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OUD Treatment Basics : Easy Buprenorphine Prescribing for Everyone

Financial Disclosures

- I have no financial conflicts of interest to disclose
- I am currently employed by the Ninilchik Traditional Council
- I work as a treatment consultant for the Opioid Response Network in Alaska, ANTHC, as well as for other non-profit agencies.

Learning Objectives

- Review epidemiology, diagnosis and assessment and standard for care to treat OUD
- Review the pharmacology of buprenorphine
- Explore buprenorphine regulatory issues
- Develop appropriate medication initiation strategies
- Troubleshoot common problems in early treatment

Annual questionnaire

Once a year, all our patients are asked to complete this form because drug and alcohol use can affect your health as well as medications you may take.
Please help us provide you with the best medical care by answering the questions below.

Patient name: _____

Date of birth: _____

https://auditscreen.org/cmsb/uploads/drink_less_questionnaire.pdf

Are you currently in recovery for alcohol or substance use? ☐ Yes ☐ No

Alcohol: One drink =

12 oz. beer

5 oz. wine

1.5 oz. liquor (one shot)

	None	1 or more
MEN: How many times in the past year have you had 5 or more drinks in a day?	○	○
WOMEN: How many times in the past year have you had 4 or more drinks in a day?	○	○

Drugs: Recreational drugs include methamphetamines (speed, crystal), cannabis (marijuana, pot), inhalants (paint thinner, aerosol, glue), tranquilizers (Valium), barbiturates, cocaine, ecstasy, hallucinogens (LSD, mushrooms), or narcotics (heroin).

	None	1 or more
How many times in the past year have you used a recreational drug or used a prescription medication for nonmedical reasons?	○	○

Drug Abuse Screening Test (DAST-10)

These questions refer to drug use in the past 12 months. Please answer No or Yes.

1. **Have you used drugs other than those required for medical reasons?**
   ☐No ☐Yes
2. **Do you use more than one drug at a time?**
   ☐No ☐Yes
3. **Are you always able to stop using drugs when you want to?**
   ☐No ☐Yes
4. **Have you had "blackouts" or "flashbacks" as a result of drug use?**
   ☐No ☐Yes
5. **Do you ever feel bad or guilty about your drug use?**
   ☐No ☐Yes
6. **Does your spouse (or parents) ever complain about your involvement with drugs?**
   ☐No ☐Yes
7. **Have you neglected your family because of your use of drugs?**
   ☐No ☐Yes
8. **Have you engaged in illegal activities in order to obtain drugs?**
   ☐No ☐Yes
9. **Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?**
   ☐No ☐Yes
10. **Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?**
    ☐No ☐Yes

Interpretation of Score:

Score	Degree of Problems Related to Drug Abuse	Suggested Action
0	No problems reported	None at this time
1-2	Low level	Monitor, reassess at a lat
3-5	Moderate level	Further investigation
6-8	Substantial level	Intensive assessment
9-10	Severe level	Intensive assessment

https://cde.drugabuse.gov/sites/nida_cde/files/DrugAbuseScreeningTest_2014Mar24.pdf

DSM-5 Criteria for SUDs

Loss of control
- more than intended
  - amount used
  - time spent
- unable to cut down
- giving up activities
- craving

Physiology
- tolerance
- withdrawal

formerly "dependence"

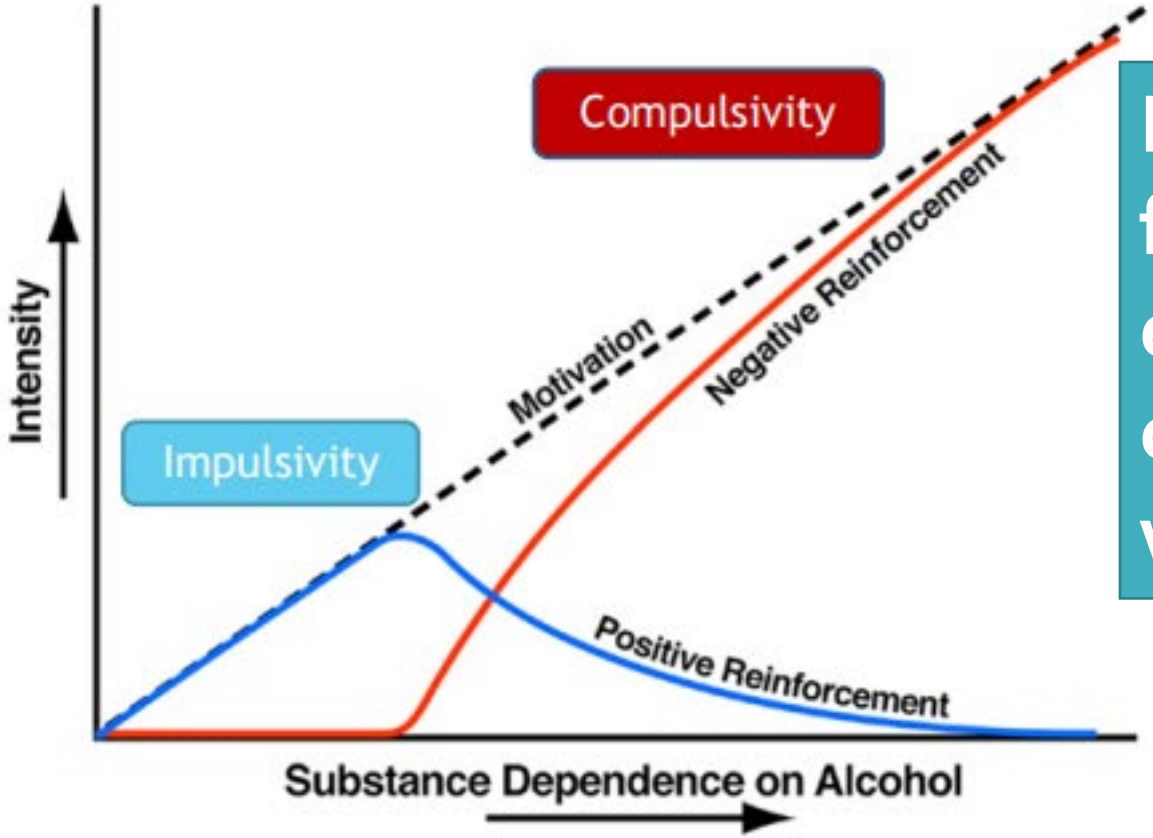
Consequences
- unfulfilled obligations
  - work
  - school
  - home
- interpersonal problems
- dangerous situations
- medical problems

formerly "abuse"

- A ***substance use disorder*** is defined by having 2 or more in the past year resulting in distress or impairment.
- **Tolerance** and **withdrawal** alone don't necessarily imply a disorder.
- Severity is rated by the number of symptoms present:
  - 2-3 = mild
  - 4-5 = moderate
  - 6+ = severe

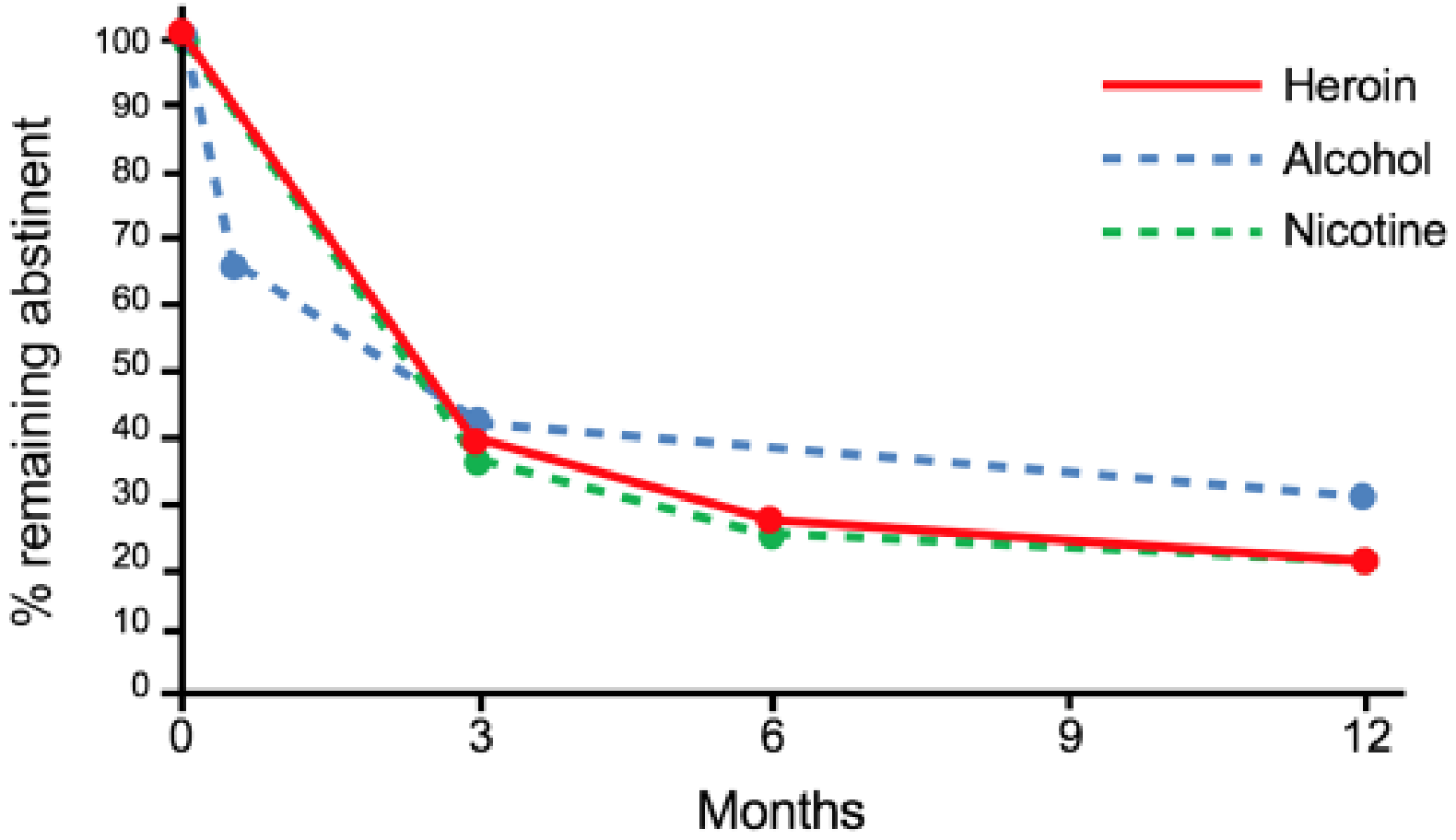
APA, 2013

Positive and Negative Reinforcement



People start using drugs for the pleasurable effects, but they continue using to relieve withdrawal symptoms

Abstinence Without MAT



Hunt et al., 1971

PCSS Providers Clinical Support System

RECOVERY RESEARCH INSTITUTE

3 years on MOUD have 2/3 less return to use
5 years on MOUD have ½ the return to use rate

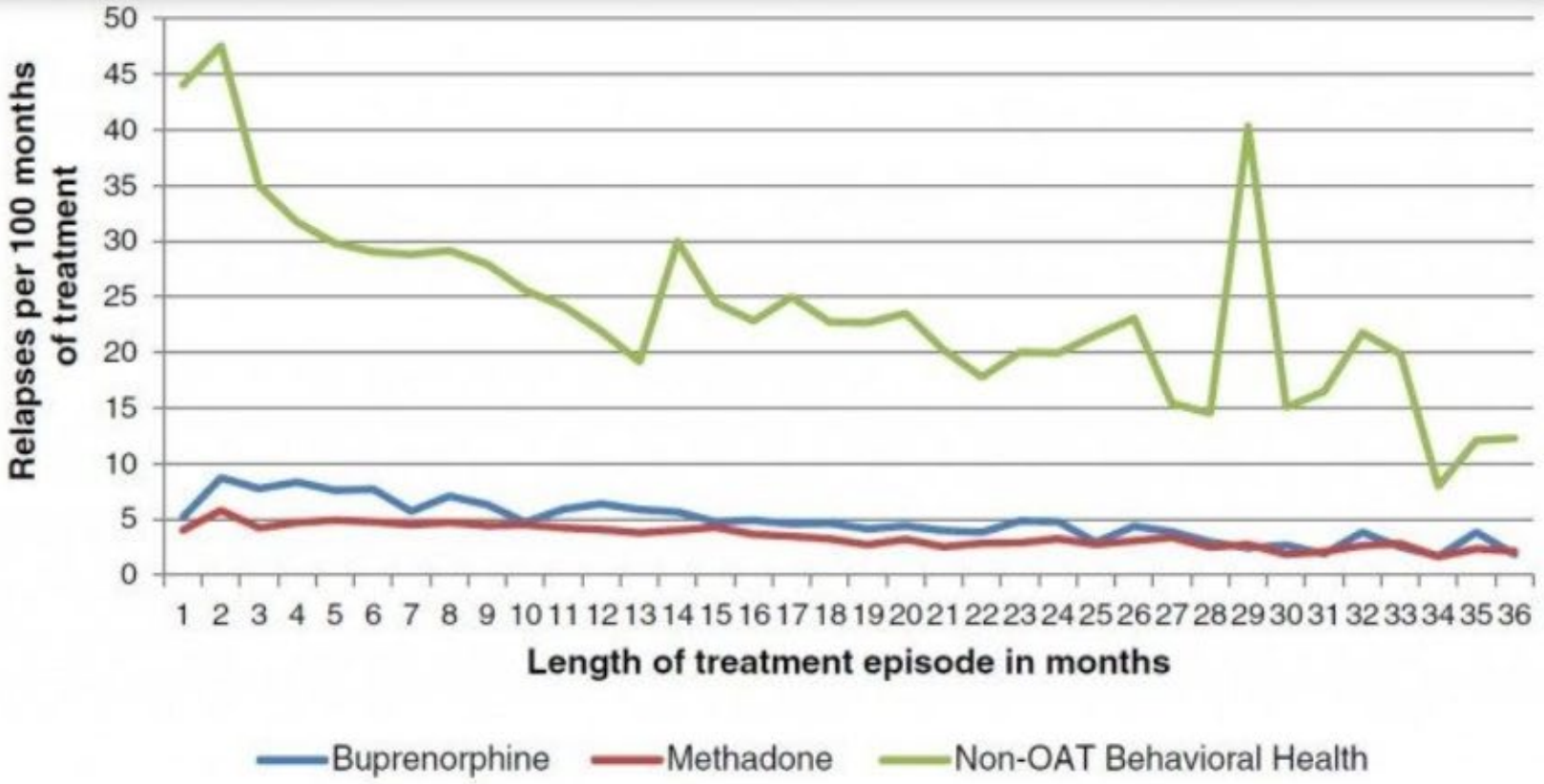
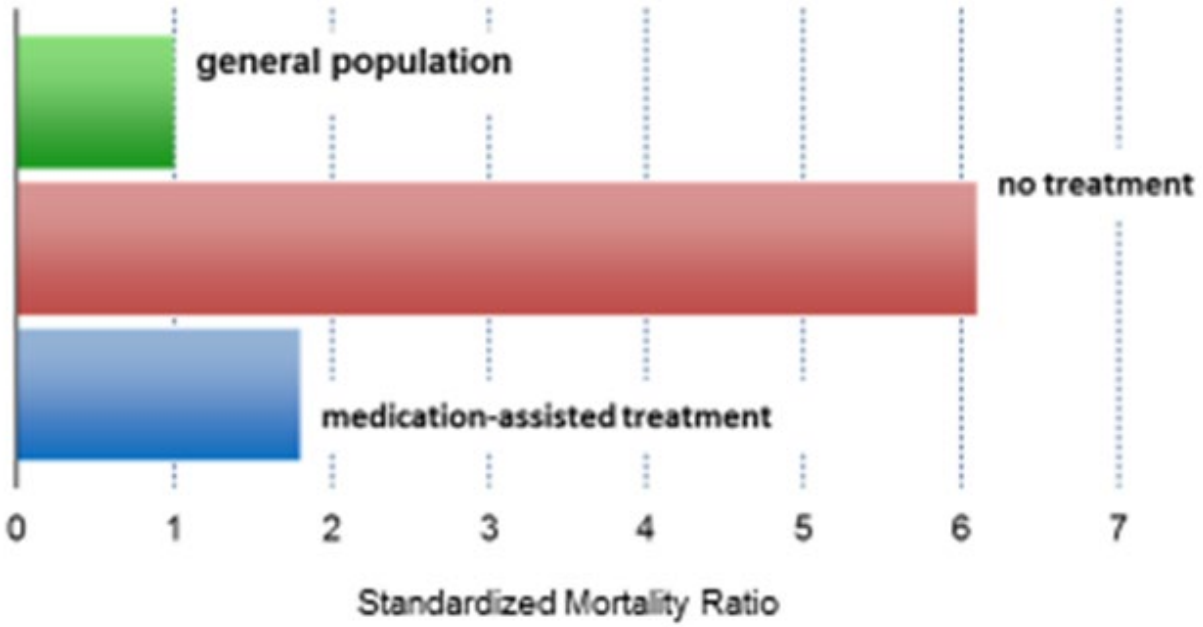


