Buprenorphine in the Hospital Setting

Substance Use Disorder in Hospital Care ECHO

DATE: September 23, 2020 PRESENTED BY: Amelia Goff MSN, NP in Addiction Medicine

Disclosures

- **Speaker:** Amelia Goff has nothing to disclose

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Learning Objectives

- At the conclusion of this session, participants will be able to:
  - Describe how buprenorphine works
  - Recognize signs of opioid withdrawal
  - List steps for buprenorphine induction
  - Describe how to avoid precipitated withdrawal
  - Identify key considerations for hospital-based buprenorphine induction

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Why use medication for opioid use disorder (MOUD)?

- Medication is life saving treatment
- Methadone and buprenorphine treat acute withdrawal
- MOUD reduces mortality by over half
- People are more likely to reclaim their lives (work, relationships, etc.)

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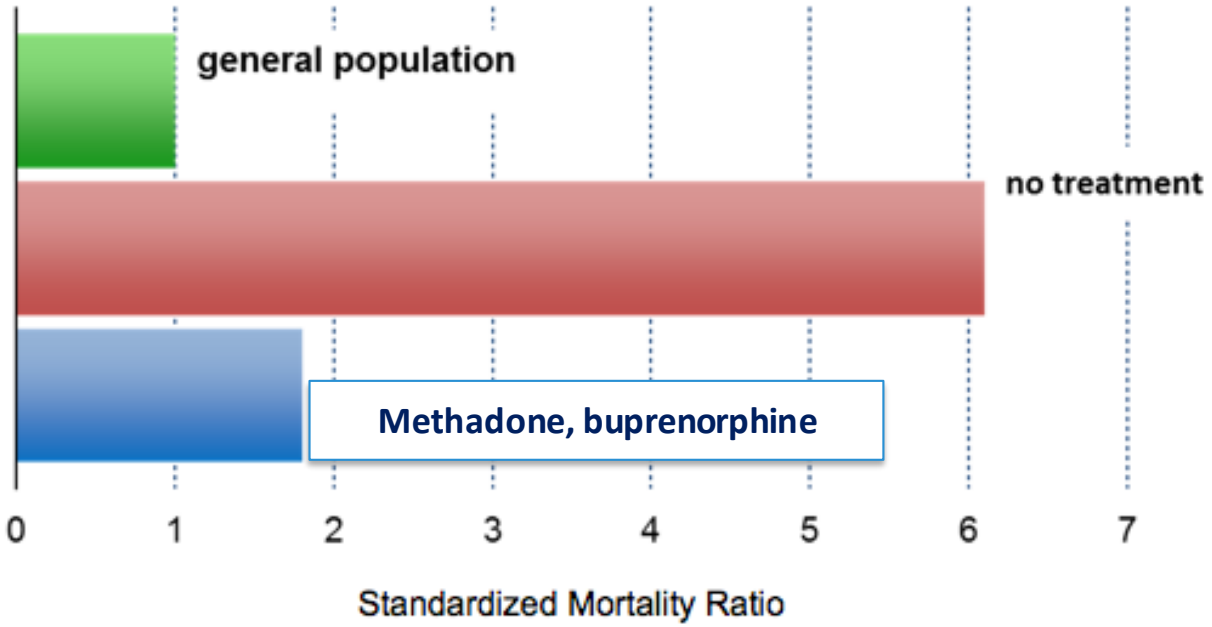
Medication for Opioid Use Disorder (MOUD) Reduces Mortality

Death rates:



