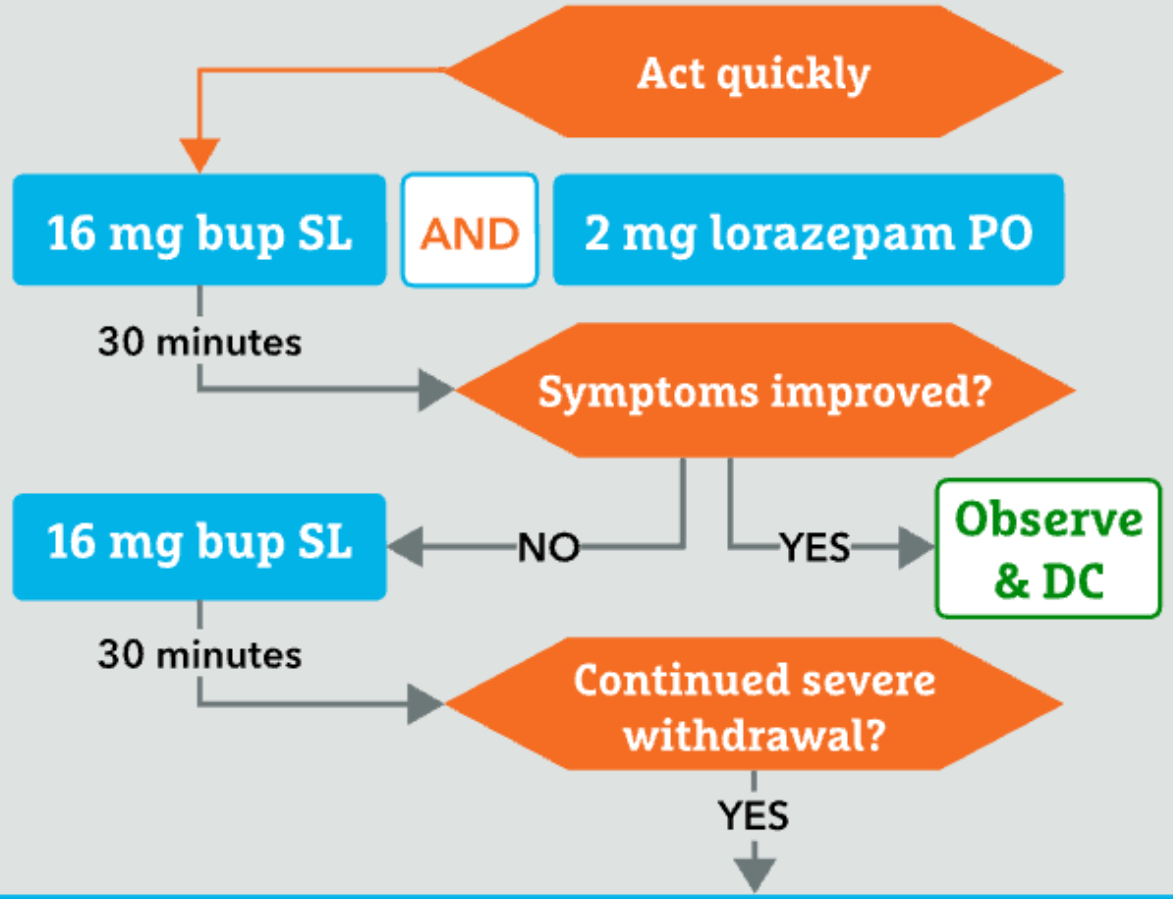
Receptor level disruption (Acute)	Opioid deficit (Chronic exposure/physical dependence)
Rate of agonist displacement by Bup	Total mu agonist

Buprenorphine Precipitated Withdrawal

Target	Treatment
Opioid deficit	Full agonist opioids Buprenorphine
Opioid resistance	Ketamine
Symptom Feedback loops	Adjuncts: Alpha-2 agonists, benzodiazepines, anticonvulsants, antipsychotics, loperamide, D2/D3 agonists

Treatment of bup precipitated withdrawal

(Sudden, significant worsening of withdrawal soon after bup administration.)



Adjuvants:
OK but should not delay or replace bup. Use sparingly with appropriate caution.