Fig. 1. Relapses during treatment among MassHealth members who received treatment for opioid addiction between 2003 and 2010[1]. [1] N = 18,866 episodes of buprenorphine treatment, 24,309 episodes of methadone treatment and 31,220 episodes of non-OAT behavioral health treatment in month 1. 33% of buprenorphine episodes, 52% of methadone episodes, and 12% of non-OAT treatment episodes lasted 12 months or more. 13% of buprenorphine treatment episodes, 27% of methadone episodes, and 1% of non-OAT treatment episodes lasted 24 months or longer.

Benefits of MAT: Decreased Mortality

Death rates:



Increased overdose risk after leaving treatment

MOUD can reduce death rates by >60%

Dupouy et al., 2017
Evans et al., 2015
Sordo et al., 2017

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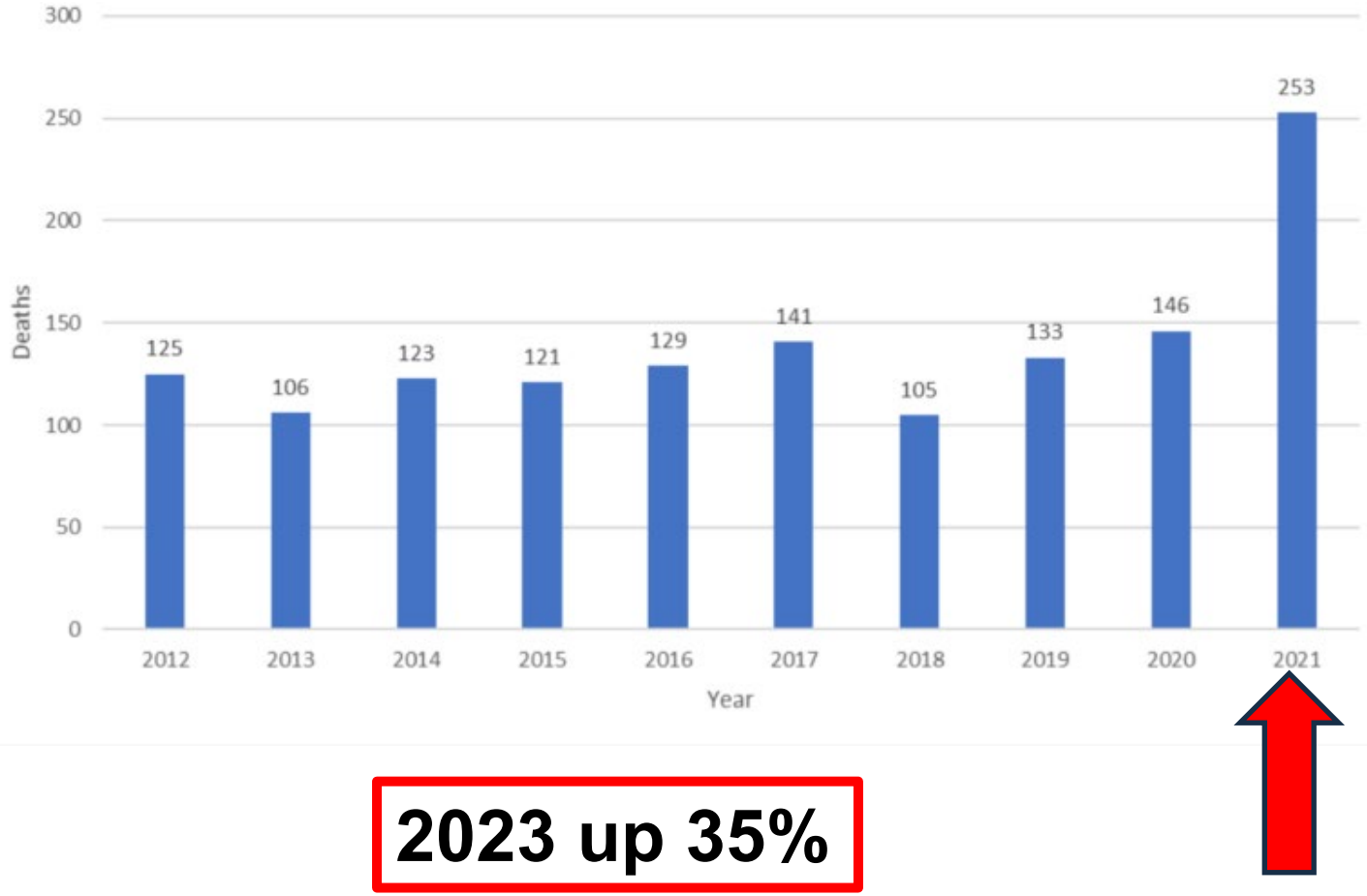
Overdose deaths in Alaska rose by 75% in 2021, highest increase nationwide



2023 up 35%

- **Alaskan Natives**
  OD rate 77/110K
- **White**
  OD rate 28/100K
- **Meth OD up 150%**
- **Fentanyl OD up 150%**

https://health.alaska.gov/dph/VitalStats/Documents/PDFs/DrugOverdoseMortalityUpdate_2021.pdf

“Detox” is not a treatment for OUD

Treating opioid disorder without meds more harmful than no treatment at all

Non-medication-based treatments for opioid use disorder may be more harmful than no treatment at all, a new Yale study finds.

When the researchers calculated the risk of fatal overdose death for each treatment, they found that, compared with no treatment at all, methadone and buprenorphine reduced the risk of death…

“However, non-medication-based treatments increased the risk of death compared to no treatment by over 77%,”

https://www.sciencedirect.com/science/article/pii/S0376871623012784?via%3Dihub

Myth: MAT/MOUD is substituting one drug for another.

1

FDA-approved medication is THE SAFEST option for treating Opioid Use Disorder. People with OUD are 50% less likely to die when treated long-term with buprenorphine or methadone.

2

Research proves that Medication Assisted Treatment (MAT) decreases opioid use, opioid-related overdose deaths, criminal activity and infectious diseases.

3

This treatment approach improves patient survival, increases treatment retention, and increases the ability for individuals to gain employment.

Features of Methadone

- Full opioid agonist
- Stimulates opioid receptors to reduce cravings and illicit opioid use
- Provides some opioid blockade at higher doses
- Available only at an opioid treatment program (Methadone clinic), daily observed dosing Long acting, once daily dosing
- OTP provides counseling and social support services with methadone
- Many drug-drug interaction and QT prolongation
- Also treats chronic pain
- Best retention in treatment of all forms of MOUD

Features of Naltrexone

- Opioid Antagonist
- Binds strongly to opioid receptors and blocks opioids from binding
- Monthly injection (Do not use oral naltrexone for OUD)
- Not a controlled substance, no physical dependence
- Requires 1-2 weeks of opioid abstinence before 1st injection
- Inpatient withdrawal management can increase success with initiation
  - Still 30% failure to initiate medication
  - Once patient successfully inducted, success rates may be similar to OAT in selected patients

The least commonly used medication to treat OUD so there is less evidence for effectiveness/retention, little evidence for mortality reduction

Reframing the perception of buprenorphine prescribing

OLD

A high-risk medication requiring specialized training and integrated behavioral health to prescribe

NEW

A very safe lifesaving medication that is the gold standard treatment for a deadly disease, that all providers should be comfortable prescribing

This is why the X-waiver was eliminated

The Waiver is Gone!!!

- All prescribers authorized to Rx Schedule 3 can prescribe buprenorphine for OUD or pain
- No limits on dose or formulation of BUP
- No limits on numbers of patients
- No requirement to refer for counseling
- No educational requirements

8-hour waiver course meets the DEA MATE act requirements

NO EXCUSE NOT TO PRESCRIBE THIS LIFESAVING MEDICATION!

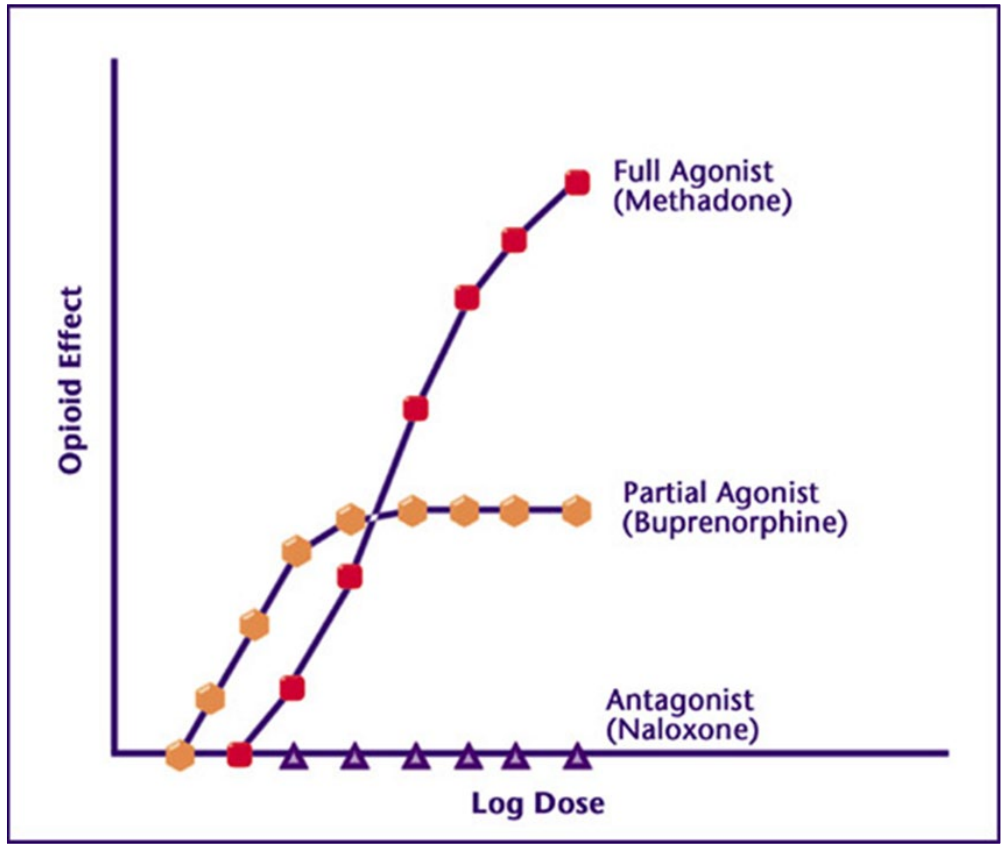
Every day of BUP treatment is helpful

- All providers should be comfortable in the basics of MOUD
- Lack of follow-up arrangements are not a contraindication to prescribing BUP
  - Warm handoff always preferred when possible
- Aways provide SLBUP Rx on discharge (minimum 1 week) or administer XRBUP before discharge
- Every day that a patient takes BUP reduces their risk of overdose
- **Not prescribing MOUD is NOT following standard of care guidelines and results in worse outcomes!!!**

Who Should Rx BUP?

