ANTHC Clinical ECHO Series

Approved Provider Statements:

ANTHC is accredited by the Washington State Medical Association to provide continuing medical education for physicians.

ANTHC is approved as a provider of nursing continuing professional development by the Montana Nurses Association, an accredited approver with distinction by the American Nurses Credentialing Center's Commission on Accreditation.

AKPhA is accredited by the Accreditation Council for Pharmacy Education as a provider of Continuing Pharmacy Education.

Contact Hours:

ANTHC designates this Live Activity for a maximum of 1 *AMA PRA Category 1 Credit(s)* ™ per session. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ANTHC designates this activity as meeting the criteria for one nursing contact hour credit for each hour of participation up to a maximum of 1 hour(s)/session.

The Alaska Pharmacists Association (AKPhA) is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. Through a Joint Providership, ANTHC and AKPhA designates this pharmacist activity for a maximum of 1 hours(s) per session. To receive CE credit, participants must be included in attendance record of facilitator/virtual format moderator with the NABP e-profile number including MM/DD birthdate, and complete the evaluation or post session survey. CPE credit will be posted to the online CPE Monitor System within 60 days of activity completion. CPE credit is offered at no charge to ANTHC/SCF employees and AKPhA members. Fees may apply to participants not affiliated with either organization.

Approved for 1 CHAP CE

Conflict of Interest Disclosures:

All Presenters and Conference Planners for this activity do not have any relevant relationships or conflict of interests to disclose.

Requirements for Successful Completion:

To receive CE credit be sure you are included in attendance record as directed by the facilitator/session moderator, and complete the course evaluation or post session survey.

For more information contact Jennifer Fielder at jlfielder@anthc.org or (907) 729-1387

Conflict of Interest Disclosure

- Nothing to disclose

Special Considerations for Buprenorphine

ANTHC Addiction ECHO Series

Sarah Spencer, DO, FASAM

4/8/2021

Objectives

- Participants will demonstrate knowledge of proper dosage for patients
- Participants will demonstrate understanding of the timing and procedure to administer buprenorphine and manage common side effects
- Participants will understand how to advise patients on the appropriate formulation of buprenorphine