Benzodiazepines:

- Lorazepam 2 mg PO/IV

Antipsychotics:

- Olanzapine 5 mg PO/IM

Alpha-agonists:

- Clonidine 0.1-0.3 mg PO

D2/D3 agonists:

- Pramipexole 0.25 mg PO

Gabapentinoids:

- Pregabalin 150 mg PO

Escalate level of care to manage potential moderate to deep sedation including cardiac, pulse oximetry, and end tidal CO2 monitoring:

1. Ketamine (0.3 mg/kg IV slow push q 15 minutes and/or infusion).
2. Fentanyl 200 mcg IV q10 minutes. Total dose of > 2000 mcg has been reported.

After clinical resolution, observe and discharge with bup Rx and/or XR-bup

Buprenorphine Precipitated Withdrawal

Early

1. Act quickly
2. Calm & confident
3. Benzo PO
4. High-dose Bup (16mg)

Acute

1. Monitored
2. Bup (64mg SL)
3. Ketamine (1-2mg/kg IV/IM) or (20 IV/IM PRN)
4. Dex (dexmedetomidine)
5. Olanzapine (5-10mg IM)

Residual

1. Pramipexole 0.5mg
2. Clonidine 0.3mg
3. Benzo
4. Pregabalin

---

goal

Month-long Bup

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33-year-old woman (Hgb SS) Sickle Cell Disease presents with pain and withdrawal crisis

Bilateral AVN of hips and left shoulder

Treated with BUP: Brixadi 128 mg XR

Treated with Opioid analgesics

- Oxycodone IR 30mg Q 8h x 20 years

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JOURNAL OF
Addiction Medicine
The Official Journal of the American Society of Addiction Medicine

REVIEWS

Challenging the Utility of DSM-5 Opioid Use Disorder Criteria for Diagnosing Problematic Prescription Opioid Use: Next Steps

Ballantyne, Jane C. MD; Sullivan, Mark D. MD, PhD; Saxon, Andrew J. MD

pain relief = opioid reward

Jane Ballantyne

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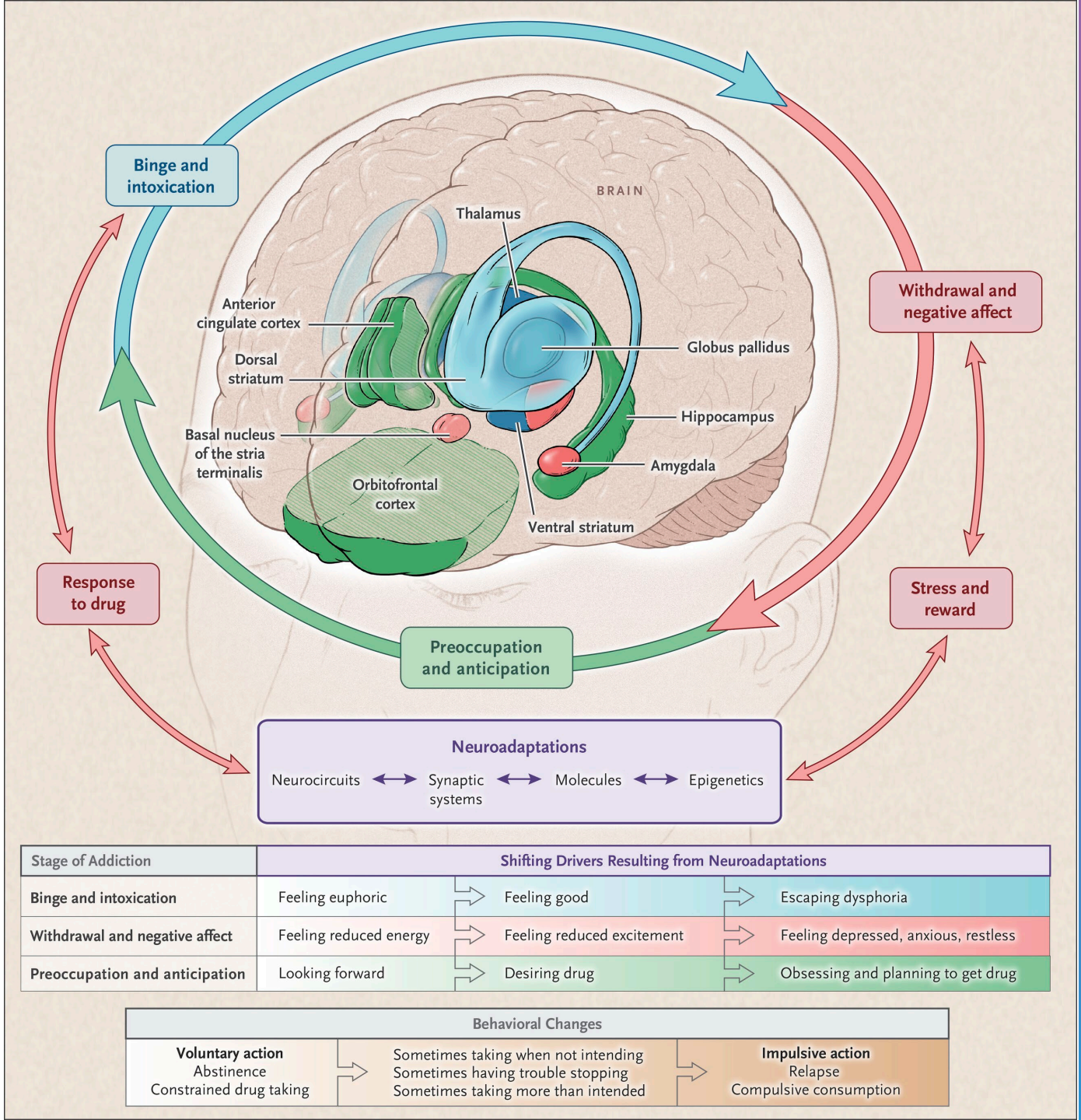
Highly Tolerant individuals present with complicated opioid withdrawal

