Make MAT Happen

A Clinical Introduction to Medication for Addiction Treatment (MAT) for Opioid Use Disorder (OUD)

CA BRIDGE

CA Bridge is a program of the Public Health Institute. The Public Health Institute promotes health, well-being and quality of life for people throughout California, across the nation, and around the world.

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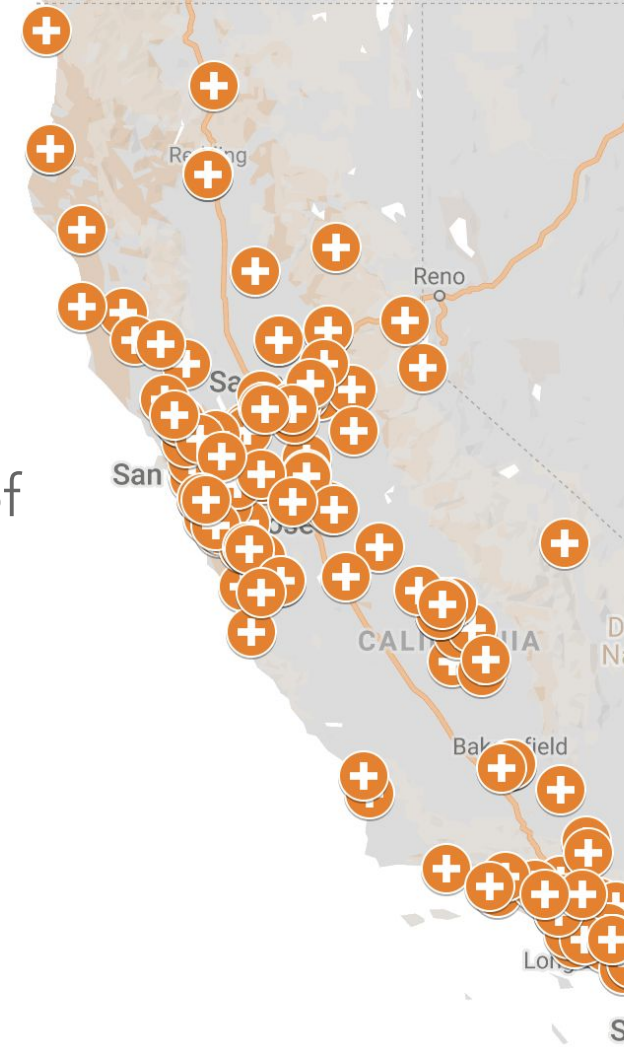
CA BRIDG

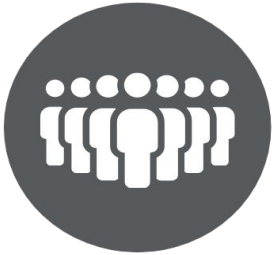
Goal: 24-7 access to high quality treatment of substance use disorders in all California hospitals by 2025.



The Opioid Epidemic

107,622
people died from drug overdose during 2021 (1)

9.3 million
people misused prescription opioids in 2020 (2)



2.7 million
people had an opioid use disorder in 2020 (2)

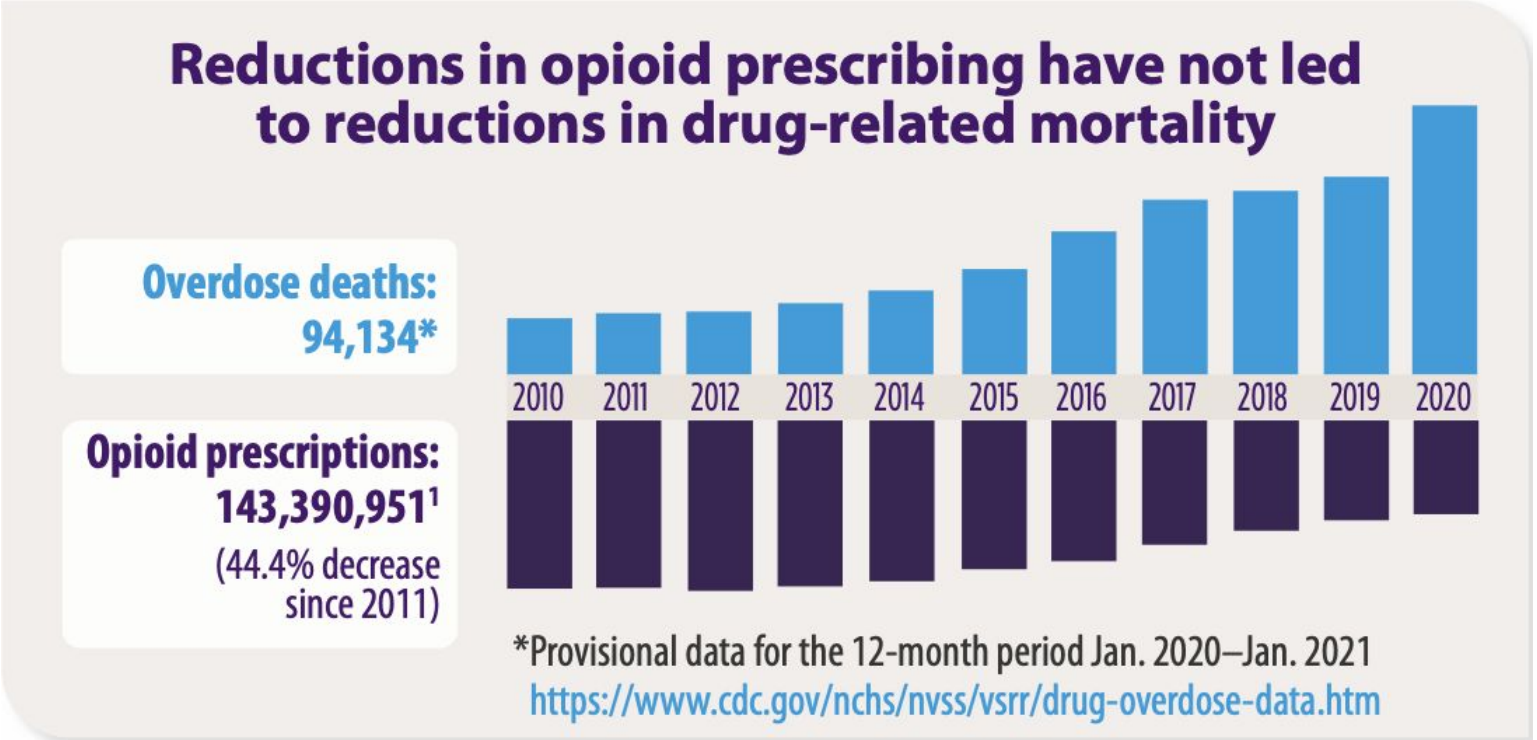
902,000
people used heroin in 2020 (2)

Sources

(1) Provisional data from CDC, National Center for Health Statistics

(2) 2020 National Survey on Drug Use and Health, 2021

As Opioid Prescribing Decreased, Overdose Deaths Increased



Los Angeles Times

SUBSCRIBE

CALIFORNIA

Fentanyl deaths in L.A. County soared 1,280% between 2016 and 2021, report finds

Shannon Knox places photos on a memorial for International Overdose Awareness Day on Aug. 31 outside Los Angeles City Hall. (Irfan Khan / Los Angeles Times)

Addiction is NOT a moral failing.