- **PCPs**: chronic OUD treatment, bridge Rx, COT for pain
- **OB**: all pregnant and postpartum pts with OUD
- **ED**: all pts with OUD, all overdoses, opioid WD , prehospital OD/WD
- **Hospitalist**: all pts with OUD, WD management, COT pts
- **Surgeons**: post-op pain in patients with OUD
- **Pain management**: switch from full opioid agonist to SLBUP
- **Peds**: adolescents with OUD
- **Palliative care**: pts with SUD hx or side effects from COT
- **Any specialist**: to bridge patients with OUD to chronic care

COT= chronic opioid therapy for pain, WD=withdrawal

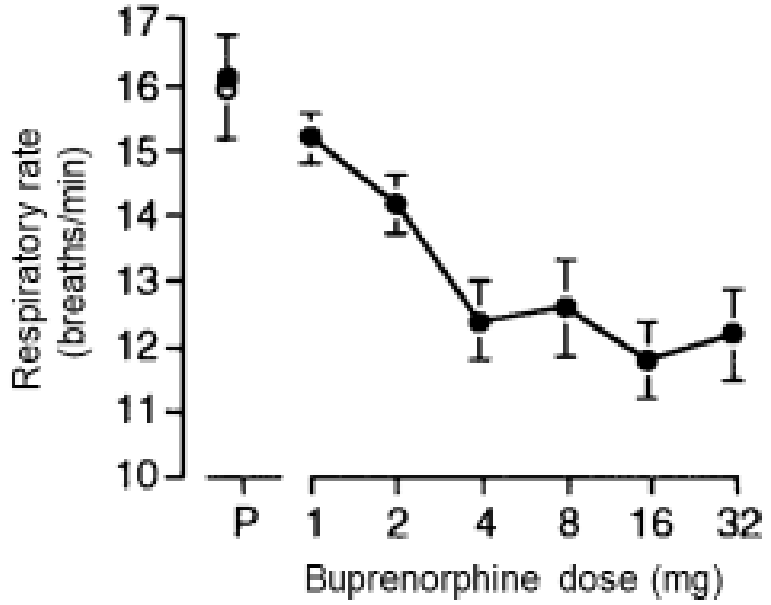


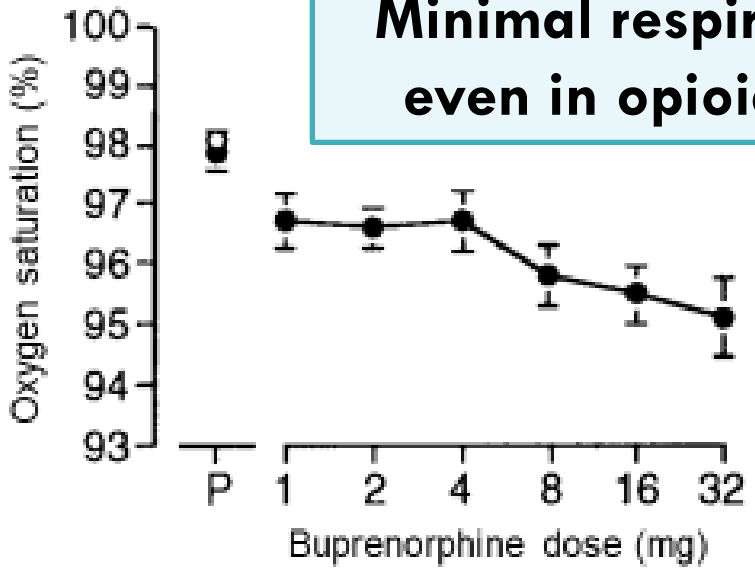
Properties of Buprenorphine, a *μ*-Opioid Partial Agonist

- Ceiling effect on respiratory depression
- High affinity for μ-opioid receptor
- Slowly dissociates from μ-opioid receptors
- Ameliorates withdrawal once underway
- Can precipitate withdrawal if given in temporal proximity to full agonist opioids

Buprenorphine Dosing: Safety

- Cognitive and psychomotor effects appear to be negligible





Minimal respiratory depression even in opioid naïve patients

- Nearly all fatal poisonings involve multiple substances

Hakkinen et al., 2012
Walsh et al., 1994

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FORMULATIONS OF BUPRENORPHINE

Brixadi
Weekly/monthly SQ injection, various doses

Mono-SL Product

Buprenorphine SL tab (2 & 8mg) (Subutex)

Long-Acting Injectables

Combo-SL Products

Buprenorphine/naloxone SL/buccal films (Generic/brand, many strengths)

Buprenorphine/naloxone SI tabs (generic/brand)

Sublocade
Monthly Buprenorphine SQ depot injection

IV Buprenorphine

(Transdermal and Buccal Buprenorphine products used for Chronic Pain (Butrans/ Belbuca) are general considered too low dose and not legal to treat OUD)

Naloxone is included in SL buprenorphine as an

Abuse Deterrent

Is has minimal absorption and no clinical effect when used as directed sublingually (it does NOT alter the effectiveness of the medication, cause precipitated withdrawal or block opioids)

It only has action if the product is misused
(IV/snorted/smoked can trigger PW or partially block BUP effect)

Prescribing this combination product may reduce misuse risk
3-6-fold compared to plain buprenorphine products (limited data)

Intolerable side effects to combo product may be an indication to switch to mono product or XRBUP (Nausea/HA 1 hr after dose)

https://www.frontiersin.org/articles/10.3389/fpsyt.2020.549272/full

Grande LA. Prescribing the Buprenorphine Monoproduct for Adverse Effects of Buprenorphine-Naloxone. J Addict Med. 2022 Jan-Feb 01;16(1):4-6. doi: 10.1097/ADM.0000000000000837. PMID: 33758111 .

Formulations of Buprenorphine NOT allowed for OUD/WD outpatient

- Butrans (transdermal, pain only)
- Belbucca (buccal, pain only)
- IV BUP

- It is illegal to use any other opioid agonist to treat opioid withdrawal in the outpatient setting (including methadone and tramadol)

- **ALL forms of BUP and ALL opioid agonists may be used in the inpatient/ED setting to treat withdrawal**

Initial Assessment

https://www.samhsa.gov/sites/default/files/quick-start-guide.pdf

- **A patient history**: medical and psychiatric history
- Social History:
  - Substance use history: type, route, quantity, treatment hx
  - Family and psychosocial supports, children, living situation, employment, transportation, legal issues
- Access the patient's prescription drug history through the state's Prescription Drug Monitoring Program (**PDMP**) to detect unreported use of other medications, such as sedative-hypnotics or alcohol, that may interact adversely with the treatment medications.

https://www.samhsa.gov/sites/default/files/quick-start-guide.pdf

Initial Assessment

- A physical examination that **focuses on physical findings related to addiction** and its complications. (heart murmur, track marks, skin infections) Deferred for telemed

- Laboratory testing (Optional)
  - Urine drug screen
  - Pregnancy test
  - Hepatitis B and C (Hep panel), HIV, RPR, CMP, CBC

Providers should not delay treatment initiation while awaiting lab results

Important Points to Review With the Patient

- Understand that discontinuing buprenorphine increases risk of overdose death upon return to illicit opioid use.
- Know that use of alcohol or benzodiazepines with buprenorphine increases the risk of overdose and death (but is NOT a contraindication to BUP).
- Offer contraception and inform providers if they become pregnant, to provide extra support.
- Tell providers if they are having a procedure or injury that may require pain medication.

https://www.samhsa.gov/sites/default/files/quick-start-guide.pdf

Buprenorphine

What You Need to Know

September 2020

CA BRIDGE

What is buprenorphine?

- Buprenorphine - or bup - is medicine for people who have chronic pain or addiction to opioids (heroin or pain pills). Many people know it by brand names like Suboxone® and Subutex®.
- Buprenorphine helps get rid of cravings and withdrawal, without making you feel high.
- People have less overdoses when they take buprenorphine.
  It is a safe medicine that has been used for 30 years.
- It is not substituting one drug for another—it is a daily medicine that you may need to stay healthy.
- Often buprenorphine and naloxone are taken together in 1 pill. Naloxone is the same as Narcan®, but if you take the medicine under the tongue the naloxone doesn't go in your body and can't make you sick. Naloxone is only there to make sure that people don't crush the pill and inject it—if you do that, the naloxone does go into your body and does make you sick.

What is it like to take buprenorphine?

- Many people say that their cravings and withdrawal go away, they feel "clear in the head," and their chronic pain gets better.
- Every morning you put a pill or a film strip under your tongue and let it dissolve—don't swallow it.
- People need to take it every day in most cases, and do feel sick if they stop taking it suddenly.
- Usually there are no side effects, but some people have headaches, stomach upset, or trouble sleeping.
- Many people keep taking it for years, or forever. If you want to stop taking it that is ok, but talk to your medical team first.
- The chance of an overdose on buprenorphine is very low, but if mixed with other drugs or alcohol overdose is possible.
- Some people take buprenorphine as a once a month shot under the skin of the belly. This is a great option if taking a medicine every day is hard for you.

Is buprenorphine right for me?

- If you are currently taking methadone, talk to your medical team before switching.
- Before taking the first dose of buprenorphine, most people need to feel some withdrawal. That is important because if you take it while other opioids are in your system, you can get very sick.
- **Talk to your medical team to see if buprenorphine is a good medicine for you.** There are many good choices for treatment, only you and your team know what is best for you.

How do I get buprenorphine?

- **You can go to any of the places below to get started.** You may need to visit more than once before getting the first dose. In some clinics (like methadone clinics), you may come in every day to pick up your buprenorphine dose.
- Instead of going to a methadone clinic, you can get the medicine from a **primary care doctor**. At first you may need daily visits, but many people can soon switch to weekly or monthly visits.
- Some **telemedicine groups** offer prescriptions over the internet/phone instead of in a doctor's office, so you need a phone and internet to use those services.

https://bridgetotreatment.org/resource/buprenorphine-what-you-need-to-know/

Lower dose BUP is NOT better

ASAM 2020 guidelines recommends minimum 16 mg/day for those in early recovery

Doses 16 mg+ have superior retention in treatment and abstinence (evidence that 24-32mg/day is superior)

Fentanyl blockade requires minimum 16mg/day (higher is better)

https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2809633?utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_term=091823

Review > J Addict Med. 2023 Sep-Oct;17(5):509-516. doi: 10.1097/ADM.0000000000001189. Epub 2023 Jun 16.

Evidence on Buprenorphine Dose Limits: A Review

Lucinda A Grande [1], Dave Cundiff, Mark K Greenwald, MaryAnne Murray, Tricia E Wright,

"Conclusions: In light of established research and profound harms from fentanyl, the Food and Drug Administration's current recommendations on target dose and dose limit are outdated and causing harm. **An update to the buprenorphine package label with recommended dosing up to 32 mg/d and elimination of the 16 mg/d target dose would improve treatment effectiveness and save lives."**

Dosing Frequency

Buprenorphine has a slow dissociation rate from the mu opioid receptor, which gives rise to its prolonged suppression of opioid withdrawal and blockade of exogenous opioids (24-48 hours).

- Once daily dosing for control of drug cravings and withdrawal
- Most patient prefer BID-TID
- Relatively short analgesic duration(6 hours)
- QID dosing for pain control

Dosing instructions

- Wet mouth first, avoid smoking before dose
- Dissolve under tongue for 15-20 mins (tabs or films)
- No talking, eating, drinking, smoking
- Spit out excess saliva (swallowing can increase nausea)
- Rinse and spit after finished
- Peak effect in 1-2 hours

Common BUP Side Effects

- Nausea
- Headache
- Sweating
- Oversedation/dizziness
- Constipation (chronic)
- Urinary Retention

- Edema (XRBUP rare)

Precipitated Withdrawal

- Precipitated withdrawal can occur due to replacement of full opioid receptor agonist (heroin, fentanyl, or methadone) with a partial agonist that binds with a higher affinity (Buprenorphine).
- Typically occurs 30-60 mins after first SLBUP dose
- Rapid onset of severe opiate withdrawal symptoms
- Like Naloxone precipitated withdrawal but lasts longer
- Avoid by ensuring adequate withdrawal before first dose (COWS > 12; Fentanyl may require higher COWS score) or by using microdosing or high dose start.

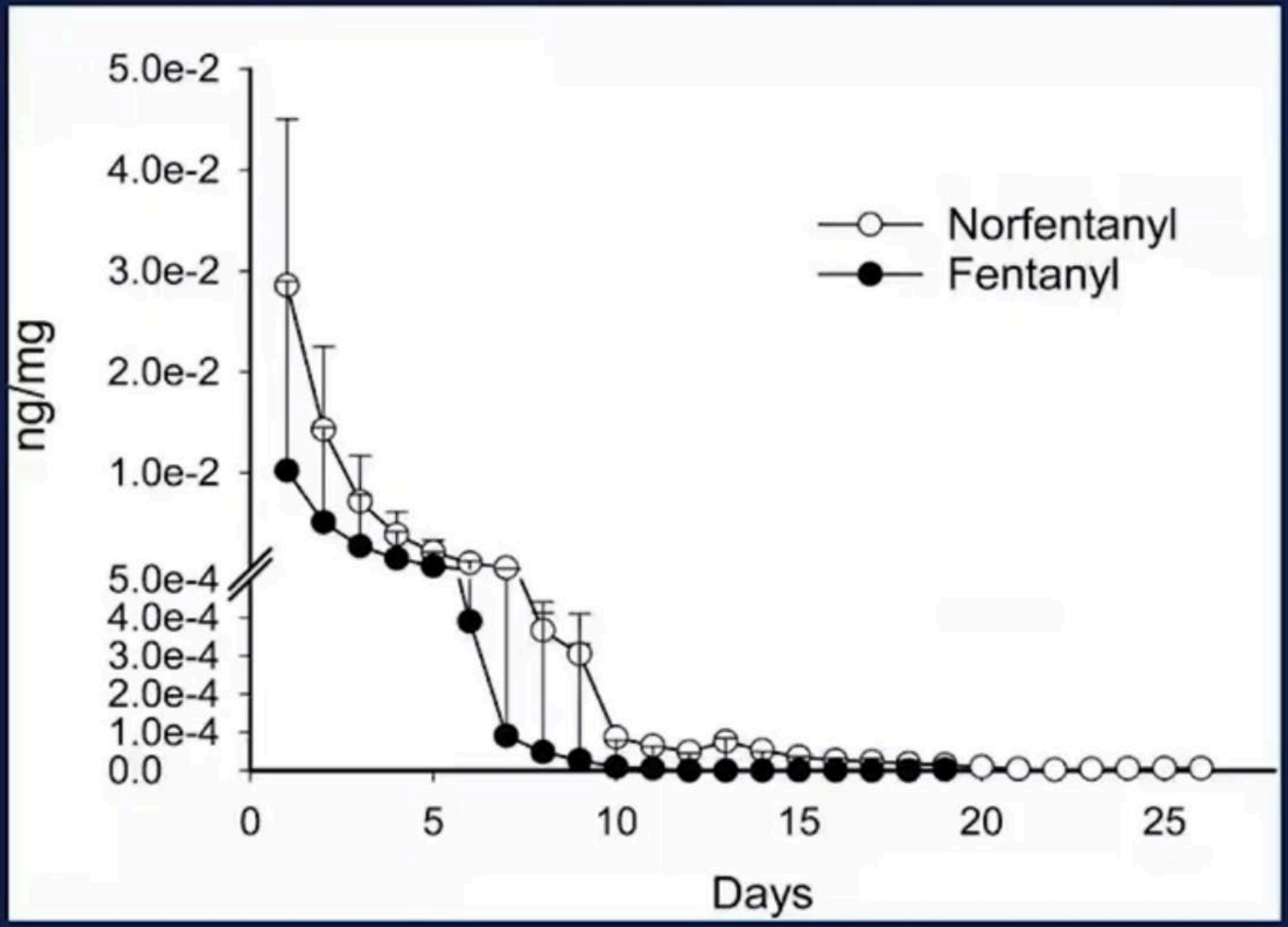
Illicit Fentanyl: DEA analysis has found counterfeit pills ranging from .02 to 5.1 milligrams (more than twice the lethal dose) of fentanyl per tablet (42% of seized pills contain at least 2mg)

https://www.dea.gov/resources/facts-about-fentanyl

Illicitly-manufactured fentanyl

- Though prior pharmacokinetic studies of fentanyl report half lives ranging from 1.5-7 hours, these studies generally relied on brief periods of drug administration.
- Fentanyl is highly lipophilic, allowing it to be sequestered in adipocytes in chronic users, similar to THC.