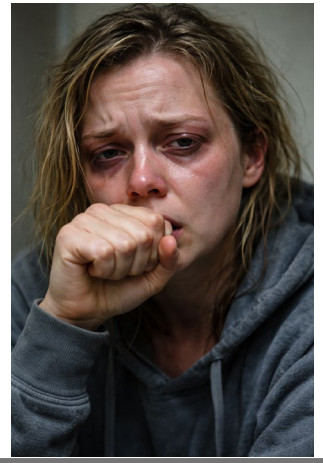
- The duration and magnitude of opioid exposure determines the severity of tolerance.
- Opioid exposure induces wide reaching adaptive changes
- The magnitude of these changes (tolerance) represents the potential withdrawal of a given individual



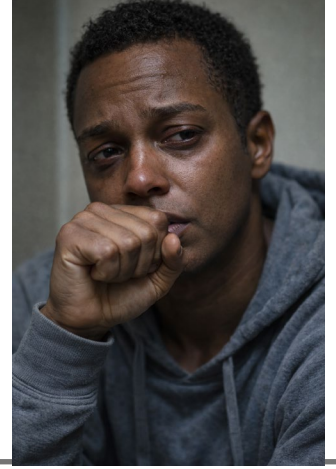
Stage of Addiction	Shifting Drivers Resulting from Neuroadaptations		
Binge and intoxication	Feeling euphoric	Feeling good	Escaping dysphoria
Withdrawal and negative affect	Feeling reduced energy	Feeling reduced excitement	Feeling depressed, anxious, restless
Preoccupation and anticipation	Looking forward	Desiring drug	Obsessing and planning to get drug

Behavioral Changes		
Voluntary action Abstinence Constrained drug taking	Sometimes taking when not intending Sometimes having trouble stopping Sometimes taking more than intended	**Impulsive action** Relapse Compulsive consumption

Volkow, N.D., Koob, G.F. and McLellan, A.T., 2016. Neurobiologic advances from the brain disease model of addiction. *New England Journal of Medicine*, *374*(4), pp.363-371.



Withdrawal Assessment is a snap shot only



COWS 8

Withdrawal intolerant

Slower less predictable Treatment response

Opioid sensitive

Withdrawal tolerant

Rapid response

Predictable

Acute Pain Management in Patients on Buprenorphine (Bup) Treatment for Opioid Use Disorder

Emergency Department / Critical Care

Continue Maintenance Bup
Divide dose q4-8hrs
(e.g 4mg Bup SL QID)

Non-opioid analgesia

- Promote calm and comfort
- Regional Anesthesia
- Acetaminophen and NSAIDs
- Gabapentinoids
- Alpha-2 Agonists
- Ketamine & Magnesium
- IV Lidocaine