It is a chronic disease that requires medical treatment.

CA Bridge Model

Revolutionizing the System of Care

Low-Barrier Treatment

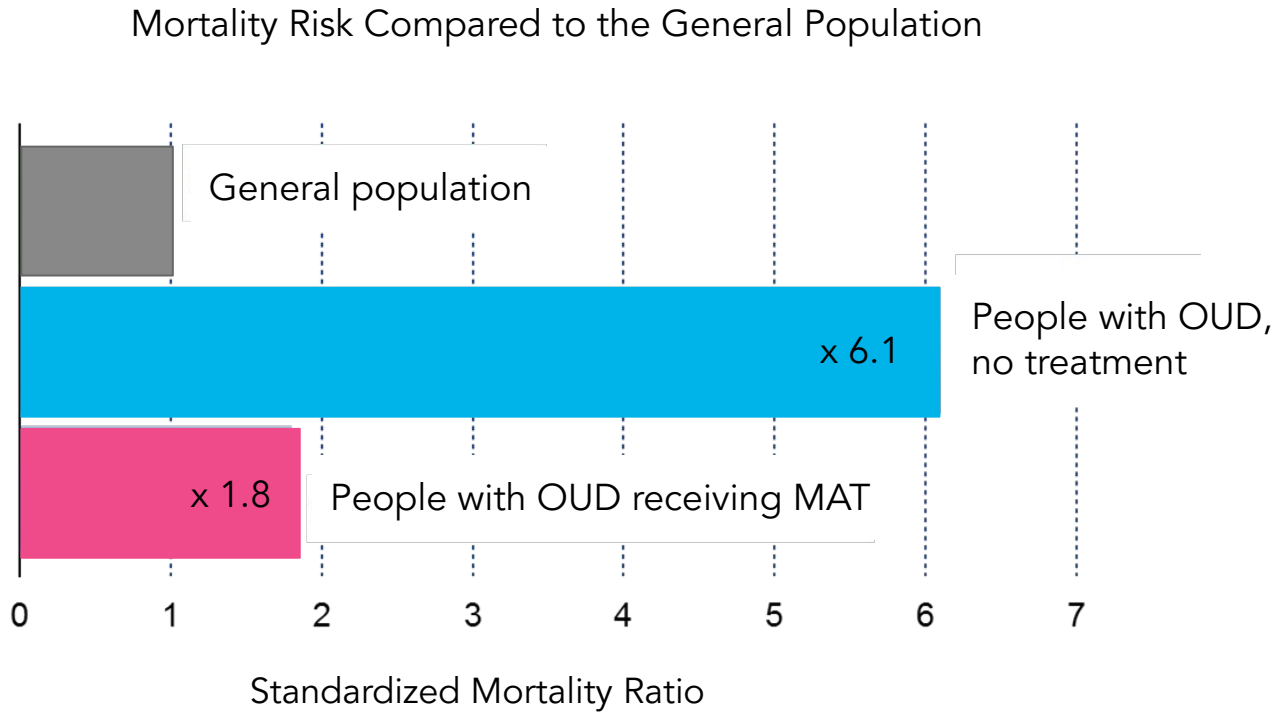
Connection to Care
and Community

Culture
of Harm Reduction

Low-Barrier Treatment

AKA Quick Start Treatment

Buprenorphine Saves Lives



Evans et al., 2015.

OUD is an EMERGENCY…
And this is our JOB.

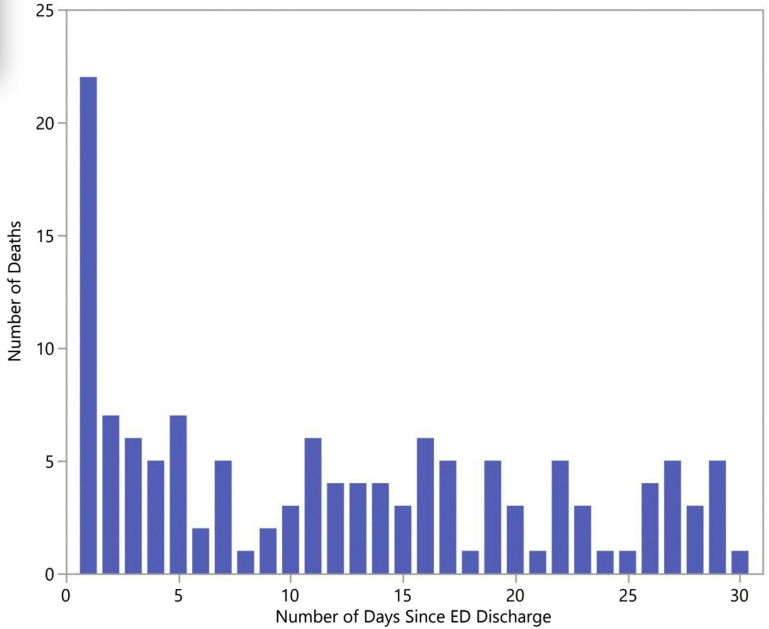
One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose

Scott G. Weiner, MD, MPH[a,*], Olesya Baker, PhD[a], Dana Bernson, MPH[b], Jeremiah D. Schuur, MD, MHS[c]

Patients treated in Massachusetts EDs for opioid overdose, 2011-2015:

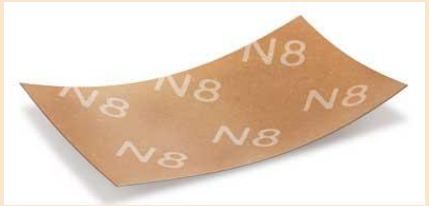
- Shows short-term increase in mortality risk post-ED discharge
- Of patients that died, 20% died in the first month
- Of those that died in the first month, 22% died within the first 2 days