FENTANYL NORFENTANYL ELIMINATION IN URINE



Huhn SA et al. Protracted renal clearance of fentanyl in persons with opioid use disorder. Drug Alcohol Depen. 2021

Some evidence suggests fentanyl withdrawal…

- Starts sooner, lasts longer, is more severe (survey of 114 pts)[13]
- Is more likely to lead to precipitated withdrawal with bup
  - OR 5.2 for precipitated withdrawal with bup (v. methadone) within 24 hrs of fentanyl use (multi-center survey of 1679 pts)[14]
  - Precipitated withdrawal with bup despite extended (24-48 hrs) periods of abstinence and high COWS (4 pt case series)[15]
- Is harder to relieve with bup:
  - "24 mg not uncommonly necessary to manage withdrawal"[16]
  - Only 38% reported bup "completely alleviated" fentanyl withdrawal[14]

Gryczynski 2019, Varshneya 2021, Shearer 2021, Neimark 2020

Increasing reports of buprenorphine precipitated withdrawal merit caution

Most people in withdrawal can start bup without issue

In populations with 25-76% fentanyl use, 0-3% precipitated withdrawal (EMS, multi center NIDA, single site ED, multi site CA Bridge)

CA BRIDGE

Varshneya NB, Thakrar AP, Hobelmann JG, Dunn KE, Huhn AS. Evidence of Buprenorphine-precipitated Withdrawal in Persons Who Use Fentanyl. J Addict Med. 2021 Nov 23. doi: 10.1097/ADM.0000000000000922. Epub ahead of print. PMID: 34816821.

D'Onofrio et. al, unpublished abstract

Hern et al, unpublished data

ZSFG, upublished data

Lesaint, unpublished data

D'Onofrio G, Fiellin D. Emergency Department-INitiated bupreNOrphine and VAlidaTIOn Network Trial (ED-INNOVATION) (NIH HEAL Initiative). Presented at: Second Annual

Ask about previous experience with BUP

- Helpful for cravings? What dose worked best?

- Initiation well tolerated:
  - Proceed with standard initiation

- Experienced Precipitated withdrawal:
  - How long did they wait?
  - What dose did they take?
  - Did they succeed with initiation?
  - Consider high dose or low dose overlapping start
  - Consider pre-medication with ondansetron 4-8 mg and clonidine 0.2 mg

Determine Withdrawal

Objective withdrawal signs help establish physical dependence

Start when COWS>12

The risk with initiating buprenorphine too soon is that buprenorphine has a very high affinity for the mu receptor and will displace any other opioid on the receptor, thereby causing precipitated opioid withdrawal.

Wesson & Ling, J Psychoactive Drugs. 2003 Apr-Jun;35(2):253-9.

COWS Clinical Opiate Withdrawal Scale

Resting Pulse Rate: _____beats/minute *Measured after patient is sitting or lying for one minute* 0 Pulse rate 80 or below 1 Pulse rate 81-100 2 Pulse rate 101-120 4 Pulse rate greater than 120	GI Upset: *over last 1/2 hour* 0 No GI symptoms 1 Stomach cramps 2 Nausea or loose stool 3 Vomiting or diarrhea 5 Multiple episodes of diarrhea or vomiting
Sweating: *over past 1/2 hour not accounted for by room temperature or patient activity.* 0 No report of chills or flushing 1 Subjective report of chills or flushing 2 Flushed or observable moistness on face 3 Beads of sweat on brow or face 4 Sweat streaming off face	Tremor *observation of outstretched hands* 0 No tremor 1 Tremor can be felt, but not observed 2 Slight tremor observable 4 Gross tremor or muscle twitching
Restlessness *Observation during assessment* 0 Able to sit still 1 Reports difficulty sitting still, but is able to do so 3 Frequent shifting or extraneous movements of legs/arms 5 Unable to sit still for more than a few seconds	Yawning *Observation during assessment* 0 No yawning 1 Yawning once or twice during assessment 2 Yawning three or more times during assessment 4 Yawning several times/minute
Pupil size 0 Pupils pinned or normal size for room light 1 Pupils possibly larger than normal for room light 2 Pupils moderately dilated 5 Pupils so dilated that only the rim of the iris is visible	Anxiety or irritability 0 None 1 Patient reports increasing irritability or anxiousness 2 Patient obviously irritable anxious 4 Patient so irritable or anxious that participation in the assessment is difficult
Bone or Joint aches *If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored* 0 Not present 1 Mild diffuse discomfort 2 Patient reports severe diffuse aching of joints/ muscles 4 Patient is rubbing joints or muscles and is unable to sit still because of discomfort	Gooseflesh skin 0 Skin is smooth 3 Piloerrection of skin can be felt or hairs standing up on arms 5 Prominent piloerrection
Runny nose or tearing *Not accounted for by cold symptoms or allergies* 0 Not present 1 Nasal stuffiness or unusually moist eyes 2 Nose running or tearing 4 Nose constantly running or tears streaming down cheeks	Total Score _____ The total score is the sum of all 11 items Initials of person completing Assessment:_____

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

At home withdrawal assessment

- Wait 12-24 hours after last opioid use

- Wait until you have at least 3-4 WD sxs
  - Rhinorrhea, sweating, tearing, N/V/D, abd cramping, myalgias, goosebumps, restlessness, yawning, anxiety

Wait until you can't wait anymore!

Common Rx at First Visit

- Buprenorphine/naloxone 8/2 mg tab or film, as directed, 16-24 mg/day, dispense #21
- LAIB (Sublocade 300 mg SQ monthly in clinic, Brixadi 128 mg SQ monthly in clinic, Rxs sent to specialty pharamacy)
- Ondansetron 4-8 mg ODT SL tid prn, disp #12
- Clonidine 0.1 mg, 1-2 tid prn restlessness and sweating, disp #20
- Naloxone nasal spray kit (refill X3)

- Consider: Trazodone 100 mg qhs for insomnia, Tizanidine 4mg qid for spasms, ibuprofen 800 tid for pain, Imodium 2 qid for diarrhea, hydroxyzine 50 mg tid for anxiety

- Wait until in moderate WD
- Start with 8-16 mg SL (2-4 mg in patients with low levels of tolerance)
- Repeat 4-16 mg every 1-2 hours as needed up to 24-32 mg day 1

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Buprenorphine Self-Start

Guidance for patients starting buprenorphine outside of hospitals or clinics

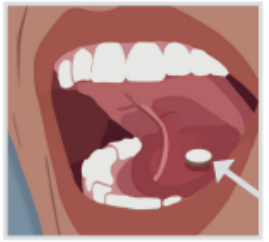
1. Plan to take a day off and have a place to rest.
2. Stop using and wait until you feel very sick from withdrawals (at least 12 hours is best, if using fentanyl it may take a few days).
3. Dose one or two 8mg tablets or strips UNDER your tongue (total dose of 8-16mg).
4. Repeat dose (another 8mg-16mg) in an hour to feel well.
5. The next day, take 16-32mg (2-4 tablets or films) at one time.

If you have started bup before:

- If it went well, that's great! Just do that again.
- If it was difficult, talk with your care team to figure out what happened and find ways to make it better this time. You may need a different dosing plan than what is listed here.

If you have never started bup before:

- Gather your support team and if possible take a "day off."
- You are going to want space to rest. Don't drive.
- Using cocaine, meth, alcohol or pills makes starting bup harder, and mixing in alcohol or benzos can be dangerous.



Place dose under your tongue (sublingual).

If you have a light habit: *(For example, 5 "Norco 10's" a day)*

- Consider a low dose: start with 4mg and stop at 8mg total.
- **WARNING:** Withdrawal will continue if you don't take enough bup.

If you have a heavy habit: *(For example, injecting 2g heroin a day or smoking 1g fentanyl a day)*

- Consider a high dose: start with a first dose of 16mg.
- For most people, the effects of bup max out at around 24-32mg.
- **WARNING:** Too much bup can make you feel sick and sleepy.

Not going well? Have questions? Contact your Navigator for help!

Simple Home Start Instructions

https://bridgetotreatment.org/resource/rapid-guidance-for-patients-starting-buprenorphine-outside-of-hospitals-or-clinics/

If you experience precipitated withdrawal:

- Immediately take 16 mg of Buprenorphine (2 strips or tablets) dissolve under tongue for 20 mins. You may repeat 8-16 mg of buprenorphine again in 1-2 hours if needed (40+ mg OK)

- Ondansetron 4-8 mg dissolve under tongue for nausea

- Clonidine 0.1 mg 1-2 tabs every 4 hours for restlessness and sweating

Comfort meds as needed: tizanidine, hydroxyzine, trazodone,NSAIDS, gabapentin, ***ketamine/benzodiazepines/hydromorphone (inpatient)***

ASAM Clinical Considerations: Buprenorphine Treatment of Opioid Use Disorder for Individuals Using High-potency Synthetic Opioids

Weimer, Melissa B. DO, MCR, DFASAM; Herring, Andrew A. MD; Kawasaki, Sarah S. MD, FASAM; Meyer, Marjorie MD; Kleykamp, Bethea A. PhD; Ramsey, Kelly S. MD, MPH, MA, FACP, DFASAM

Author Information

Journal of Addiction Medicine 17(6):p 632-639, 11/12 2023. | ***DOI:*** 10.1097/ADM.0000000000001202

1. What specific clinical situations favor use of low or high-dose buprenorphine initiation strategies?
2. What strategies can address patient discomfort, including precipitated opioid withdrawal, if it occurs during buprenorphine initiation?
3. After buprenorphine initiation, what range of buprenorphine dosing and/or dosing strategies can be considered during stabilization and long-term treatment?
4. What are indications for injectable extended-release buprenorphine for OUD treatment compared with sublingual formulations?
5. How do other novel drug components affect buprenorphine initiation and stabilization?
6. What are OUD treatment alternatives after repeated unsuccessful attempts at buprenorphine treatment?

https://journals.lww.com/journaladdictionmedicine/fulltext/2023/11000/asam_clinical_considerations__buprenorphine.2.aspx

Advantages of Monthly Injectable Buprenorphine In Remote Native Villages

No concern for diversion

Diversion concerns and stigma around sublingual buprenorphine can be a huge barrier to patient access as providers/clinic administrators are hesitant to offer this treatment

Monitoring medication compliance can be very difficult in remote locations

Not easy to access facilities for random medication counts and urinalysis

Reduces risk of withdrawal and relapse related to Rx interruption

Mail delivery in the bush can be frequently interrupted due to weather holds and other logistical concerns (reduced flights during COVID) that can result in Rx refills not arriving on time, leading to acute withdrawal which can trigger relapse and overdose

Flexible dosing q4-6 weeks, slow reduction in levels reduces withdrawal sxs

Excellent and long-lasting opioid blockade

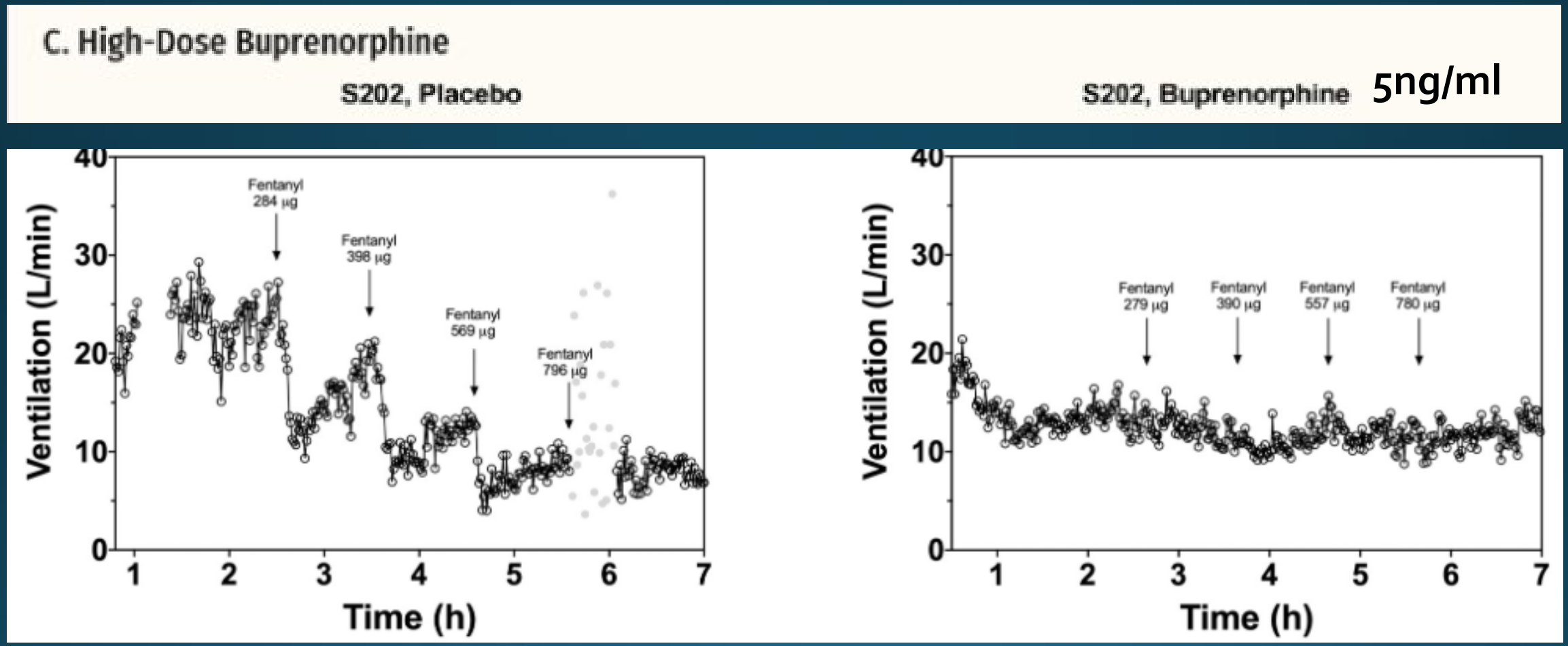
Provides protection from overdose, even for patients with extended lack of clinic access such as those in fishing industry or who may become incarcerated, reducing risk of overdose in this remote population