Additional opioids

Option 1 High affinity full agonist opioids
- Fentanyl
- Hydromorphone

Option 2 Additional Bup
- Increase SL Bup
- Start IV Bup

Promote calm and comfort

Anxiety, fear, depression are common: Instill sense of control, provide education on self-management techniques such as mindfulness meditation. Reduce noise, uncertainty, confusion.
Positioning, splinting, and physical comfort should be maximized. Minimize unnecessary NPO status.
TREAT UNPLEASANT SYMPTOMS:
Diphenhydramine 25-50mg PO q8h prn insomnia/anxiety
Tizanidine 2-4mg q6h prn muscle spasms
Ondansetron 4mg PO q6h prn nausea
Trazadone 50mg PO qhs prn insomnia
Melatonin 3mg PO qhs prn insomnia
Lorazepam 0.5-1mg PO prn anxiety
Antipsychotics prn psychotic disorder symptom control
Nicotine replacement prn tobacco dependence

Regional Anesthesia

Peripheral nerve blocks: superficial cervical plexus, brachial plexus, radial/median/ulnar, PECS, erratus plane, TAP, femoral, sciatic, posterior tibial.
Spinal and Epidural anesthesia

Acetaminophen and NSAIDs

Acetaminophen and **NSAIDs,** when not contraindicated, should are the foundation of a multimodal analgesic strategy.

Gabapentinoids

In opioid depenent patients, the calcium channel inhibitors, gabapentin and pregabalin reduce postoperative pain and reduce opioid consumption. Gabapentin 300-600mg PO TID.

Alpha-2 agonists

Clonidine and Dexmedetomidine are anxiolytic and analgesic with significant opioid sparing affects. e.g. **Clonidine** 0.1-0.3mg PO q6-8h prn pain or anxiety (NTE 1.2mg/day, hold if BP <100/70).

Ketamine & Magnesium (NMDAR antagonists)

Ketamine is the most potent non-opioid analgesic for opioid tolerant patients. A brief infusion of 0.3mg/kg IV over 15min is followed by 0.3-1mg/kg/hr as needed.
Magnesium is also an NMDAR with analgesic and opioid sparing effect. eg. 30-50mg/kg bolus followed by 10-mg/kg/hr.

IV Lidocaine (Na channel antagonist)

Opioid sparing analgesic. A bolus of 1-1.5mg/kg is followed by 1.5-3 mg/kg/h. Contraindications include cardiac dysrthymias. Must monitor serum levels after 24hrs.

High Affinity Full agonist Opioids

Hydromorphone, fentnayl, and sufentanil can be added to maintenance Bup to provide synergistic analgesia. Titrate to analgesia and side effects. This

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Educational Objectives

1. Describe common conditions that complicate management of opioid withdrawal
2. Highlight strategies to effectively manage complicated opioid withdrawal
3. Discuss case examples of opioid withdrawal syndrome, highlighting common challenges, gaps in evidence, and practical approaches