Number of deaths after ED treatment for nonfatal overdose by number of days after discharge in the first month (n=130)



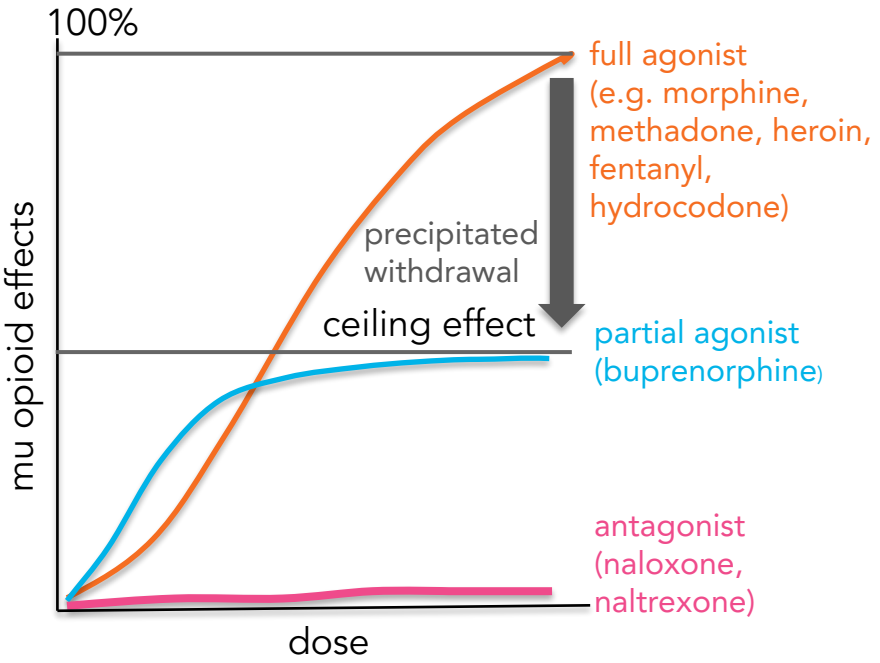
Source: Weiner, Scott, et al.. *One-Year Mortality of Patients After Emergency Department Treatment for Nonfatal Opioid Overdose*. Annals of Emergency Medicine. April 2, 2019.

Medications for Opioid Use Disorder

Methadone	Buprenorphine ± Naloxone	Naltrexone
Full mu (opioid) receptor agonist	Partial mu receptor agonist	Mu receptor antagonist (blocker)
	 	
Oral (often solution)	Sublingual (tab, film), IV, IM, subcutaneous injection, transdermal patch	Intramuscular injection (extended release) or oral Ex: “Vivitrol,” “ReVia”

Understanding Buprenorphine (Bup)

- Treats withdrawal, cravings, & overdose
- Partial agonist → less respiratory depression & sedation
- High affinity
  - Blocks & displaces other opioids
  - Can precipitate withdrawal
- Half-life ~ 24-36 hours (long acting)



Emergency Department Medication Starts Save Lives

Original Investigation

Emergency Department–Initiated Buprenorphine/Naloxone Treatment for Opioid Dependence
A Randomized Clinical Trial

Gail D'Onofrio, MD, MS; Patrick G. O'Connor, MD, MPH; Michael V. Pantalon, PhD; Marek C. Chawarski, PhD; Susan H. Busch, PhD; Patricia H. Owens, MS; Steven L. Bernstein, MD; David A. Fiellin, MD

37% vs 78%

CONCLUSIONS AND RELEVANCE Among opioid-dependent patients, ED-initiated bup treatment vs brief intervention and referral significantly increased engagement in addiction treatment, reduced self-reported illicit opioid use, and decreased use of inpatient addiction treatment services but did not significantly decrease the rates of urine samples that tested positive for opioids or of HIV risk. These findings require replication in other centers before widespread adoption.

The Numbers for Success

Number Needed to Treat	
Aspirin in ST-elevation myocardial infarction	42 to save a life
Warfarin in atrial fibrillation	25 to prevent a stroke
Steroids in chronic obstructive pulmonary disease (COPD)	10 to prevent treatment failure
Defibrillation in cardiac arrest	2.5 to save a life
Buprenorphine in opioid use disorder	2 to retain in treatment

https://clincalc.com/Stats/NNT.aspx

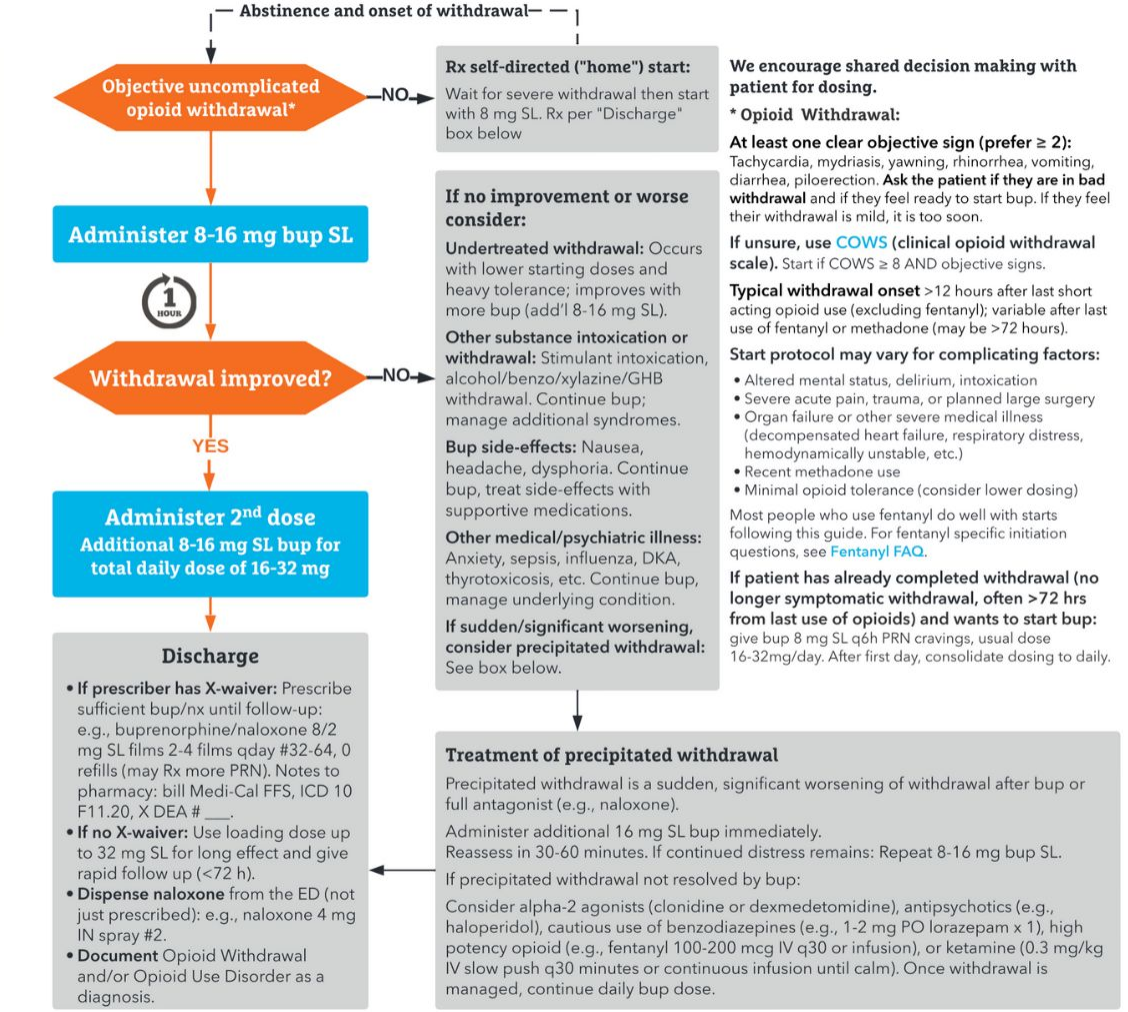
-ing the X-waiver!