Buprenorphine Pharmacology

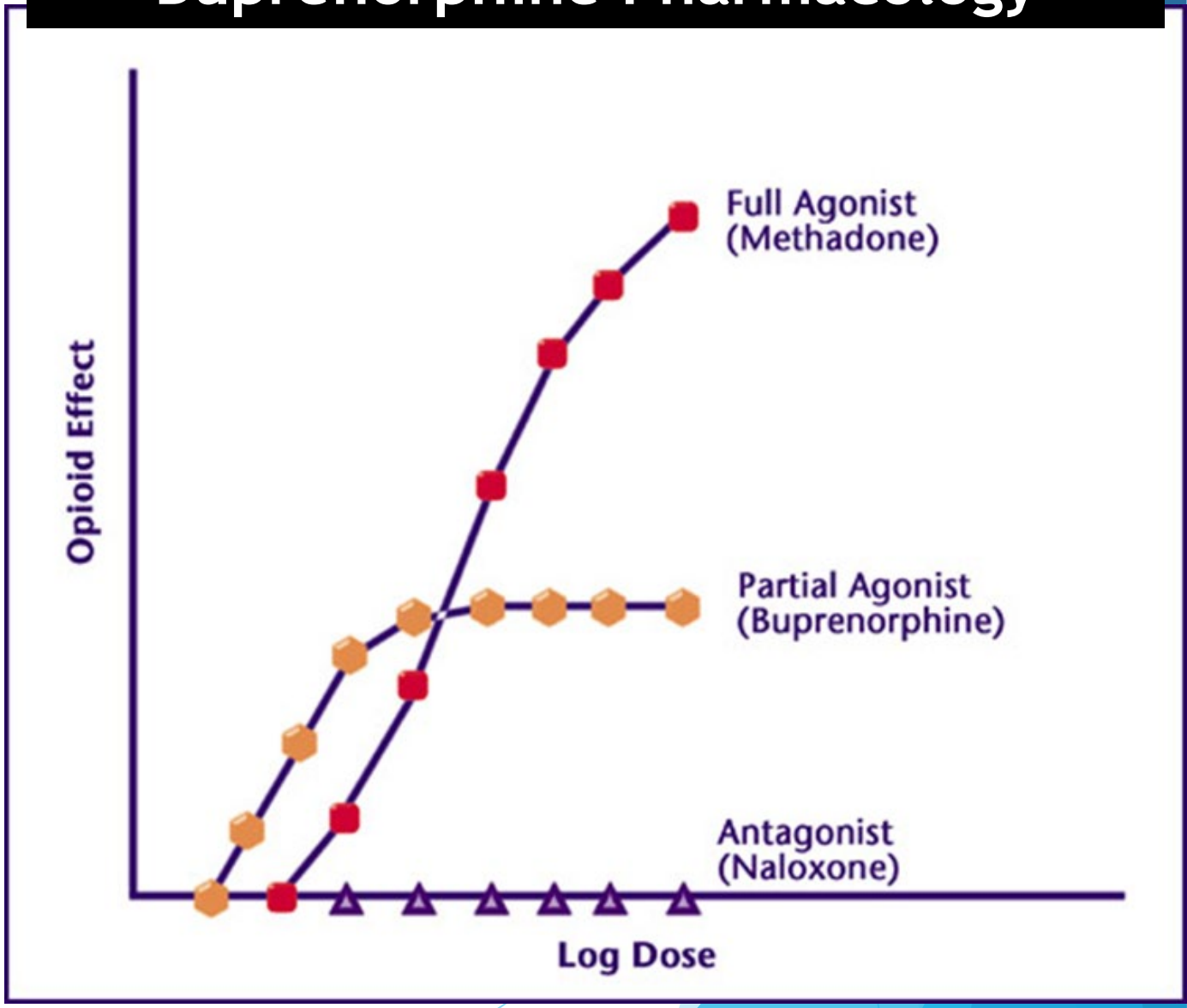
Binds very tightly to opioid mu receptors blocking other opioids

Partially stimulates the mu receptors to relieve craving and withdrawal without causing intoxication

Has a ceiling effect which makes it harder to abuse (taking more does not have more effect)

It stays on the receptors for a long time (half life about 30 hours)

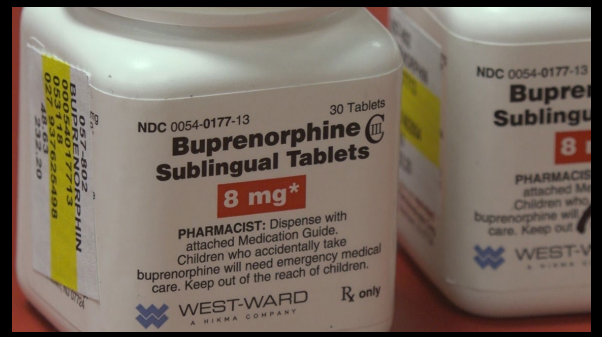
It doesn't cause much respiratory suppression (safer than other opioids)



FORMULATIONS OF BUPRENORPHINE

Probuphine® (buprenorphine implant) Ⅲ

6 mo implant (=8 mg)



Buprenorphine SL tab (for pregnancy, 2 & 8mg)

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

Buprenorphine/naloxone Sl tabs (generic/brand)

Monthly Buprenorphine SQ depot injection

IV Buprenorphine

(Transdermal and Buccal Buprenorphine products used for chronic pain (Butrans/ Belbuca) are general considered too low dose to be used in MAT for OUD)

CHOOSING THE APPROPRIATE FORMULATION OF BUPRENORPHINE

Plain buprenorphine tablets (mono-product)