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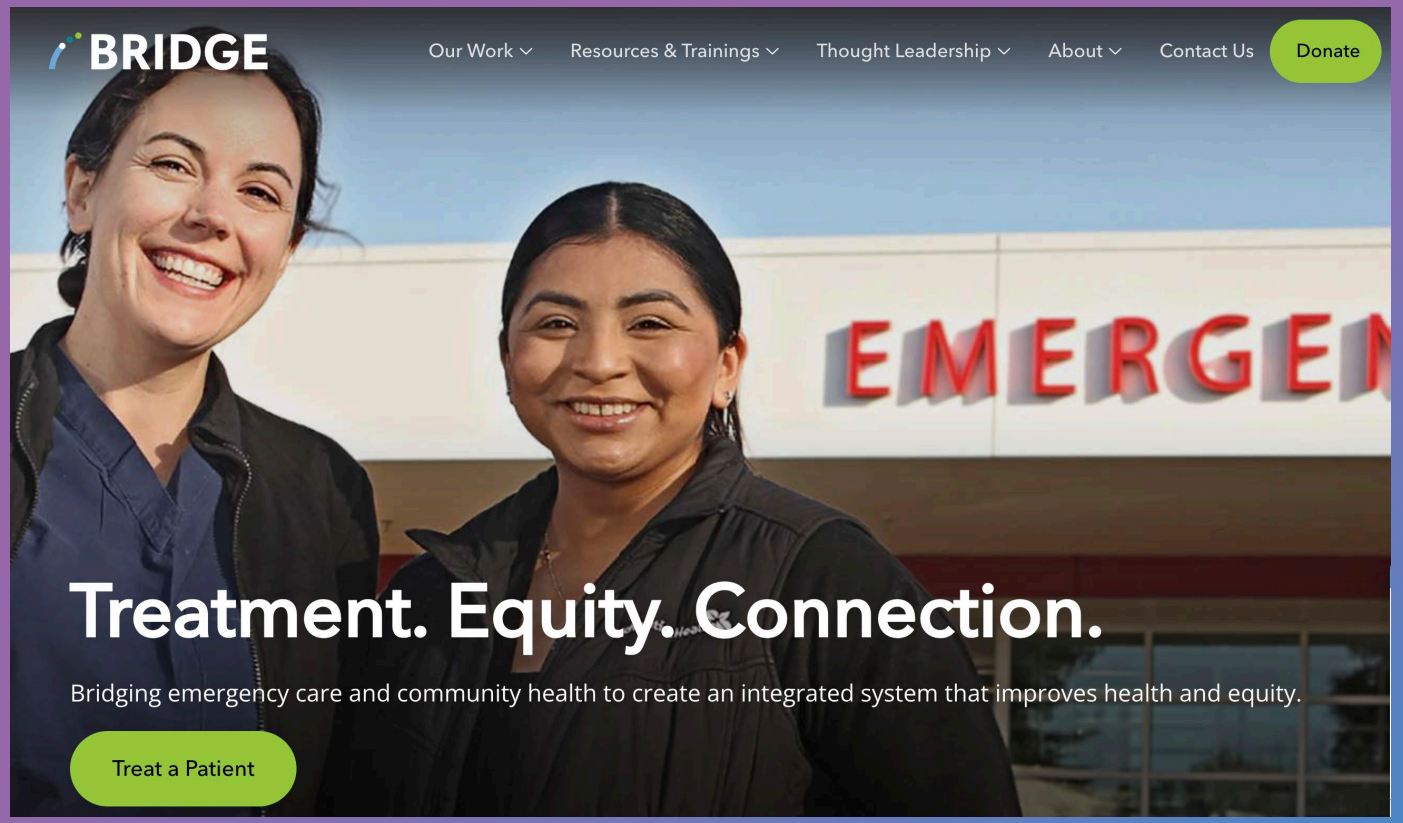
Bridgetotreatment.org



Thanks

Andrew Herring, MD
aherring@alamedahealthsystem.org

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Wrap-up

- ✓ **Evaluation:** Please complete this quick evaluation: https://ttc-gpra.org/P?s=818886
- ✓ **Claim CE:** Complete a quick post-test and claim your 1.5 CE https://elearning.asam.org/p/PCSSMOUD_Session2_05062026
- ✓ **Recording:** The recording will be available at: https://elearning.asam.org/oud-learning-collaboratives

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Join Us for the Rest of this Series on Opioid Withdrawal!

ASAM-hosted PCSS-MOUD Online Case-based Learning Collaboratives:

Session 1	**Strategies to Effectively Manage Opioid Withdrawal** *Recording Available*
Session 3	**Managing Opioid Withdrawal in the Era of Medetomidine** *Tuesday, June 23, 2026 | 5:00 – 6:30 PM ET*
Session 4	**Multidisciplinary Approach to Assessing Opioid Withdrawal** *Wednesday, July 15, 2026 | 5:00 – 6:30 PM ET*

- *Free!*
- *1.5 CE each*
- *Join live or watch the recording*

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PCSS-MOUD Steering Committee

- PCSS-MOUD is led by the American Academy of Addiction Psychiatry (AAAP), in collaboration with a coalition of national professional and healthcare organizations.

Learn more about the Steering Committee and its partner organizations:
https://pcssnow.org/about/steering-committee/

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PCSS-MOUD Mentoring Program

- Designed to offer general information to clinicians about evidence-based clinical practices in prescribing medications for opioid use disorder (MOUD).
- Supported by a national network of providers with expertise in addictions, pain, and evidence-based treatment, including MOUD.
- Three mentoring options are available to meet your needs.
- No cost to participate.