As of Jan 1, 2023, an X-waiver is no longer required by federal law. Buprenorphine for medication for opioid use disorder no longer requires an X-waivered prescriber.

Good News:
MAT Works

Buprenorphine (Bup) Emergency Department Quick Start

View or download on your device



Identify Withdrawal & Rule-Out Contraindications

*** Opioid Withdrawal:**

At least one clear objective sign (prefer ≥ 2): Tachycardia, mydriasis, yawning, rhinorrhea, vomiting, diarrhea, piloerection. **Ask the patient if they are in bad withdrawal** and if they feel ready to start bup. If they feel their withdrawal is mild, it is too soon.

If unsure, use COWS (clinical opioid withdrawal scale). Start if COWS ≥ 8 AND objective signs.

Typical withdrawal onset >12 hours after last short acting opioid use (excluding fentanyl); variable after last use of fentanyl or methadone (may be >72 hours).

Start protocol may vary for complicating factors:

- Altered mental status, delirium, intoxication
- Severe acute pain, trauma, or planned large surgery
- Organ failure or other severe medical illness (decompensated heart failure, respiratory distress, hemodynamically unstable, etc.)
- Recent methadone use
- Minimal opioid tolerance (consider lower dosing)

Most people who use fentanyl do well with starts following this guide. For fentanyl specific initiation questions, see Fentanyl FAQ.

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 sifting 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

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Fentanyl? Higher COWS + "Hard Signs"

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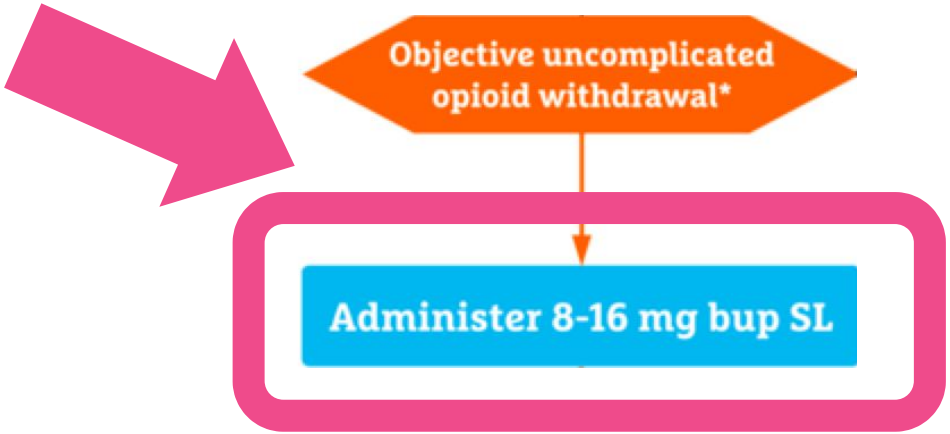
Include 1+ *objective* signs!

- Dilated pupils
- "Goose bumps"
- Vomiting
- Tachycardia
- Yawning
- Runny nose & eyes

Patient in Moderate to Severe Withdrawal & Interested in Buprenorphine?



Buprenorphine is given as sublingual, *dissolvable* dose.

No PO for 15-20min!

Patient in Moderate to Severe Withdrawal & Interested in Buprenorphine?

No methadone for 72+hrs

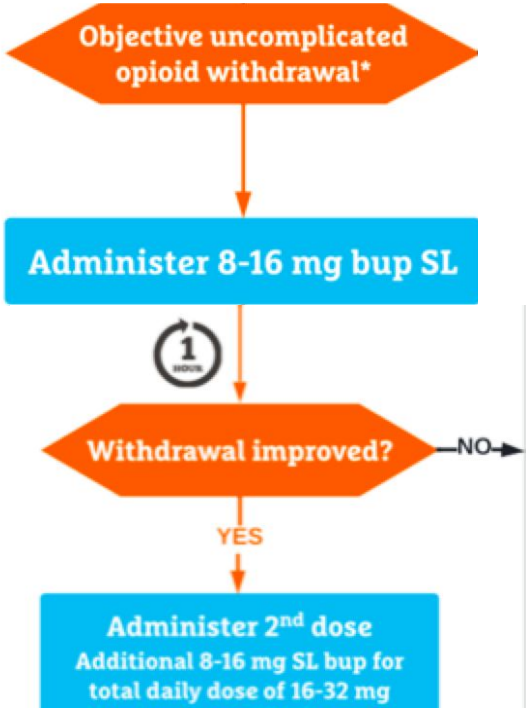
CAUTION: benzodiazepines, etOH, other respiratory suppressants

Patient in Moderate to Severe Withdrawal & Interested in Buprenorphine?

Typically start 8mg bup SL.

Fentanyl use may require higher dose, e.g., 16-32 mg.