- Limited usage due to increased IV misuse potential.
- Pregnancy/breastfeeding?? (combo product is OK)
- Naloxone allergy (rare)
- Uninsured (lower cost)

Buprenorphine/naloxone strips and tablets (combo product)

- Naloxone has no clinical effect, only an IV abuse deterrent
- Most common form used

SQ XR Monthly Buprenorphine (Sublocade)

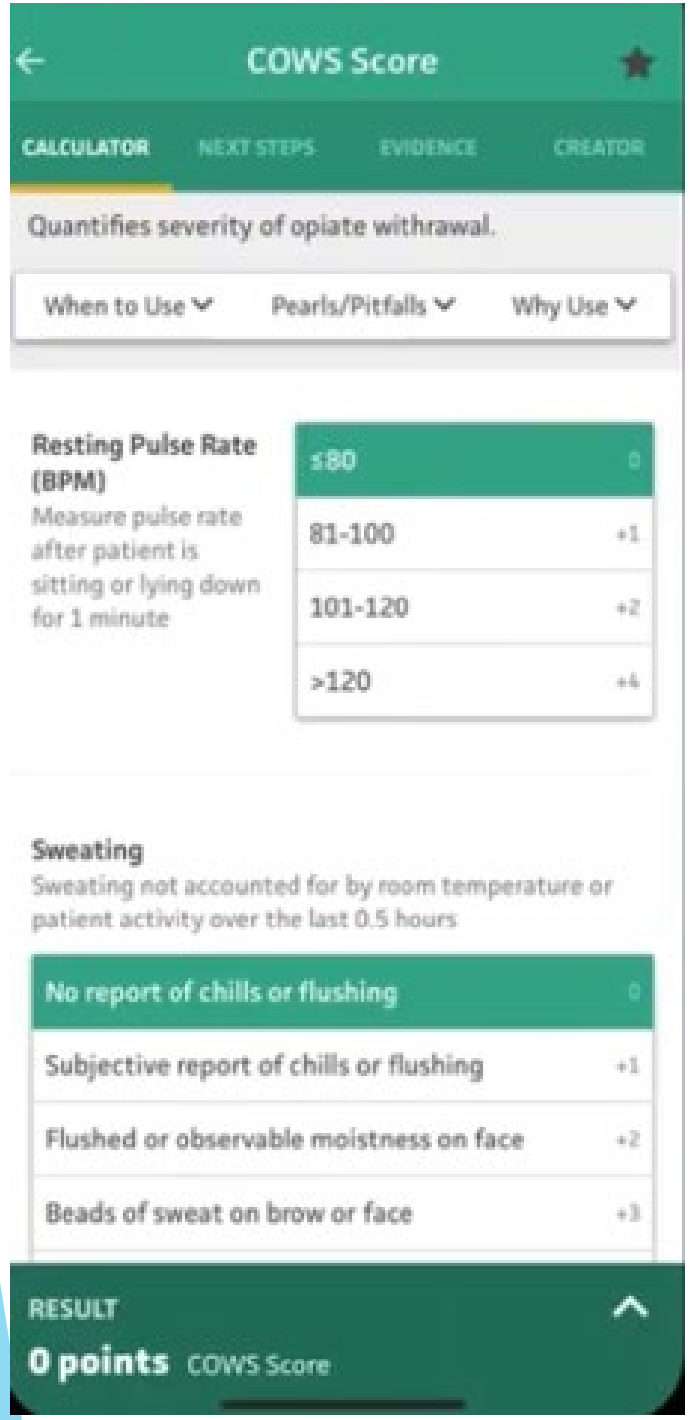
- Highest dose of buprenorphine
- Lasts longer than a month
- Useful in patients with medication compliance concerns, diversion concerns or limited access to pharmacy/monitoring