For more information visit:
https://pcssNOW.org/mentoring/

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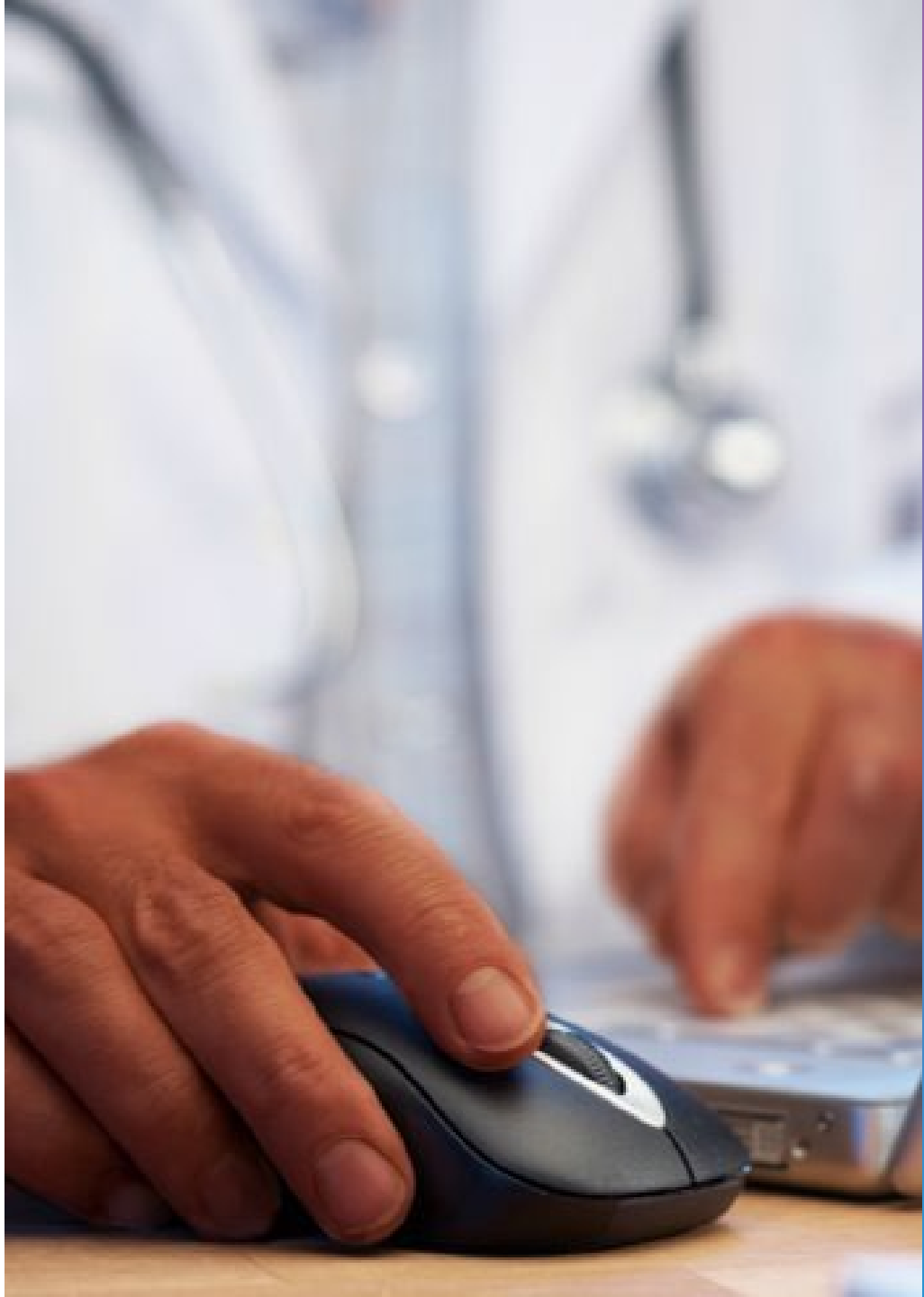
1: Discussion Forum

- An online discussion forum moderated by addiction specialists where health professionals can post questions and receive answers from clinical experts and other colleagues.

Register here at no cost!



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2: Ask a Clinical Question

- A simple and direct way to receive an answer related to Substance Use Disorder, Opioid Use Disorder, and other related topics. Designed to provide a prompt response to clinical questions via email.

Submit your clinical question

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3: One-on-One Mentoring

- Provides individualized, one-on-one guidance via email, phone, or in-person (if feasible), to discuss specific clinical issues. Members are “matched up” with one of our mentors in their region. This is the most in-depth of the three PCSS-MOUD mentoring tools. Please contact **pcssmentoring@aaap.org** to receive a mentor request form.

Browse our Mentors

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