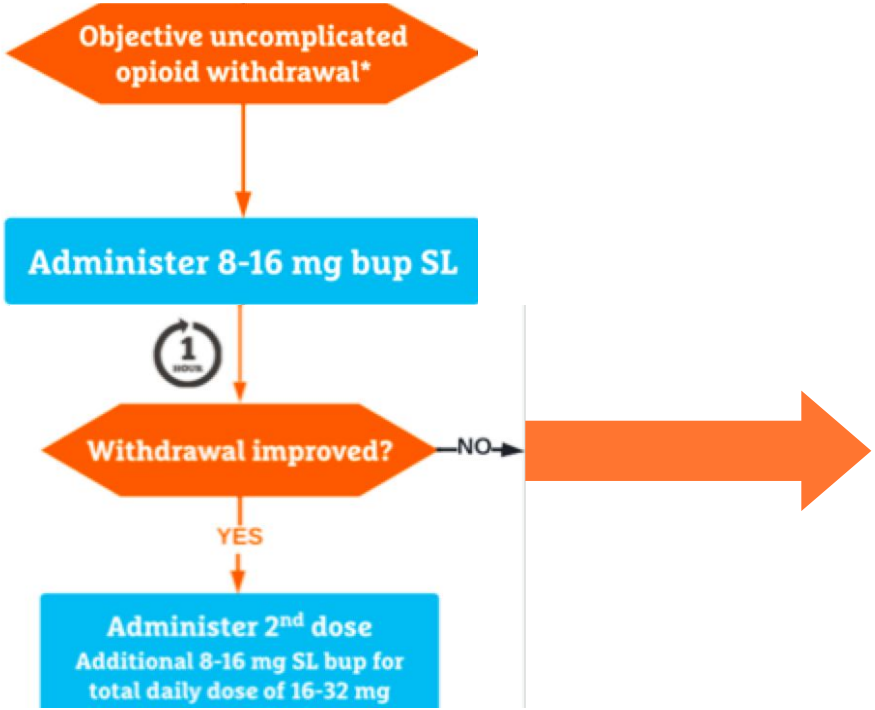
Wait 1 hour. Reassess.
Better? Give another dose.



Don't be afraid to repeat dose!
Fentanyl use may take more doses.

Note: *Most* patients will *still* do great with 16-32 mg total buprenorphine.

Wait 1 hour. Reassess.
Not better? Widen your ddx.



If no improvement or worse consider:

Undertreated withdrawal: Occurs 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.

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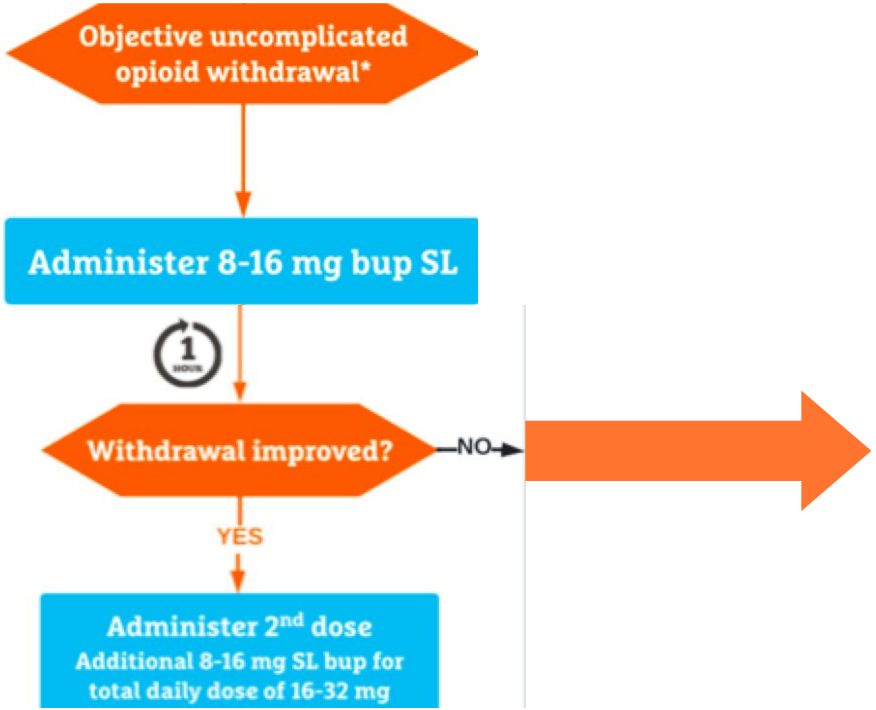

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Undertreated Withdrawal

- Small bup doses given to pt with high tolerance → ongoing sxs
- Incomplete treatment of sxs
- As time goes on between doses, sxs get worse – from *lack of enough* bup, not *because* of it
- Can be a *normal* part of the bup induction experience

Precipitated Withdrawal

- Very rare! (<1% in National Institute on Drug Abuse data)
- How? *"Too little bup, too soon"*
- What? Rapid, *significant* & *sudden* worsening withdrawal sxs
- Pain, unpleasant, agitated, "excited delirium"
- Note: this is what happens *on purpose* when we give naloxone!

Why the Hype?!

- A rough patient experience – patients talk to each other!
- A rough provider experience – do not want to lose trust!

We need to normalize the withdrawal experience for pts.

It may take some time for the medication to work; I'm here for you and will help you no matter what happens.

I know going through withdrawal is terrible. I'm here to help make this the *BEST WITHDRAWAL EXPERIENCE EVER!* With *SUPPORT* and *MEDICATION* to ease your pain.

Have you ever tried buprenorphine before? Do you know anybody who has? What concerns do you have?

If you *do* precipitate withdrawal…

If you *do* precipitate withdrawal…

KEEP
CALM
AND
GIVE
BUP

If you *do* precipitate withdrawal…

KEEP
CALM
AND
GIVE
BUP***…and more bup!***

Treatment of precipitated withdrawal

Precipitated withdrawal is a sudden, significant worsening of withdrawal after bup or full antagonist (e.g., naloxone).

Administer additional 16 mg SL bup immediately.
Reassess in 30-60 minutes. If continued distress remains: Repeat 8-16 mg bup SL.

If precipitated withdrawal not resolved by bup:

Consider alpha-2 agonists (clonidine or dexmedetomidine), antipsychotics (e.g., haloperidol), cautious use of benzodiazepines (e.g., 1-2 mg PO lorazepam x 1), high potency opioid (e.g., fentanyl 100-200 mcg IV q30 or infusion), or ketamine (0.3 mg/kg IV slow push q30 minutes or continuous infusion until calm). Once withdrawal is managed, continue daily bup dose.