WHEN TO START BUPRENORPHINE

Wait until COWS score 8-12 (2-3 symptoms of withdrawal)
12-24 hours after last dose of heroin or short acting opioids
24-36 hours after last dose of long-acting opioids
36-72 hours after last methadone dose (<30 mg/day)

How to avoid precipitated withdrawal:

The best way to avoid this condition is through patient education. The patient should be informed, prior to the induction appointment, of what precipitated withdrawal is and how they can avoid it. The patient who understands that under reporting last use puts him/her at high risk for rapid and intense onset of withdrawal syndrome, is more likely to accurately report last use."[25]



COWS Clinical Opiate Withdrawal Scale

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

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

How to administer sublingual buprenorphine

•Moisten mouth

•Place the tablet/strip under the tongue until it is dissolved. Do not chew or swallow it

•If you take 2 or more tablets/strips at a time, place all the tablets in different places under the tongue at the same time.

•If this is uncomfortable, place 1 tablet/strip at a time under the tongue and repeat the process until all the tablets have been taken.

•Do not eat or drink anything for 20 minutes

How to administer sublingual buprenorphine

- OK to cut strips
- Use of crushed tablets under tongue likely OK (DOC studies)
- Designed to dose once per day
- Most patients prefer to split dose bid/tid (especially for pain)

Alaska Patient Guide for Beginning Buprenorphine Treatment

Before you begin, you want to feel *moderately sick* from your withdrawal symptoms

It should be at least:

- ✓ **12 hours** since you used heroin/fentanyl
- ✓ **12 hours** since you snorted pain pills (OxyContin)
- ✓ **16 hours** since you swallowed pain pills

You should feel **at least three** of these symptoms:

- ☐ Restlessness
- ☐ Heavy yawning
- ☐ Enlarged pupils
- ☐ Runny nose
- ☐ Body aches
- ☐ Tremors/twitching
- ☐ Chills or sweating
- ☐ Anxious or irritable
- ☐ Goose bumps
- ☐ Stomach cramps, nausea or diarrhea *(vomiting not necessary)*

Once you're ready, follow these instructions to start on the medication:

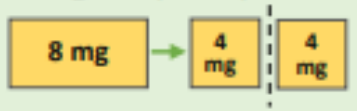
Day 1

8-12 mg of buprenorphine

Dosing depends on how early on the first day you start

Most people feel better the first day after 8-12 mg

4 mg of buprenorphine =



A full film is 8 mg so you need to cut the film in half

Step 1

Take 1st dose

4 mg

Wait 1 hour total

- Put the strip under your tongue. Do NOT swallow.
- Keep it there until fully dissolved (about 15 min.), then wait for 45 minutes.
- Do NOT eat, drink or talk at this time.

Step 2

Still feel sick? Take 2nd dose

4 mg

Wait 2 hours

- Most people feel better after two doses or 8 mg.
- If feeling more withdrawal symptoms after the 1st dose, you will likely feel better after the 2nd dose.

Step 3

Still uncomfortable? Take 3rd dose

4 mg

Wait 2 hours

- Take the 3rd dose only if needed.

Step 4

Still uncomfortable? Take 4th dose

4 mg

STOP

- Stop after this dose.
- Do NOT exceed 16 mg on Day 1.

Do NOT mix buprenorphine with alcohol, benzodiazepines – such as Xanax, Ativan or Valium – or other sedatives.

Day 2

8-12 mg of buprenorphine

- Most people feel better the second day using 8-16 mg of buprenorphine.
- If you wake up on day 2 and feel fine, take the same dose you took on day 1.
- If you wake up on day 2 feeling withdrawal, take the same dose you took on day 1, plus an additional 4 mg.
- If you feel withdrawal symptoms more than 2 hours after your initial dose, you can take an additional 4 mg every 2 hours *up to a maximum of 16 mg/day*.
- Repeat your total day 2 dose each day until your next follow-up appointment.

http://dhss.alaska.gov/dbh/Documents/Resources/initiatives/ebp/MAT-ED-Patient-Guide.pdf