The RECOVER™ study found that 75 percent of patients who had received 12 once-monthly doses of SUBLOCADE in a Phase 3 clinical trial were abstinent from illicit opioids for a year after the study ended

At 12 months 88% of patients reported medication satisfaction

Effects of monthly buprenorphine extended-release injections on patient-centered outcomes, Journal of Substance Abuse Treatment VOL 110, P1-8, MARCH 01, 2020

High Dose XR Buprenorphine blocks fentanyl induced respiratory depression

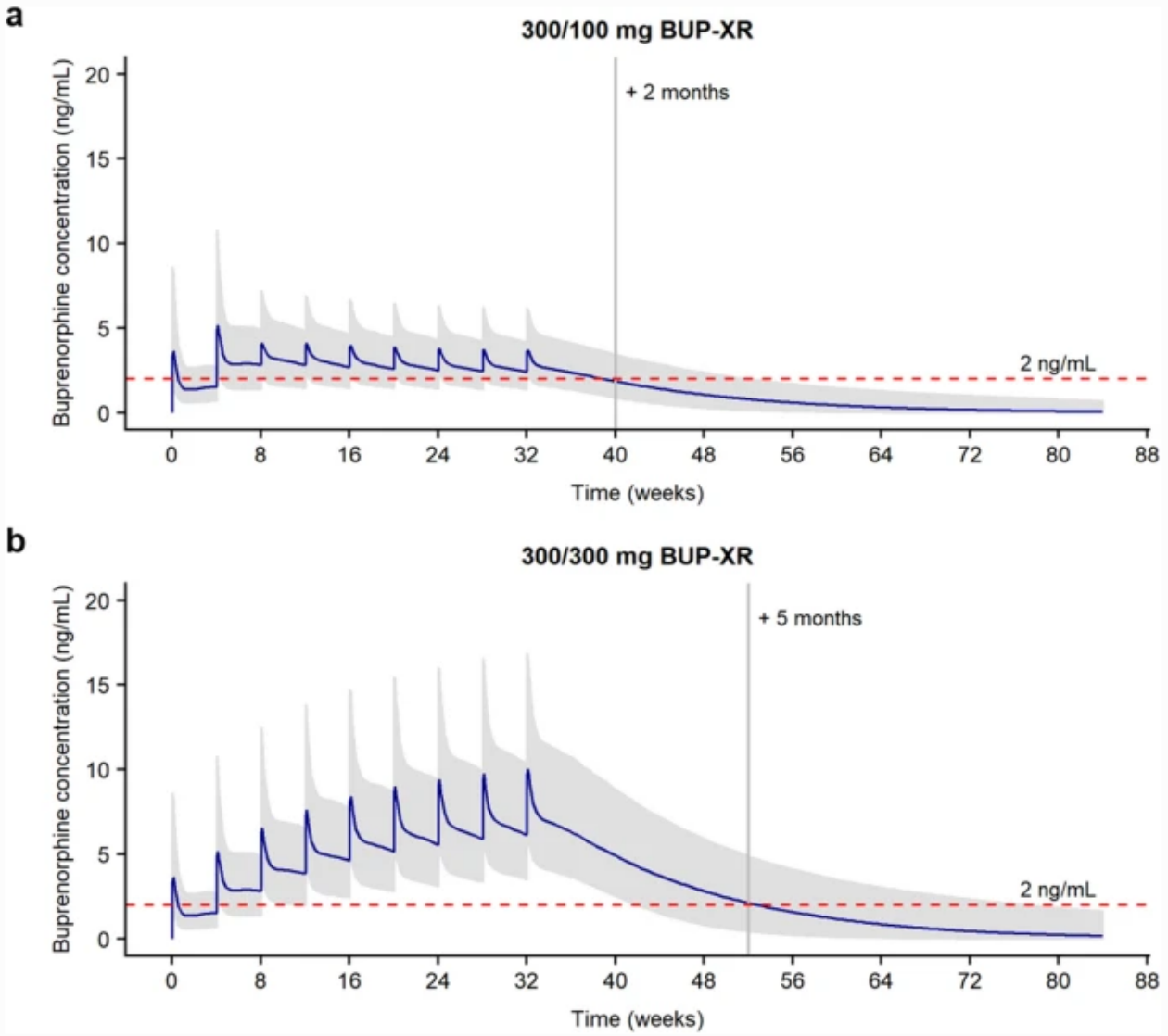


Blockade was lost under 2 ng/ml

https://journals.plos.org/plosone/article/figure?id=10.1371/journal.pone.0256752.g004

Extended opioid blockade after medication cessation

Fig. 6



Predicted decrease in buprenorphine plasma concentrations for BUP-XR dosing regimens following treatment interruption. **a** 300/100-mg dosing regimen 2; **b** 300/300-mg dosing regimen. Blue solid lines: median of the simulated data; gray shaded areas: 90% prediction intervals of simulated data. A total of nine subcutaneous injections were simulated in 5000 subjects. The horizontal red dashed line indicates the 2-ng/mL minimum concentration required for opioid blockade, as established from

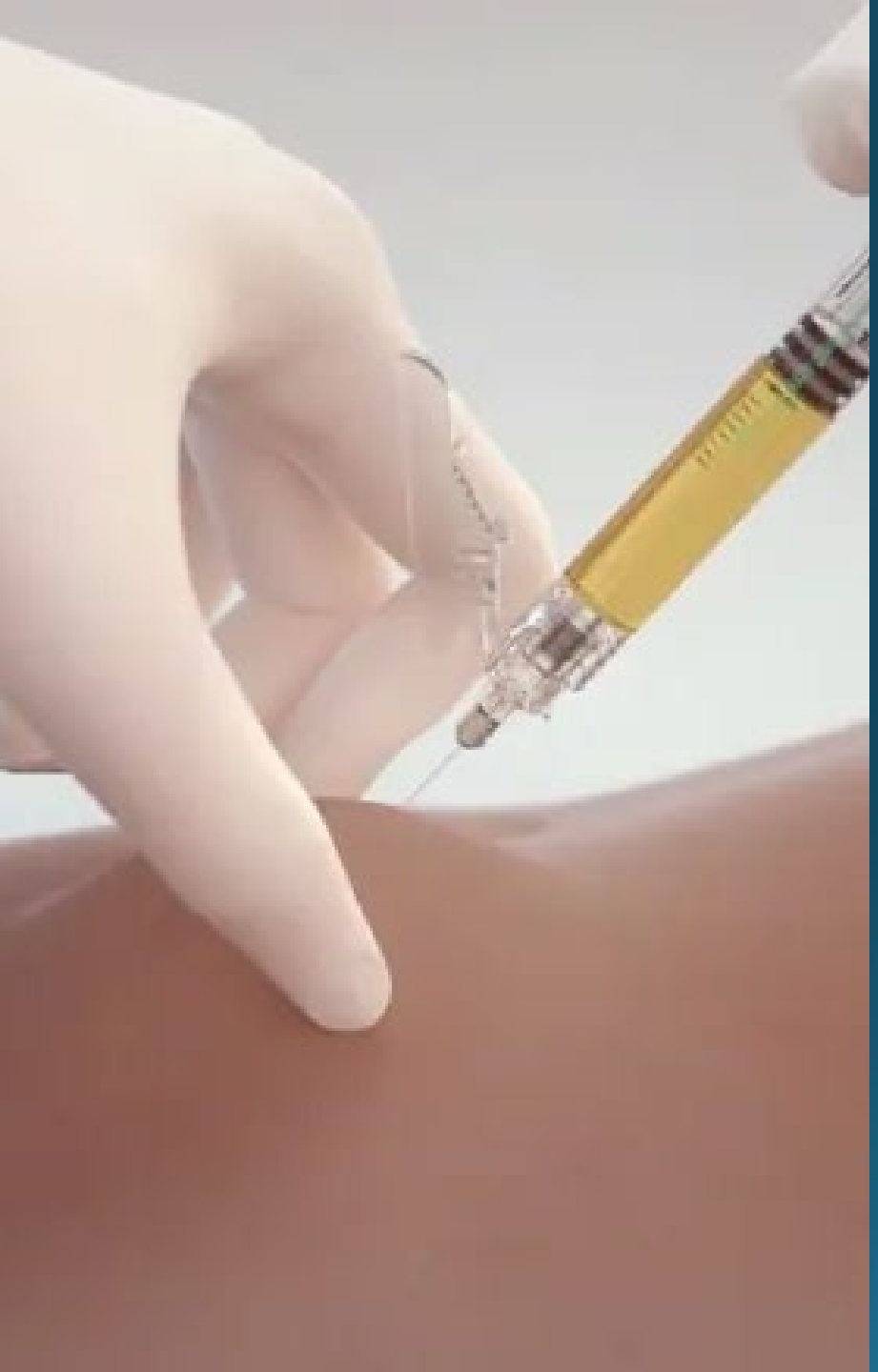
Patients stable on 100 mg will have blockade for 2 months (1 missed shot)

Patients stable on 300 mg will have blockade for 5 months (4 missed shots)

https://link.springer.com/article/10.1007/s40262-020-00957-0

Pharmacokinetic parameters	SUBUTEX daily stabilization		SUBLOCADE		
Mean	12 mg (steady-state)	24 mg (steady-state)	300 mg# (1st injection)	100 mg* (steady-state)	300 mg* (steady-state)
$C_{avg,ss}$ (ng/mL)	1.71	2.91	2.19	3.21	6.54
$C_{max,ss}$ (ng/mL)	5.35	8.27	5.37	4.88	10.12
$C_{min,ss}$ (ng/mL)	0.81	1.54	1.25	2.48	5.01

During the first month of XRBUP, the serum drug levels drop to levels that may not be therapeutic for some patients, thus **supplemental sublingual dosing is indicated in patients who experience craving or withdrawal in early treatment**



Low Threshold XR-BUP

- Given regardless of active drug/alcohol use
- No required drug testing
- Flexible schedule
- Walk-in appointments for injections
- Single day medication start for opioid tolerant patients
- Flexible dose
- SL supplementation available
- Available in pregnancy (2^{nd}/3^{rd} trimester)

Harm Reduction Based Low Threshold Care
(Our clinic's approach)

- Don't discharge patients for ongoing drug use
- Create patient centered care plans
- Flexible walk-in/same day/tele-med appointments
- Co-located/tele-behavioral health/digital apps
- Motivational interviewing
- Peer support (via text)
- Treatment of co-morbid medical/MH issues
- Contingency Management

Harm Reduction Based Low Threshold Care (continued)

- Assistance with transportation
- Assistance with filling out applications for treatment or social services
- Contraception
- Rapid Hep C/HIV testing
- Hep C treatment/ PREP for active users
- Naloxone kits
- Injection and smoking supplies
- Fentanyl test strips

Chronic Pharmacotherapy for Stable Patients

Maintenance therapy

- Check PDMP regularly to ensure prescriptions are filled, and to check other prescriptions.
- Consider drug testing (UDT) and consider confirmatory testing for unexpected results. UDT can facilitate open communication to change behavior but is not an evidence-based practice and may be a barrier for some patients.
- Ask about how patient is taking their meds
- Discuss cravings and what triggers them
- Discuss side effect management
- Adjust dose as needed to control cravings
- Address co-morbid disorders
- Initial weekly visits until use extinguished, then q2wk, monthly for long term stable patients

RECOVERY RESEARCH INSTITUTE

3 years on MOUD have 2/3 less return to use
5 years on MOUD have ½ the return to use rate