For Discharge:

Maintenance Treatment
16 mg Bup SL/day
Titrate to suppress cravings;
Usual dose 16-32 mg/day

Discharge

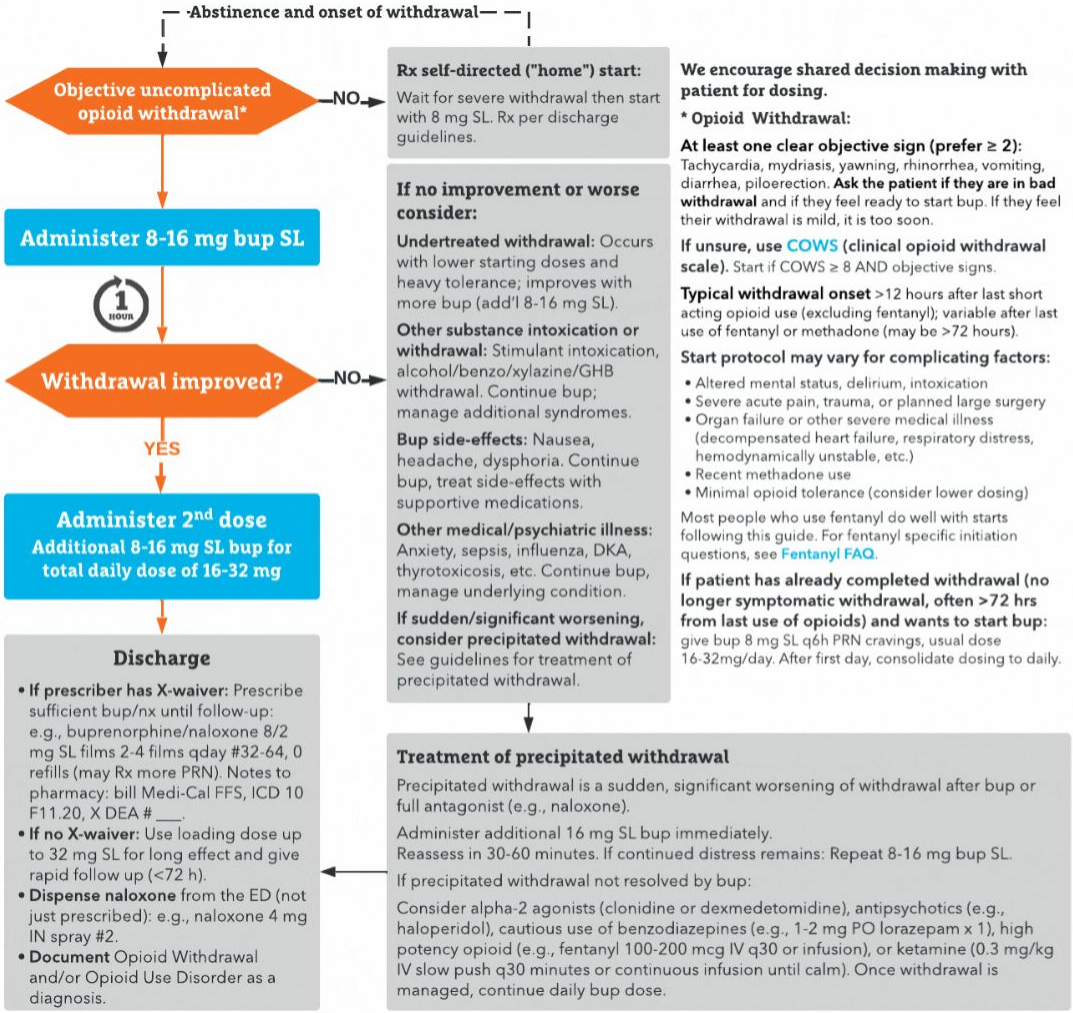
- **If prescriber has X-waiver:** Prescribe sufficient bup/nx until follow-up: e.g., buprenorphine/naloxone 8/2 mg SL films 2-4 films qday #32-64, 0 refills (may Rx more PRN). Notes to pharmacy: bill Medi-Cal FFS, ICD 10 F11.20, X DEA # ___.
- **If no X-waiver:** Use loading dose up to 32 mg SL for long effect and give rapid follow up (<72 h).
- **Dispense naloxone** from the ED (not just prescribed): e.g., naloxone 4 mg IN spray #2.
- **Document** Opioid Withdrawal and/or Opioid Use Disorder as a diagnosis.

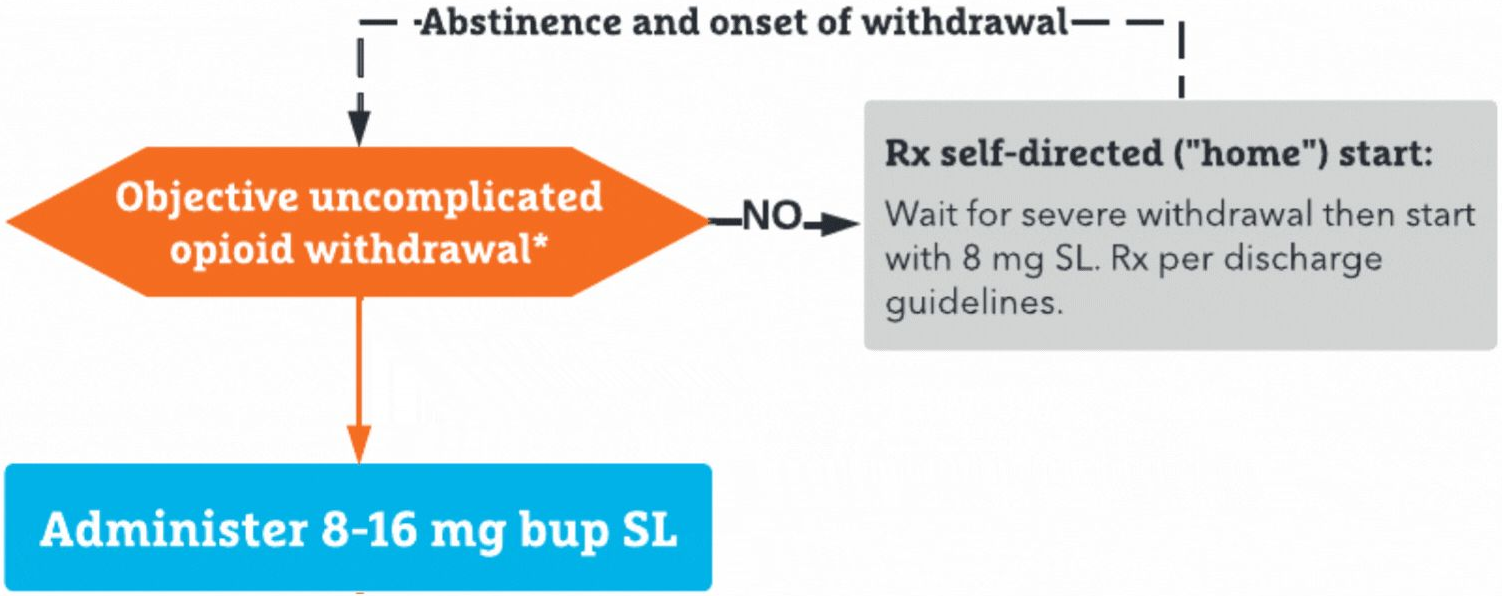
Need Help?