Buprenorphine Induction and Dosing Pearls

<u>The right dose is the dose that controls cravings</u>

Start at low dose for tramadol/kratom

Typical effective dose range is 12-24 mg **(16+mg most effective)**

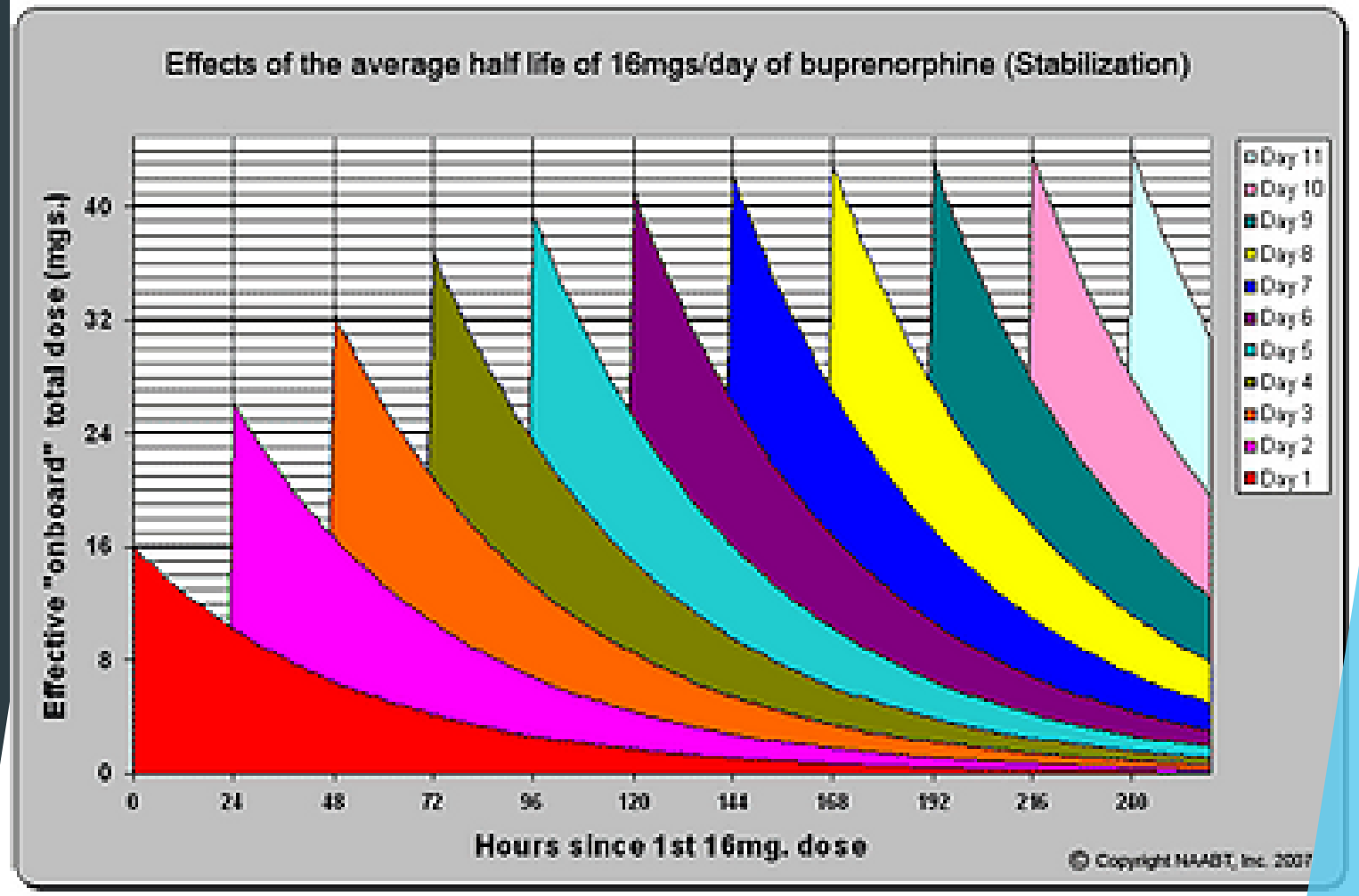
- At higher end doses consider more diversion monitoring (strip counts)
- At low doses watch closely for opioid use (not a full blockade)