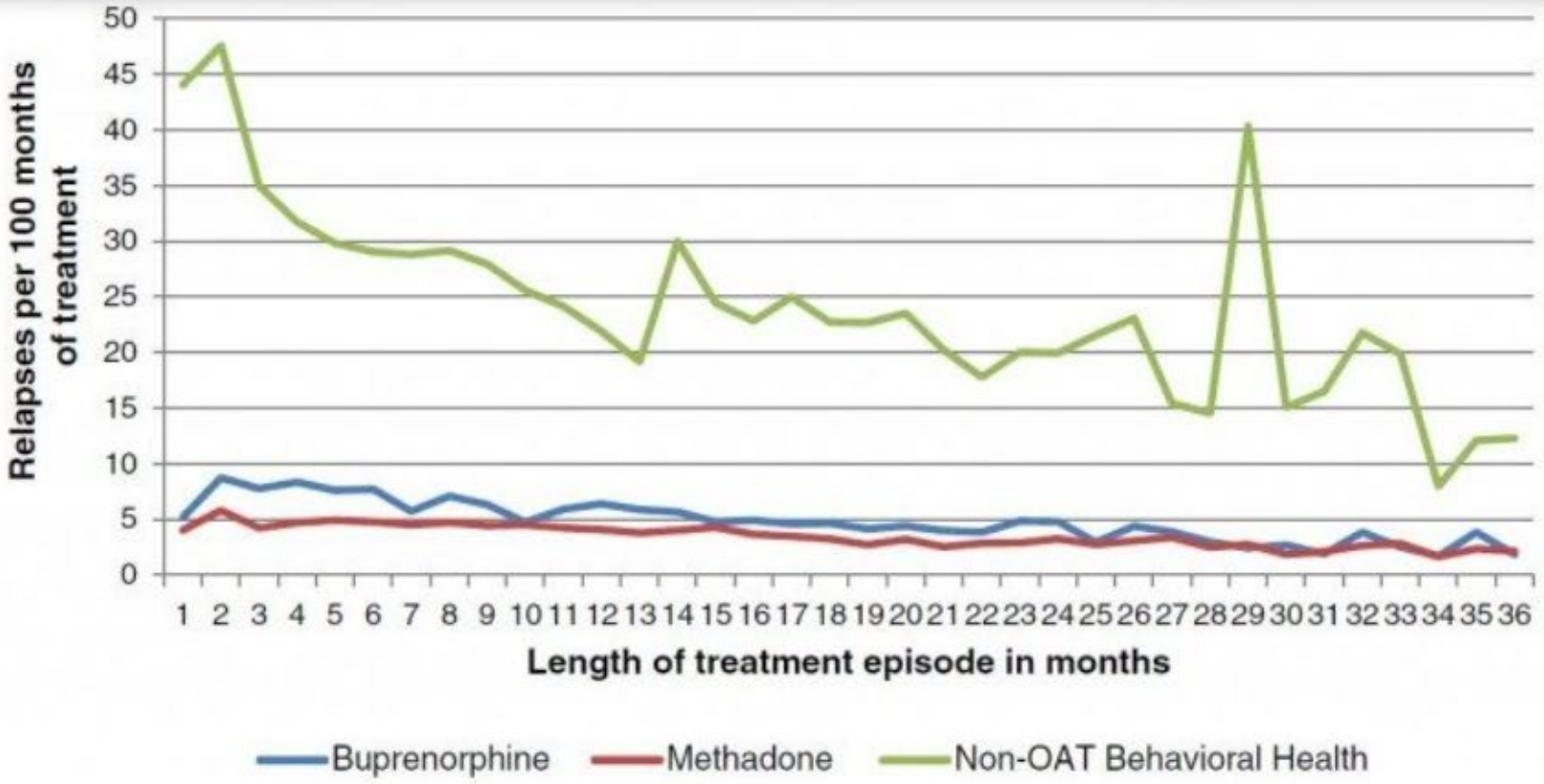


Fig. 1. Relapses during treatment among MassHealth members who received treatment for opioid addiction between 2003 and 2010[1]. [1] N = 18,866 episodes of buprenorphine treatment, 24,309 episodes of methadone treatment and 31,220 episodes of non-OAT behavioral health treatment in month 1. 33% of buprenorphine episodes, 52% of methadone episodes, and 12% of non-OAT treatment episodes lasted 12 months or more. 13% of buprenorphine treatment episodes, 27% of methadone episodes, and 1% of non-OAT treatment episodes lasted 24 months or longer.

When to Consider Taper?

- Patient Insists (for the right reasons)
- Relapse free for a year
- Stable housing, job, family life
- No major stressors (legal, financial)
- Stable Mental Health
- Actively engaged in strong recovery network

TAPER SHOULD ALWAYS BE PATIENT INITIATED

We work to counsel patient AGAINST discontinuation:

- During Pregnancy/postpartum
- During high stress times
- During surgery/hospitalization
- Due pressure from family/friends
- Because they “don’t need it anymore”

Buprenorphine for Chronic Pain

CDC 2022 Opioid Guidelines

Under Recommendation #5

"Emerging evidence suggests that patients for whom risks of continued high-dose opioid use outweigh benefits but who are unable to taper and who do not meet criteria for opioid use disorder might benefit from transition to buprenorphine. Buprenorphine is a partial agonist opioid that can treat pain and opioid use disorder and has other properties that might be helpful, including less respiratory depression and overdose risk than other opioids"

VA 2022 Guidelines

For patients receiving daily opioids for the treatment of chronic pain, **we suggest the use of buprenorphine instead of full agonist opioids** due to lower risk of overdose and misuse.

https://www.healthquality.va.gov/guidelines/Pain/cot/VADoDOpioidsCPGProviderSummary.pdf

Buprenorphine for Pain = Risk Reduction

Buprenorphine can be used for chronic noncancer pain and could be preferable to other options in patients with higher risks of toxicity (eg, elderly patients, patients with COPD, OSA, renal and hepatic dysfunction)

Strongly consider transitioning patients on chronic full opioid agonists to Buprenorphine to reduce opioid related risks

https://www.hhs.gov/opioids/sites/default/files/2019-10/Dosage_Reduction_Discontinuation.pdf

Which patients on COT may benefit from transition to BUP?

- Patients who find that protracted opioid withdrawal symptoms are unbearable when attempting an opioid taper
- Patients at high risk for opioid/sedative related morbidity or mortality on their current therapy
- Patients with opioid induced hyperalgesia??? Or other current opioid induced symptoms (depression, cognitive impairment, somnolence)
- Patients with opioid use disorder

Resources

- Bridge to treatment: practical tools, algorithms, patient education https://bridgetotreatment.org/tools/resources/
- SAMHSA Buprenorphine Quick Start Guide https://www.samhsa.gov/sites/default/files/quick-start-guide.pdf
- ASAM Clinical Considerations: Buprenorphine Treatment of Opioid Use Disorder for Individuals Using High-potency Synthetic Opioids https://journals.lww.com/journaladdictionmedicine/Fulltext/9900/ASAM_Clinical_Considerations__Buprenorphine.212.aspx

Utilizing Buprenorphine in the Hospital

ANTHC Bethel Syndemic Conference

December 2024

Sarah Spencer DO, FASAM

Learning Objectives

- Identify and treat opioid withdrawal in hospitalized patients with opioid use disorder
- Choose the appropriate opioid agonist to treat withdrawal based on patient comorbidities, geography and future goals
- Develop competencies to provide adequate pain relief in opioid dependent patients
- Create a safe discharge plan for patients needing transfer to OUD care and acute pain management.

Hospitalization is a high-risk touchpoint

MA statewide study: Residents hospitalized with injection-related infection in 2014 *had 54-fold increased risk of fatal opioid overdose* compared to general population

OR statewide study: Among adults with OUD hospitalized between April 2015-Dec 2017, *8% died within 12 months of discharge*

- Mortality similar to acute myocardial infarction (5-9%)

Larochelle, DAD 2019
King CA, JAM 2021

Mortality rate after 1st Heart attack is about 8% at one year

We would never send a patient home without a statin, which reduces mortality by 25%

Mortality rates after first overdose are 8% at one year

However, patients are routinely sent home without MOUD, which reduces one year mortality by >60%

https://jamanetwork.com/journals/jama/fullarticle/193491#:~:text=In%20regression%20analysis%20adjusting%20for,in%20hospital%20survivors%20of%20AMI.

https://pubmed.ncbi.nlm.nih.gov/36906496/#:~:text=Conclusions%3A%20Buprenorphine%20treatment%20after%20nonfatal,of%20opioid%2Dinvolved%20overdose%20death.

Why start in the hospital?

- 67% of hospitalized people who use substances state that they would like to cut back or quit
- Patients with OUD on buprenorphine had reduced 30 and 90 day hospital readmission rate by 53 and 43% compared to those not on buprenorphine
- 25-30% of admitted patients with opioid use disorder (OUD) leave AMA

Englander et al. J Hosp Med. 2017 May; 12(5): 339–342

Lianping Ti et al. Leaving the Hospital Against Medical Advice Among People Who Use Illicit Drugs: A Systematic Review AJPH, December 2015

Moreno, et al. Predictors for 30 day and 90 day hospital readmission among patients with opioid use disorder. Journal of Addiction Medicine. 2019.

J Addict Med. 2021 Apr 1;15(2):155-158. doi: 10.1097/ADM.0000000000000725.

Medications for Opioid use Disorder Associated With Less Against Medical Advice Discharge Among Persons Who Inject Drugs Hospitalized With an Invasive Infection

Nathanial S Nolan [1], Laura R Marks, Stephen Y Liang, Michael J Durkin

Managing opioid withdrawal: Choosing the best medication

opioid withdrawal

is hell on earth

"It feels like the worst flu you ever had, the sickest you've ever been, at times suicidal thoughts and complete and total confidence that you are never, ever, ever going to feel better. "

"For days, I shook uncontrollably. I sweat through my sheets. "

"I wanted to tear my hair out of my skull and my scratch the skin off of my body."

"It feels like the day your wife left and your kitten died and there were no more rainbows anywhere and never will be again. "

Buprenorphine in the ED: Initiating MAT for OUD, ACEP webinar, Drs Ketcham and Strayer

c/o Zack Repanshek

Opioid Agonists for Withdrawal Management

- Buprenorphine (partial agonist)
  - Should be started in all patients prior to discharge who plan to access BUP for OUD post d/c
  - Can combine with high-dose, potent full agonists to achieve acute pain control (hydromorphone/fentanyl)
- Methadone
  - Only for patients who plan to transfer care to OTP for long term methadone MOUD therapy, can d/c with 3 days (ANC, Mat-su, Fairbanks, Juneau)
- Hydromorphone/Fentanyl
  - High dose/PCA for severe pain, severe fentanyl w/d or precipitated w/d
  - Can utilize micro-dosing to add buprenorphine therapy prior to discharge

Adjunctive meds for breakthrough withdrawal symptoms

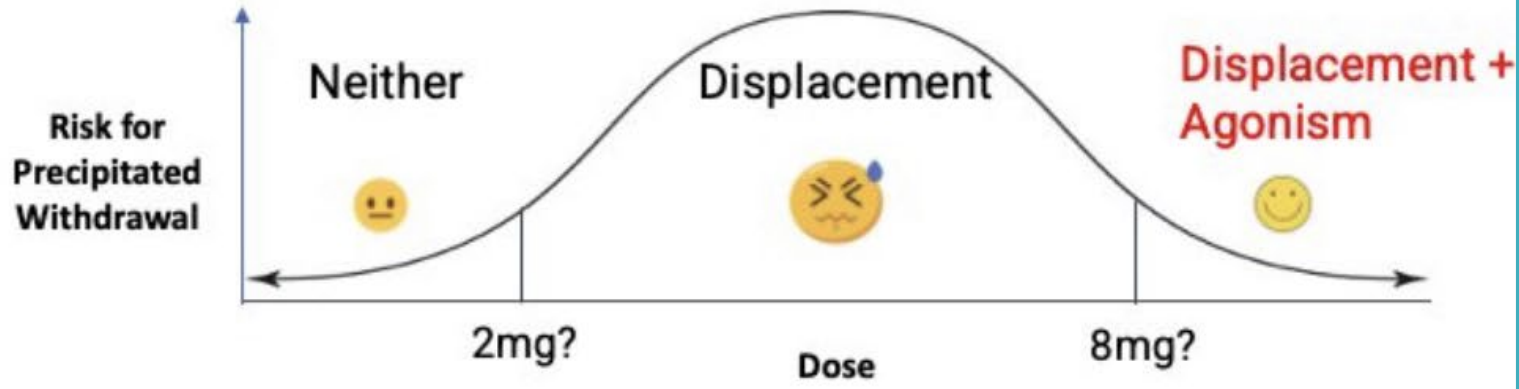
- Clonidine 0.1mg PO q8 hours PRN opioid withdrawal symptoms not controlled one hour after 2nd dose of buprenorphine. Hold for SBP<90, HR<60
- Acetaminophen 650mg PO every 4 hours PRN headache, musculoskeletal pain
- Ondansetron 4mg PO every 6 hours PRN nausea/vomiting
- Trazodone 100mg PO QHS PRN insomnia
- Lorazepam 1mg PO every 4 hours PRN severe anxiety/agitation (up to 10mg/day)
- Gabapentin 600mg PO TID PRN moderate anxiety/restlessness

Starting Buprenorphine in the Hospital

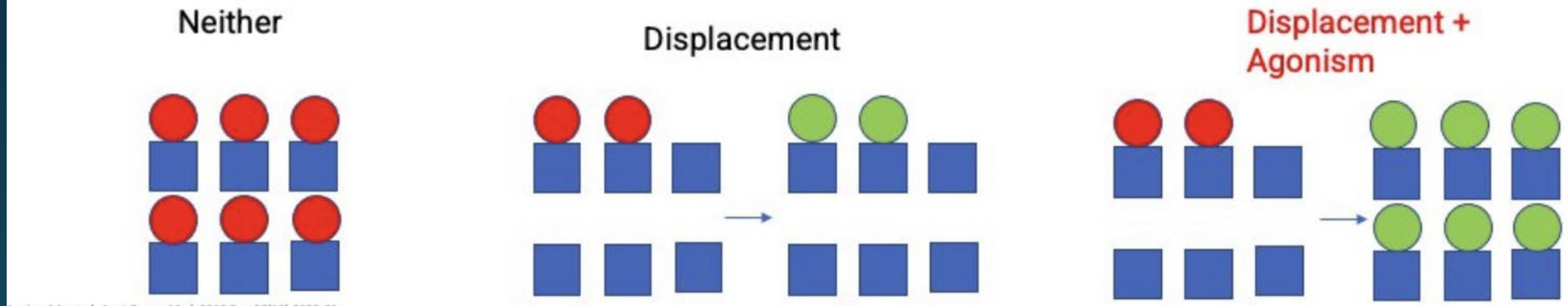
Barriers With Traditional Induction Approaches in Hospitalized patients

- Requires frequent reassessment and dosing based on symptoms (challenging busy on medicine floors)
- Needed to experience withdrawal symptoms prior to first dose
  - hard to sit in withdrawal in hospital setting even with comfort meds
  - difficult if experiencing acute or chronic pain in addition
- Challenging for patients ambivalent to commitment to induction process

Buprenorphine Micro- and Macrodosing Induction Using a Bell-Shaped Curve Framework



Therapeutic dose is 16-32 mg
Why not get there in 2-3 hours instead or 2-3 days?



Herring AA, et al. *Am J Emerg Med*. 2019 Dec;37(12):2259-62.
Huhn AS, et al. *Drug Alcohol Depend*. 2020 Jul 2;214:108147.