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

PCSS Providers Clinical Support System

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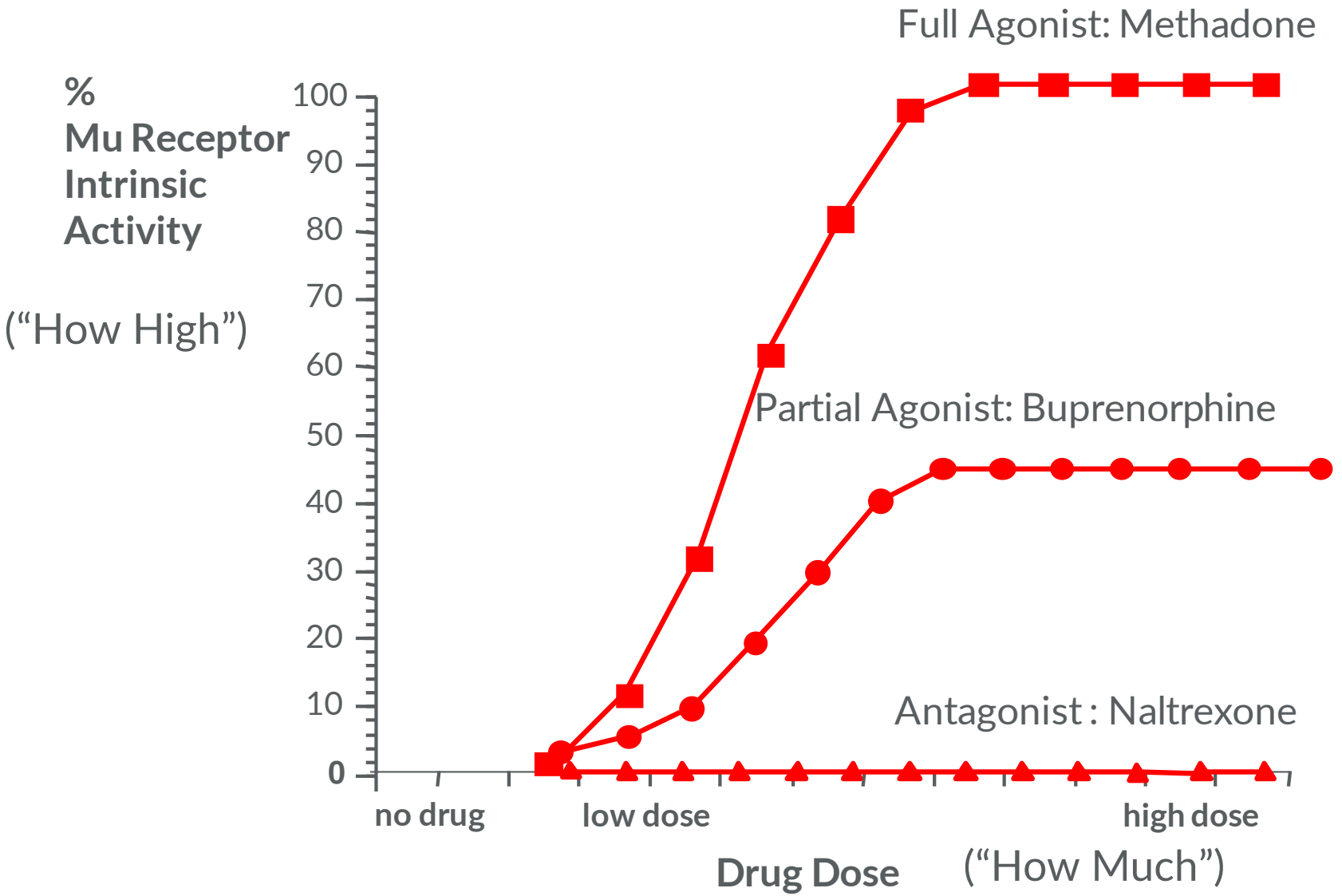
Pharmacotherapy for Opioid Use Disorder