Split dosing (up to TID) may be beneficial in patients with chronic pain

It is normal for cravings to increase and dose increases to be needed during stressful events or change in living situation/health

For acute pain can increase to 8 mg q6h (32 mg/day)

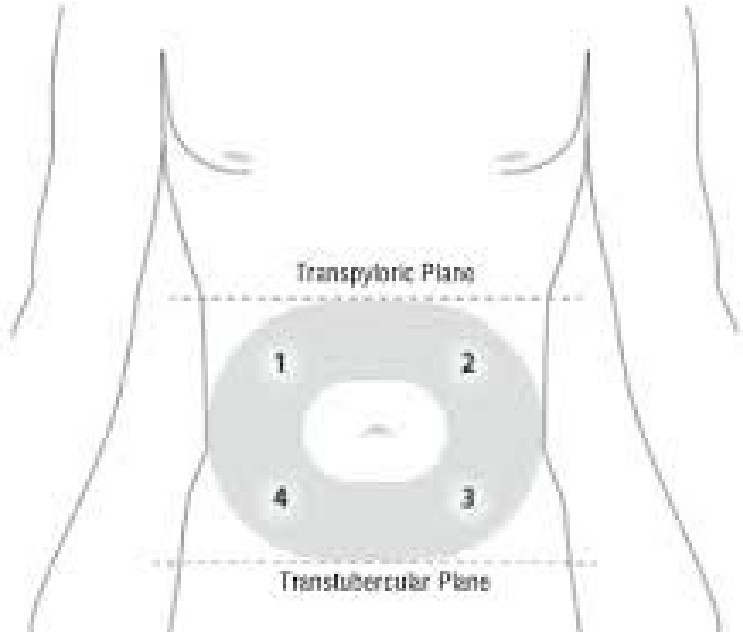
- It takes about 5 days to reach steady state of serum drug levels

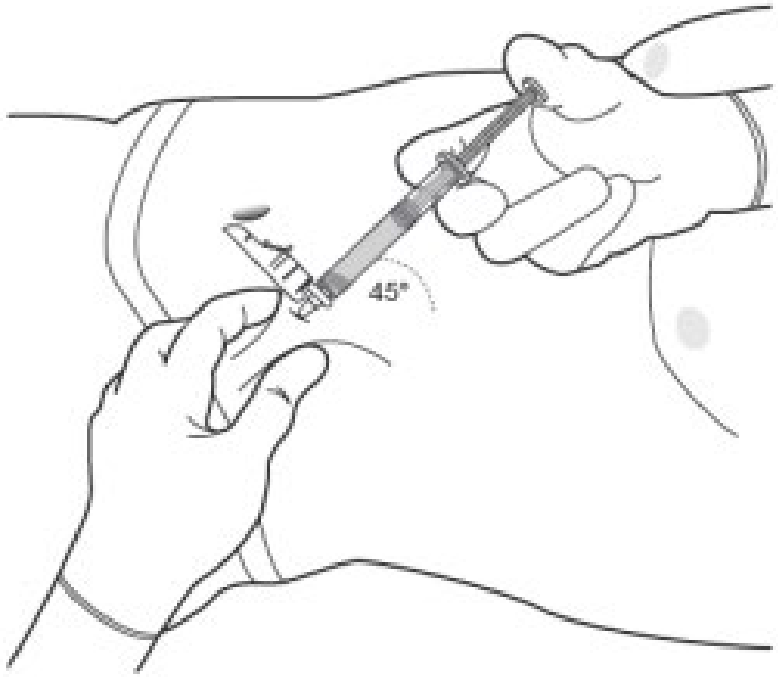


Starting Monthly XR Buprenorphine (XR-BUP) (Sublocade)