MEDICATION-ASSISTED TREATMENT CENTERS OF EXCELLENCE

High-Dose Buprenorphine Initiation (AKA: Macro-dosing)

High-Dose Buprenorphine Quick Start

Patients who have high levels of opioid tolerance/ chronic fentanyl use and need to get rapid symptom control

-Especially in the ED/ Patient directed discharge

- Wait until moderate withdrawal (COWS>12)
- Give 16 mg SLBUP
- Repeat 8-16 mg SLBUP q1h prn, up to 40+ mg
- Alternative give XRBUP injection (Sublocade/Brixadi)

https://doi.org/10.1001%2Fjamanetworkopen.2021.17128

Low Dose Overlapping Buprenorphine Initiation (AKA Micro-dosing)

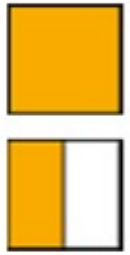
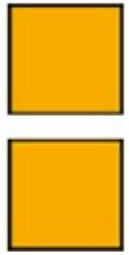
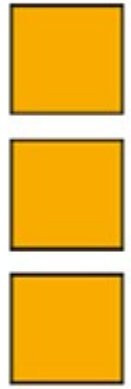
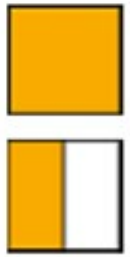
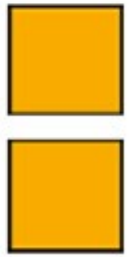
When to consider Micro-dosing?

- Transitioning from methadone to buprenorphine
- Chronic fentanyl use
- Patient with severe acute pain and OUD
- Previous failed attempts at induction due to PW

Basics of Micro-dosing Buprenorphine Induction

- Allow patients to continue the full opioid agonist as starting small doses of buprenorphine
- Start with very small doses of SL buprenorphine (0.5mg) to gradually displace full opioid agonist
- Gradually increase amount of buprenorphine patients receive
- Continue full opioid agonist during induction period
- Stop full agonist as tolerated after buprenorphine maintenance dose achieved (16+ mg)
- Limited evidence, mostly case series reports, commonplace on addiction medicine services

Continue to use full agonist (fentanyl, hydromorphone or methadone) on days 1-6

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Buprenorphine dose	0.5mg (1/4 strip) daily	0.5mg (1/4 strip) twice daily	1mg (1/2 strip) twice daily	2mg (1 strip) twice daily	3mg (1 ½ strips) twice daily	4mg (2 strips) twice daily	6mg (3 strips) twice daily
Morning dose							
Night dose							

Stop using the full agonist on day 7-8 (fentanyl, methadone or hydromorphone)

Day 8+ take 16-32 mg SLBUP daily

Can give XRBUP (Sublocade/Brixadi) once tolerating 8 mg SLBUP or anytime if leaving AMA

https://pubmed.ncbi.nlm.nih.gov/34954746/

3-day Sublingual Cross Taper Start

Prescribe 2 mg buprenorphine films #6, 8 mg buprenorphine films #4 for 3 day supply)[4]

- Day 1: 0.5 mg (1/4 of 2mg strip) SL buprenorphine q3 hours (4 mg total daily dose), continue full opioid agonists
- Day 2: 1 mg (1/2 of 2 mg strip) SL buprenorphine q3 hours (8 mg total daily dose), continue full opioid agonists
- Day 3: 8-16 mg (1-2 8 mg strips) SL buprenorphine once daily and 4 mg SL q6h prn withdrawal (max 32 mg total daily dose), wean or stop full opioid agonists

7-day Sublingual Cross Taper Start

https://bridgetotreatment.org/resource/starting-buprenorphine-with-microdosing-and-cross-tapering/

Prescribe 2 mg buprenorphine SL strips # 15, 8 mg buprenorphine SL strips #4 for 7 day supply

- Day 1: 0.5 mg (1/4 of 2 mg strip) buprenorphine SL daily (0.5 mg total daily dose), continue full opioid agonist
- Day 2: 0.5 mg (1/4 of 2 mg strip) buprenorphine SL BID (1 mg total daily dose), continue full opioid agonist
- Day 3: 1 mg (1/2 of 2 mg strip) buprenorphine SL BID (2 mg total daily dose), continue full opioid agonist
- Day 4: 2 mg buprenorphine SL BID (4 mg total daily dose), continue full opioid agonist
- Day 5: 3 mg (1+1/2 of 2 mg strip) buprenorphine SL BID (6 mg total daily dose), continue full opioid agonist
- Day 6: 4 mg (2 of 2 mg strip) buprenorphine SL BID (8 mg total daily dose), continue full opioid agonist
- Day 7: 6 mg (3 of 2 mg strip) buprenorphine SL BID (12 mg total daily dose), continue full opioid agonist
- Day 8: 16 mg (2 of 8 mg strip) buprenorphine qday and 4mg (1/2 of 8 mg strip) q6h prn withdrawal (max 32 mg

1-Day Micro-Macro Start

Administer (2) 20 mcg patch, prescribe buprenorphine 8 mg SL film/tablet as needed

- **Place 2 x 20 mcg transdermal buprenorphine patch**
  (do not need to wait for withdrawal)
- If patches are not available:
  - Stop full opioids
  - Do not wait for withdrawal
  - Start very low dose of buprenorphine
    - 0.5 mg (1/4 of 2mg strip) SL buprenorphine q3 hours (4 mg total daily dose)

    OR
    - Swallow 2mg SL buprenorphine q3 hours (6 mg total daily dose)

- **Wait** until the development of moderate to severe withdrawal. Patients should report feeling sick from withdrawals. (COWS 8 or ≥7/10 severity rating by patient)
  - 6-12 hours typically but can be much longer depending on the person and the drugs they have been consuming.
  - Some patients may wait 24-72 hours
  - Patient should stay abstinent and keep microdosing--keep the patches on or keep swallowing the 2mg tablets q3 hours (6 mg total daily dose) until they feel sick from withdrawal

Once withdrawal has become intolerable, **take 16mg SL bup** in one dose.

https://bridgetotreatment.org/resource/starting-buprenorphine-with-microdosing-and-cross-tapering/

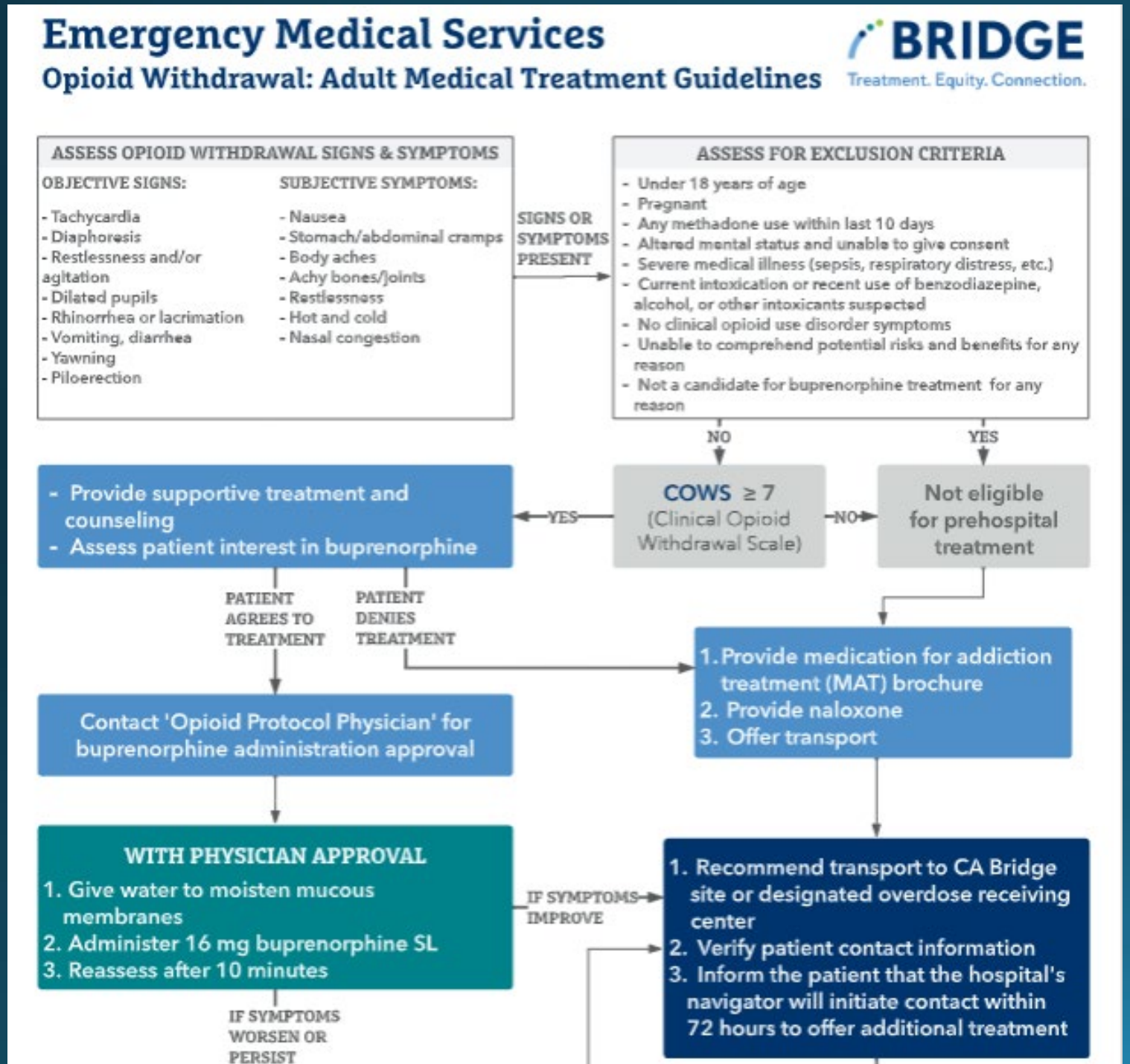
Buprenorphine in the ED

Why initiate MOUD via EMS?

- Buprenorphine is an incredibly safe medication
- Quickly control WD symptoms
- Opioid blockade to protect against repeat overdose X 48hrs
- Increased retention in treatment
- >10 states already doing this

https://doi.org/10.1080/10903127.2022.2061661

https://www.recoveryanswers.org/research-post/buprenorphine-equipped-ambulances-help-link-overdose-survivors-addiction-treatment/



EMS Opioid Withdrawal Protocol for Pre-hospital Buprenorphine

- Pending in Alaska
- Useful in long transports

https://bridgetotreatment.org/resource/emergency-medical-services-opioid-withdrawal-treatment-guidelines/

THE PRACTICE OF EMERGENCY MEDICINE/CONCEPTS

Consensus Recommendations on the Treatment of Opioid Use Disorder in the Emergency Department

Kathryn Hawk, MD, MHS*; Jason Hoppe, DO; Eric Ketcham, MD; Alexis LaPietra, DO; Aimee Moulin, MD; Lewis Nelson, MD; Evan Schwarz, MD; Sam Shahid, MBBS, MPH; Donald Stader, MD; Michael P. Wilson, MD; Gail D'Onofrio, MD, MS

Based on literature review, clinical experience, and expert consensus, the group recommends that emergency physicians offer to initiate opioid use disorder treatment with buprenorphine in appropriate patients and provide direct linkage to ongoing treatment for patients with untreated opioid use disorder.

https://www.annemergmed.com/action/showPdf?pii=S0196-0644%2821%2900306-1

ED-initiated Buprenorphine Increased Engagement In Addiction Treatment, Reduced Self-reported Illicit Opioid Use, & Decreased Use Of Inpatient Addiction Treatment Services

D'Onofrio JAMA. 2015.

Buprenorphine administration in the ED reduces cost, return to the ED and admission rates!
Average Length of Stay 2.4 hrs!

Evaluation of the use of buprenorphine for opioid withdrawal in an emergency department.

Berg ML, et al. Drug Alcohol Depend. 2007.

who received buprenorphine were less likely to return to the same ED within 30 days for a drug-related visit (8%) compared to those who received symptomatic treatment (17%) ($p<0.05$).

July 15, 2021

High-Dose Buprenorphine Induction in the Emergency Department for Treatment of Opioid Use Disorder

Andrew A. Herring, MD[1,2]; Aidan A. Vosooghi, MS[1,3]; Joshua Luftig, PA[1]; et al

» Author Affiliations | Article Information

JAMA Netw Open. 2021;4(7):e2117128. doi:10.1001/jamanetworkopen.2021.17128

ADDICTION SSA SOCIETY FOR THE STUDY OF ADDICTION

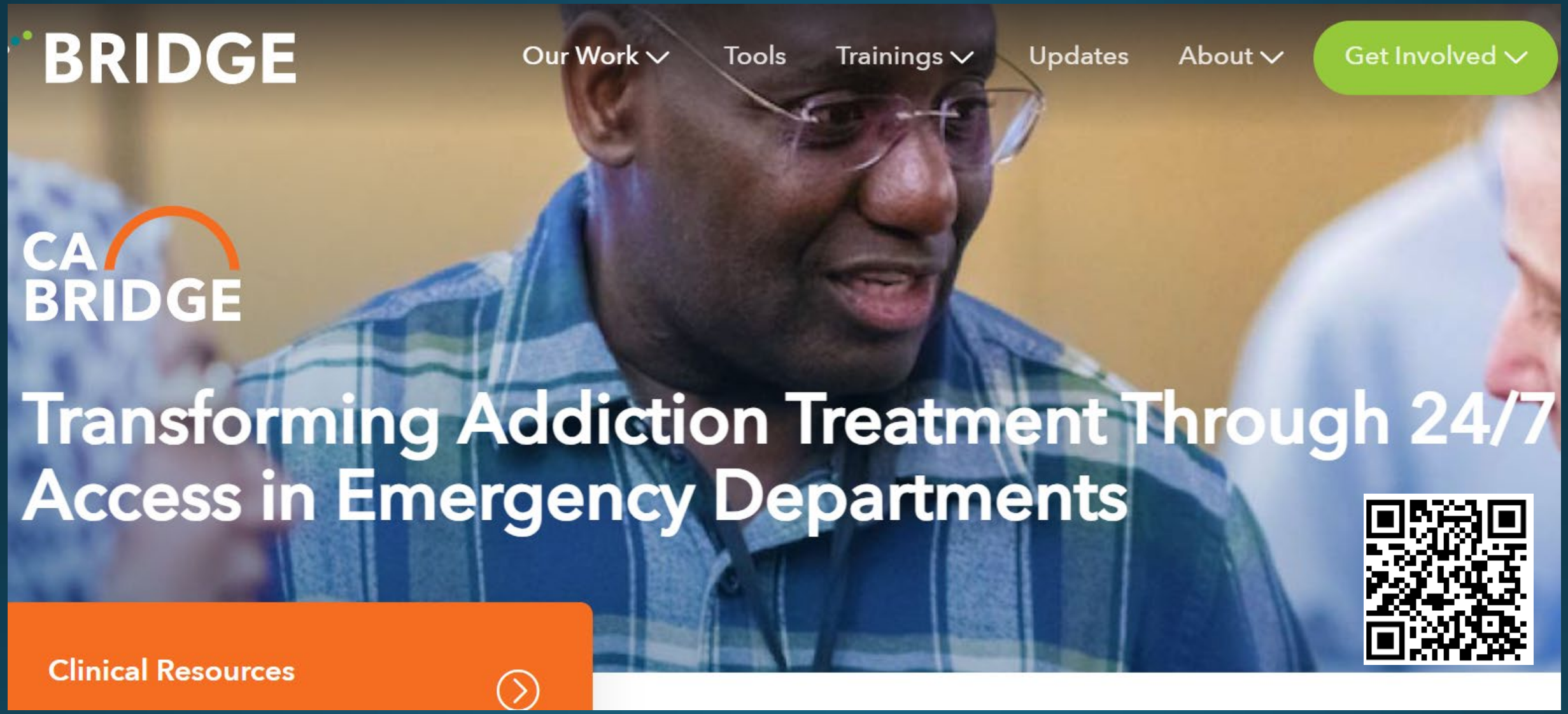
Research Report

Cost-effectiveness of emergency department-initiated treatment for opioid dependence

Susan H. Busch ✉, David A. Fiellin, Marek C. Chawarski ... See all authors ›

First published: 16 August 2017
https://doi.org/10.1111/add.13900

Treatment with buprenorphine was the most cost-effective treatment option with a mean cost of $1,752. The mean cost of a brief intervention alone was $1,805 and the mean cost for a referral alone was $1,977. The ED-initiated buprenorphine group was nearly twice as likely to enroll in addiction treatment and used illicit opioids for fewer days during the 30 days after their ED visits. This group also used fewer illicit opioids over the study period.