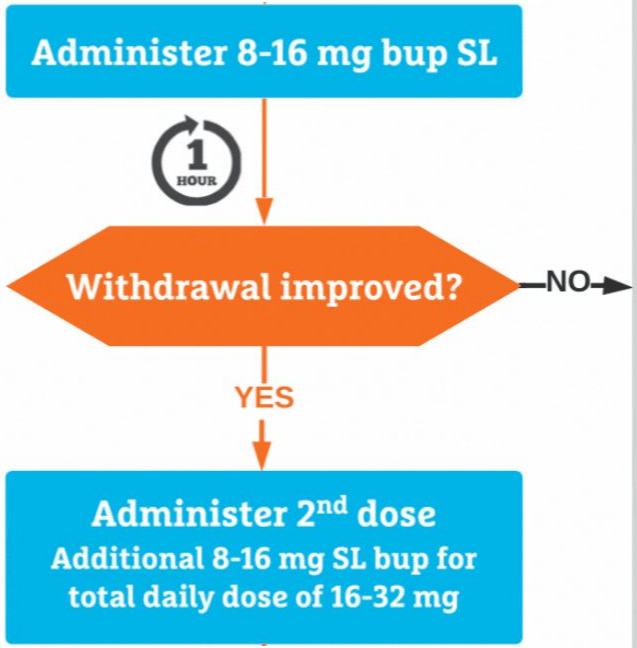
California Only
CA Poison Control (24/7)
(800)222-1222

National Clinician
Consultation Center
Substance Use Warmline
M-F 6 am-5 pm
Voicemail 24 hrs, 7 days
(855)300-3595

View or download on your device




Abstinence and onset of withdrawal
Objective uncomplicated opioid withdrawal*
NO
Rx self-directed ("home") start:
Wait for severe withdrawal then start with 8 mg SL. Rx per discharge guidelines.
Administer 8-16 mg bup SL



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If sudden/significant worsening, consider precipitated withdrawal: See box below.

Discharge

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- **If no X-waiver:** Use loading dose up to 32 mg SL for long effect and give rapid follow up (<72 h).
- **Dispense naloxone** from the ED (not just prescribed): e.g., naloxone 4 mg IN spray #2.
- **Document** Opioid Withdrawal and/or Opioid Use Disorder as a diagnosis.

What if the patient is interested in treatment, but not in withdrawal yet?

Patients can
self-start on bup!

Studies show pt's self-rating for withdrawal ≥ COWS.

Instructions mimic hospital start.

Safe, effective option.

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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!

Call or text your Navigator for help at _____

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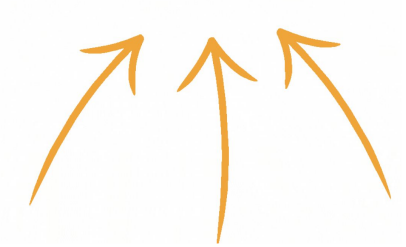
CA Bridge Model