Sublocade

Figure 4





7 days SL-BUP 8+mg/day

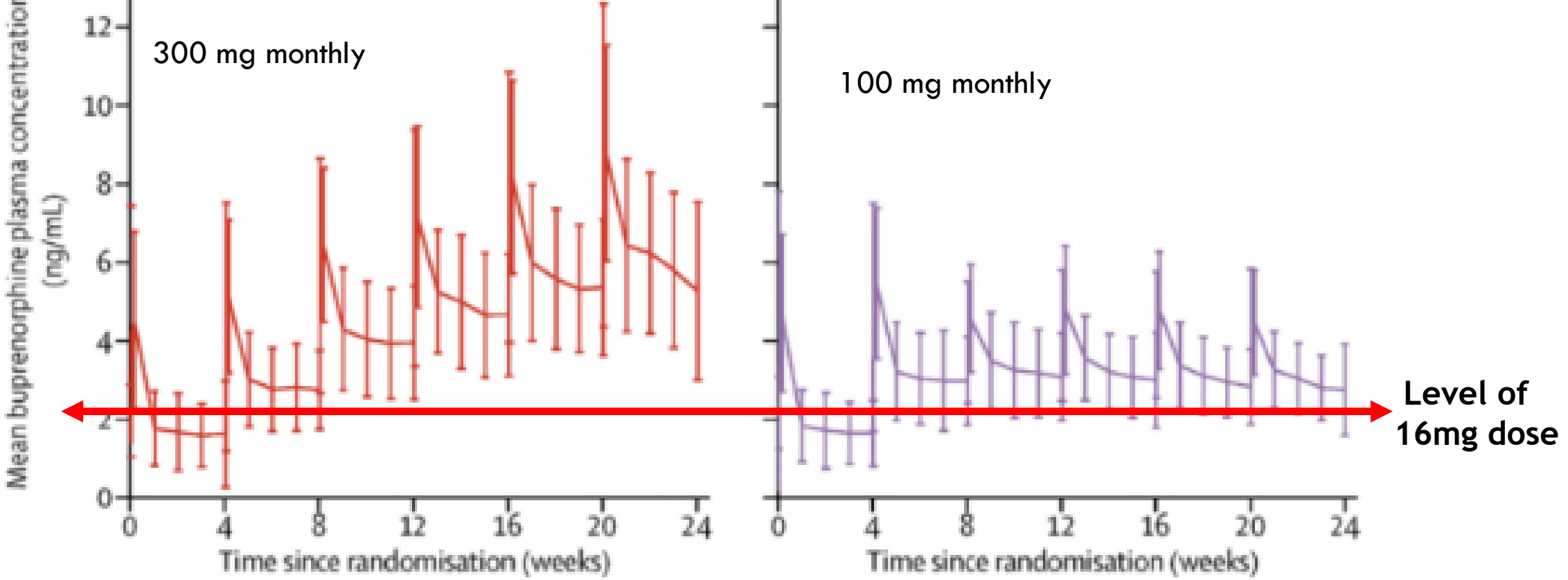
300 mg XR-BUP injection

Loading dose

300 mg XR-BUP injection

100 mg XR-BUP injection

Maintenance dose



BUP-XR provides sustained plasma levels > 2–3 ng/mL, which are needed to block opioid agonist effects thus having an advantage over transmucosal BUP, which might provide this level of blockade only part of the day

Haight et al., Lancet 2019

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 Sublocade, 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

XR-BUP may be started **sooner than 7-day stabilization period**, may be **empirically kept at 300mg monthly**, and may require **supplemental SL BUP** during early treatment months

Real-world outcomes with extended-release buprenorphine (XR-BUP) in a low threshold Bridge clinic

Alyssa M. Peckham, PharmD, BCPP
Laura G. Kehoe, MD, MPH, FASAM
Jessica R. Gray, MD
Sarah E. Wakeman, MD, FASAM

The authors have no relevant conflicts of interest or financial disclosures.