An AMAZING free online resource with free protocols and training materials to start utilizing buprenorphine in your hospital ED

https://bridgetotreatment.org/addiction-treatment/ca-bridge/

CA BRIDGE

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.

30-60 minutes YES ↓

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

↓

Discharge

*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

Patient Home Start Instructions

CA BRIDGE

Buprenorphine Self-Start

Guidance for patients starting buprenorphine outside of hospitals or clinics

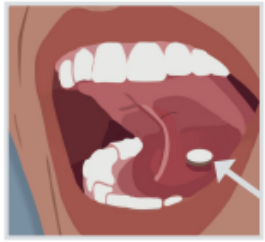
1. Plan to take a day off and have a place to rest.
2. Stop using and wait until you feel very sick from withdrawals (at least 12 hours is best, if using fentanyl it may take a few days).
3. Dose one or two 8mg tablets or strips UNDER your tongue (total dose of 8-16mg).
4. Repeat dose (another 8mg-16mg) in an hour to feel well.
5. The next day, take 16-32mg (2-4 tablets or films) at one time.

If you have started bup before:

- If it went well, that's great! Just do that again.
- If it was difficult, talk with your care team to figure out what happened and find ways to make it better this time. You may need a different dosing plan than what is listed here.

If you have never started bup before:

- Gather your support team and if possible take a "day off."
- You are going to want space to rest. Don't drive.
- Using cocaine, meth, alcohol or pills makes starting bup harder, and mixing in alcohol or benzos can be dangerous.



Place dose under your tongue (sublingual).

If you have a light habit: *(For example, 5 "Norco 10's" a day)*

- Consider a low dose: start with 4mg and stop at 8mg total.
- **WARNING:** Withdrawal will continue if you don't take enough bup.

If you have a heavy habit: *(For example, injecting 2g heroin a day or smoking 1g fentanyl a day)*

- Consider a high dose: start with a first dose of 16mg.
- For most people, the effects of bup max out at around 24-32mg.
- **WARNING:** Too much bup can make you feel sick and sleepy.

Not going well? Have questions? Contact your Navigator for help!

When discharging patients not in active withdrawal yet

Always give at least 1 week of SLBUP Rx

https://bridgetotreatment.org/resource/rapid-guidance-for-patients-starting-buprenorphine-outside-of-hospitals-or-clinics/

Precipitated withdrawal

- Bup 16mg SL -AND- PO benzodiazepine x1
- Repeat bup until mydriasis resolves
- If withdrawal persists, ketamine 0.3mg/kg IV slow push every 30 minutes until calm and light sedation. Hold for excessive sedation or dissociative symptoms

Enhanced Care Practice: Precipitated Withdrawal 90-Minute Emergency Room Bundle

1. Carroll GG, Wasserman DD, Shah AA, et al. Buprenorphine Field Initiation of ReScue Treatment by Emergency Medical Services (Bupe FIRST EMS): A Case Series. *Prehospital Emerg Care Off J Natl Assoc EMS Physicians Natl Assoc State EMS Dir*. 2021;25(2):289-293. doi:10.1080/10903127.2020.1747579
2. Herring AA, Schultz CW, Yang E, Greenwald MK. Rapid induction onto sublingual buprenorphine after opioid overdose and successful linkage to treatment for opioid use disorder. *Am J Emerg Med*. 2019;37(12):2259-2262. doi:10.1016/j.ajem.2019.05.053
3. Herring AA. Postoverdose Initiation of Buprenorphine After Naloxone-Precipitated Withdrawal Is Encouraged as a Standard Practice in the California Bridge Network of Hospitals. *Ann Emerg Med*. 2020;75(4):552-553. doi:10.1016/j.annemergmed.2019.12.015

If no improvement or worse consider:

Undertreated withdrawal: Occur with lower starting doses and heavy tolerance; improves with more bup (add'l 8-16 mg SL).

Other substance intoxication or withdrawal: Stimulant intoxication, alcohol/benzo/xylazine/GHB withdrawal. Continue bup; manage additional syndromes.

Bup side-effects: Nausea, headache, dysphoria. Continue bup, treat side-effects with supportive medications.

Other medical/psychiatric illness Anxiety, sepsis, influenza, DKA, thyrotoxicosis, etc. Continue bup manage underlying condition.

If sudden/signficant worsening, consider precipiated withdrawal See box below.

Buprenorphine Precipitated Withdrawal: Treatment approach by phase

Early

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

Clonidine
Pramipexole
Gabapentinoid

Acute

1. Monitored bed
2. Bup to 64mg SL
3. Ketamine 20 IV q 30
4. Fentanyl 200mcg Q 10 min

Residual

1. Pramipexole 0.5mg
2. Clonidine 0.3mg
3. Benzo (loraz 1mg IV)
4. Pregabalin 100-300mg po

Olanzepine 10mg IM

goal

XRBUP

J Hosp Med. 2022 Sep;17(9):744-756. doi: 10.1002/jhm.12893. Epub 2022 Jul 26.

Management of opioid use disorder and associated conditions among hospitalized adults: A Consensus Statement from the Society of Hospital Medicine

Susan L Calcaterra [1], Marlene Martin [2], Richard Bottner [3], Honora Englander [4], Zoe Weinstein [5],

- Assess hospitalized patients with unhealthy opioid use for OUD
- Use shared decision making to initiate medications for OUD
- Offer buprenorphine or methadone as first line agents to treat opioid withdrawal and OUD
- Assess and treat pain in the setting of OUD
- Continue buprenorphine or methadone during hospitalization, including in the setting of acute pain and the perioperative period
- Link patients to a buprenorphine prescriber or an opioid treatment program when they want to continue buprenorphine or methadone following hospital discharge

https://pmc.ncbi.nlm.nih.gov/articles/PMC9474708/

3 Basic Acute Pain Management Options:

1. Divide buprenorphine dose every 6 hours, INCREASE DOSE UP TO 32+ MG/DAY (no known ceiling for analgesic effect, can be given on top of long-acting injectable buprenorphine), add adjunctive meds but do not use additional opioids (minor pain/day surgery)

2. Continue buprenorphine maintenance therapy (If desired at lower dose 8-12mg) utilize multimodal analgesia and administer high-dose, potent, short-acting opioid analgesics (hydromorphone or fentanyl), titrate to effect. (mod-severe pain/inpatient surgery),

3. Discontinue buprenorphine maintenance therapy and use opioid analgesics (major surgery). Convert back to buprenorphine therapy when acute pain no longer requires opioid analgesics.

Patient directed only, NOT recommended.

"Given the increased mortality rate immediately after discontinuing buprenorphine-naloxone, we strongly recommend continuing buprenorphine-naloxone preoperatively to ensure overall patient stability and prevent relapse from stopping and restarting the medication."

The perioperative patient on buprenorphine: a systematic review of perioperative management strategies and patient outcomes, Can J Anesthesia, February 2019, Volume 66, Issue 2, pp 201–217

Labor and Delivery

- Epidurals!
- Full Opioid Agonists are still OK!
  Hydromorphone 2-3 times usual dose
- Don't give extra Bup during labor to treat acute pain
- OK to increase Bup dose post delivery
- Don't give nalbuphine, butorphanol (precipitated w/d)
- Schedule NSAIDS/acetaminophen
- Buprenorphine and methadone are safe in breastfeeding

Opioids + MOUD

- **4-12% Mu receptor availability** at 24mg daily dose of buprenorphine
- Hydromorphone serum level of 4ng/ml is associated with lowest level of good pain control
- How Much?
  - Swedish post-Cesarean Protocol: Hydromorphone oral 4-6mg q4h + 4-8mg q4h prn pain
  - 2-3x typical dosing
  - No longer than non-opioid tolerant patients

Reducing AMA discharges in patients with OUD

Why Does Patient Directed Discharge Happen?

- Inadequate support of withdrawal symptoms
- Inadequate pain management
- Loss of privacy, autonomy, freedom of movement (esp during prolonged hospitalizations, and esp among patients with PTSD)
- Stigma and judgement
  - Negative attitudes of health professionals diminished patients' feelings of empowerment and subsequent treatment outcomes
  - Diminished empathy

Santos (2021); Nolan (2021)

How can we reduce negative outcomes related to substance use in hospital?

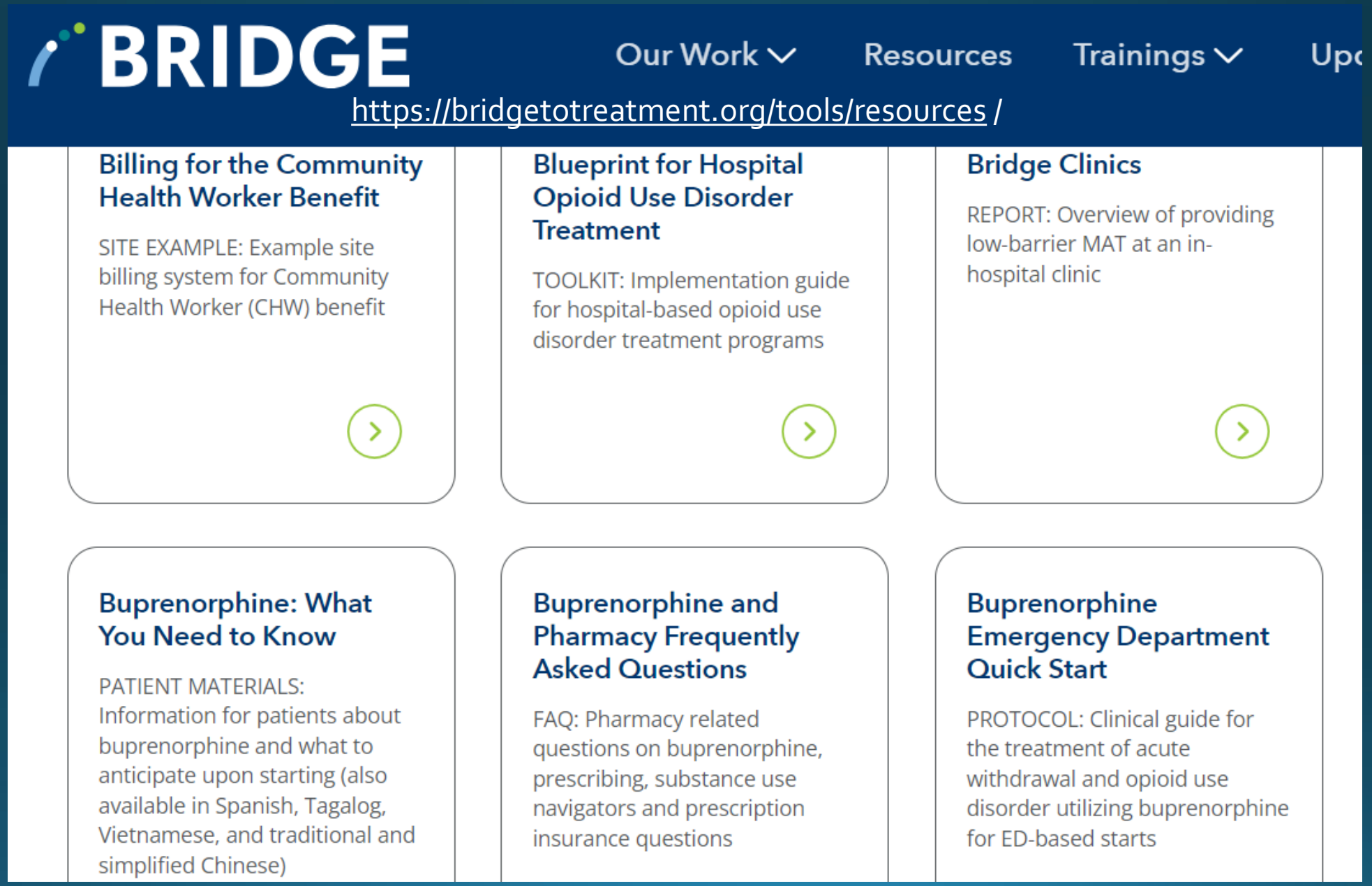
- Trauma-informed care principals (empathy, respect)
- Early identification of SUD and support
  - For example, identifying OUD and offering methadone and buprenorphine reduces patient directed discharge
- Optimize therapeutic alliance
- Move from security/legal response to therapeutic response
- Treat pain, insomnia, anxiety, and other concerns
- LInk to outpatient treatment resources when patient is interested
- Overdose prevention education, naloxone, safe injection/smoking kits
- Safe consumption spaces

Santos (2021); Suzuki (2020); Nolan (2021)

Develop a standing order set for patients with OUD leaving AMA

- Administer a high dose of buprenorphine (24-32mg)
  (If possible, administer XRBUP injection)
- Give at least 1 week Rx for outpatient buprenorphine
- A referral to outpatient MOUD provider with warm handoff/ peer support

Amazing FREE algorithms, order sets, patient education materials!



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