Revolutionizing the System of Care

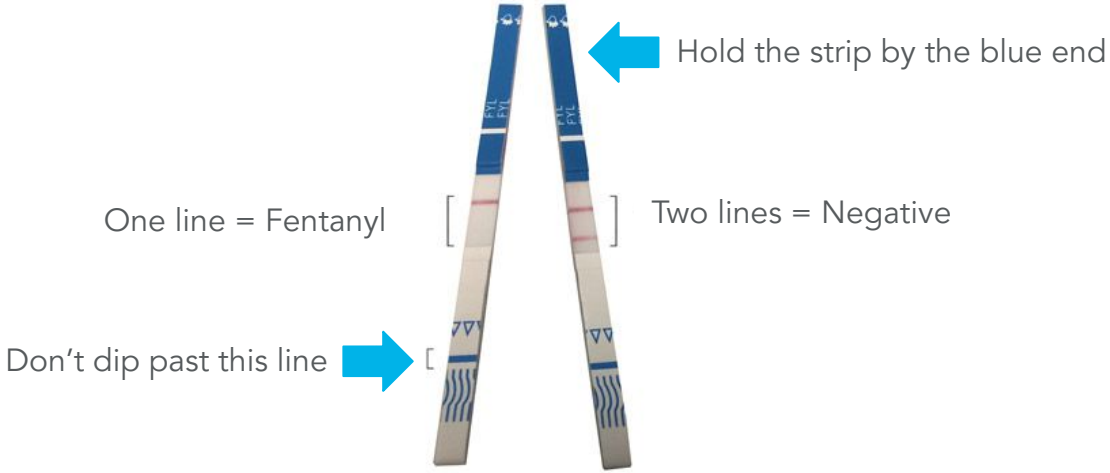
Low-Barrier Treatment

Connection to Care and Community

Culture of Harm Reduction

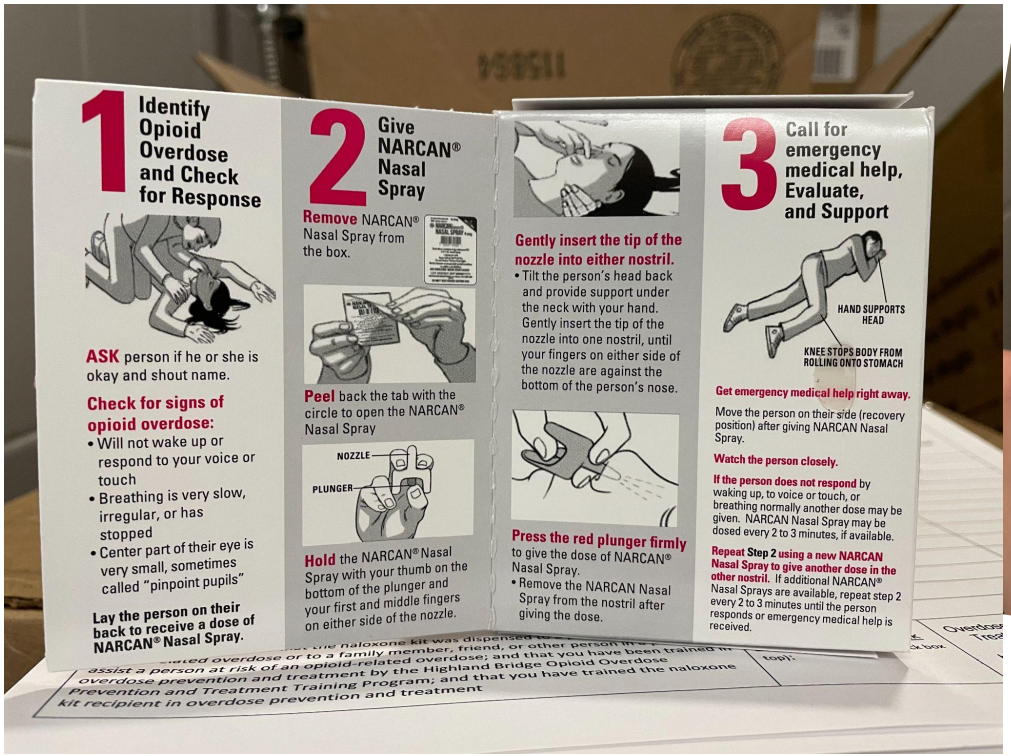


Harm Reduction:
Fentanyl Test Strips

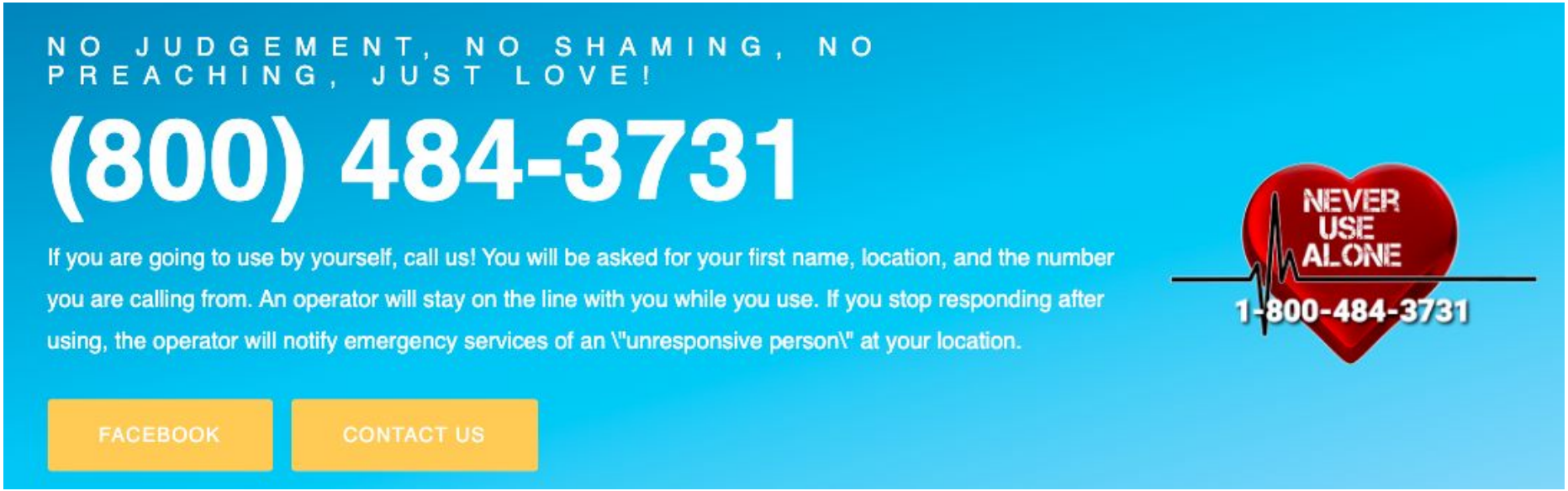


- *Help identify unintentional fentanyl in drugs*
- *Caution: High concentrations of meth can cause false positive*

Harm Reduction: Naloxone



Harm Reduction:
Never Use Alone

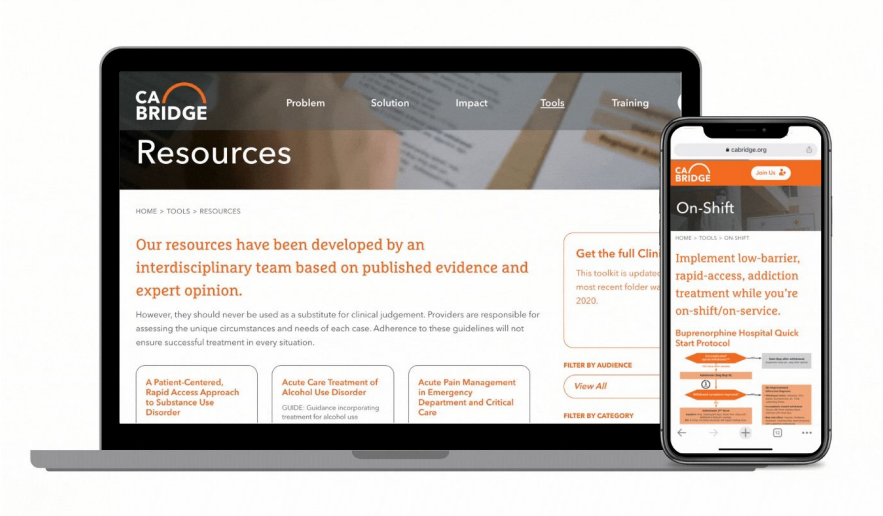


www.neverusealone.com

Harm Reduction:
Safe Injection Practices

- If possible, don't inject! Choose smoking, snorting, ingesting.
- Clean first with alcohol swabs
- Do not reuse or share needles or syringes
    - Use *sterile* equipment
    - Give info for syringe exchange programs
- Public health screening – HIV, HepC
- Check out Harm Reduction Coalition for more!

CA Bridge Resources



Visit our website for resources and more www.cabridge.org