MGH 1811 MASSACHUSETTS GENERAL HOSPITAL

AMERICAN SOCIETY OF ADDICTION MEDICINE FOUNDED 1954 ASAM

Consider giving injection prior to 7 days of SL-BUP in high-risk patients who have mod-high levels of opioid tolerance and have tolerated buprenorphine 16mg/day well in the past

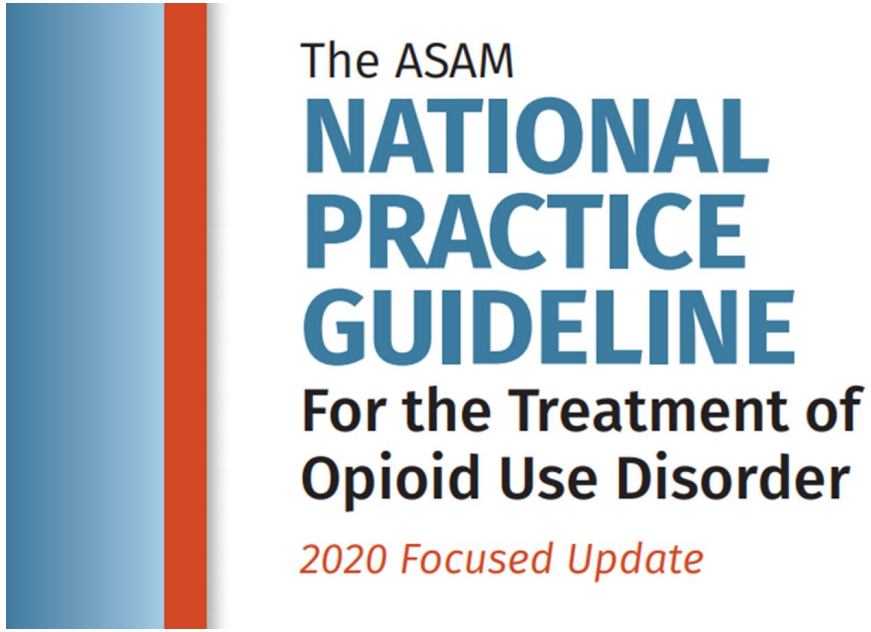
Managing side effects

Nausea is very common, is not a sign of allergy and usually resolves within 2 week. Consider giving all patients Rx for ondansetron. Switching to a different brand can also help.

Supportive medications for opioid withdrawal management:

- Myalgias: NSAIDS and Acetominophen
- Muscle spasms: Tizanidine
- Nausea: Ondansetron or Promethazine
- Restlessness and sweating: Clonidine
- Anxiety and rhinorrhea: Hydroxyzine
- Insomnia: Trazodone

References



https://www.asam.org/Quality-Science/quality/2020-national-practice-guideline

http://dhss.alaska.gov/dbh/Pages/Initiatives/EvidenceBasedPractices/MAT.aspx

Case Presentation

Project ECHO's goal is to protect patient privacy

- To help Project ECHO accomplish that goal, please only display or say information that doesn't identify a patient or that cannot be linked to a patient.
- **References: For a complete list of protected information under HIPAA, please visit www.hipaa.com**

Thank you for joining us today.
We appreciate your participation and hope to see you at the **NEXT ECHO Session:**

April 22, 2021 from 12pm -1 PM

You will be receiving a follow up survey that we hope you will complete to help us improve. If you are requesting continuing education credits, you will be required to complete the survey to receive your CEs.


quyana • gunalchéesh • háw'aa • way dankoo • igamsiqanaghhalek • baasee' • tsin'aen • 'awa'ahdah • qagaasakung • maasee' • dogidinh