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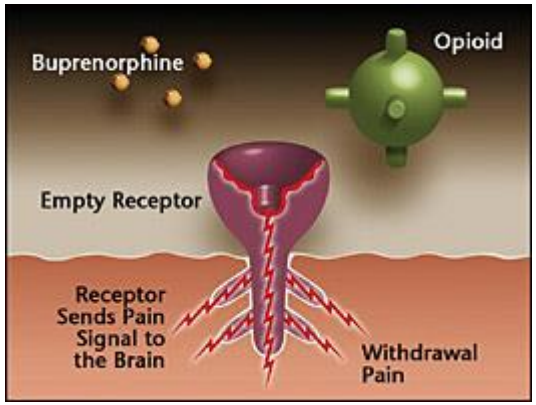
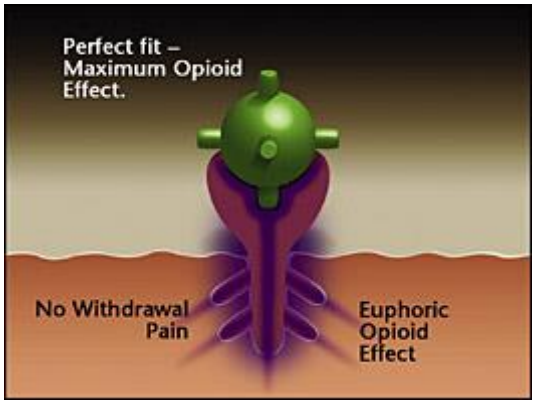
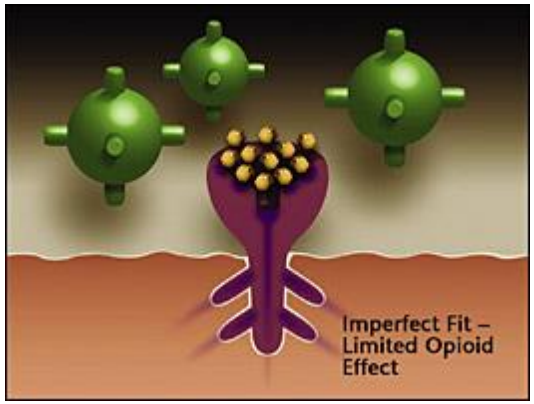
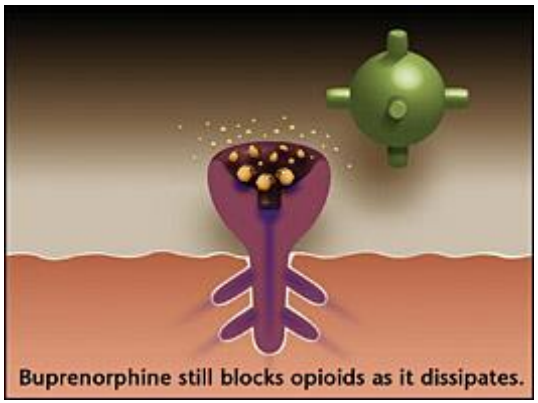
How Does Buprenorphine Work?
High affinity, partial opioid activity at mu receptor site









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Buprenorphine/naloxone
(4:1 combination)

- Partial opioid agonist
  - Decreases overdose risk
- Naloxone inactive unless injected –then precipitates withdrawal
  - Decreases misuse risk
- Sublingual
  - Can be administered once daily (simple, adherence)
  - Up to three times/day dosing

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Major Features of Buprenorphine

Safe medication

- **minimal respiratory suppression and no respiratory arrest when used as prescribed**
- ***Cognitive and psychomotor effects are negligible***
- ***Nearly all fatal poisonings involve multiple substances***

Slow dissociation from mu receptor

Long acting

- ***Half life approx 24-36 hours***

Effective for pain

- ***Analgesic effect can be improved if split and dosed TID***
- ***20-30x more potent than morphine***

SAMHSA, 2018
Orman & Keating, 2009

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Prior to starting buprenorphine

- Diagnose Opioid Use Disorder or acute opioid withdrawal

- Counsel patient on
  - Benefits and alternatives
  - Induction timing
  - Precipitated withdrawal risk
  - How to properly take buprenorphine
- Obtain urine hcg for patients at risk for pregnancy

Additional considerations:

- Severe liver impairment (AST/ALT >5x normal) requires close monitoring
- Alcohol or benzodiazepine use may limit community treatment options

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Timing of Buprenorphine Induction to Avoid Precipitating Withdrawal

- Should be in at least mild-to-moderate opioid withdrawal in order to begin induction
  - The more severe the withdrawal, the greater the relief
- Withdrawal symptoms typically adequate for induction
  - 12-24 hours after last dose of a short-acting opioids like heroin
  - 24-72 hours after last dose of long acting opioids like methadone

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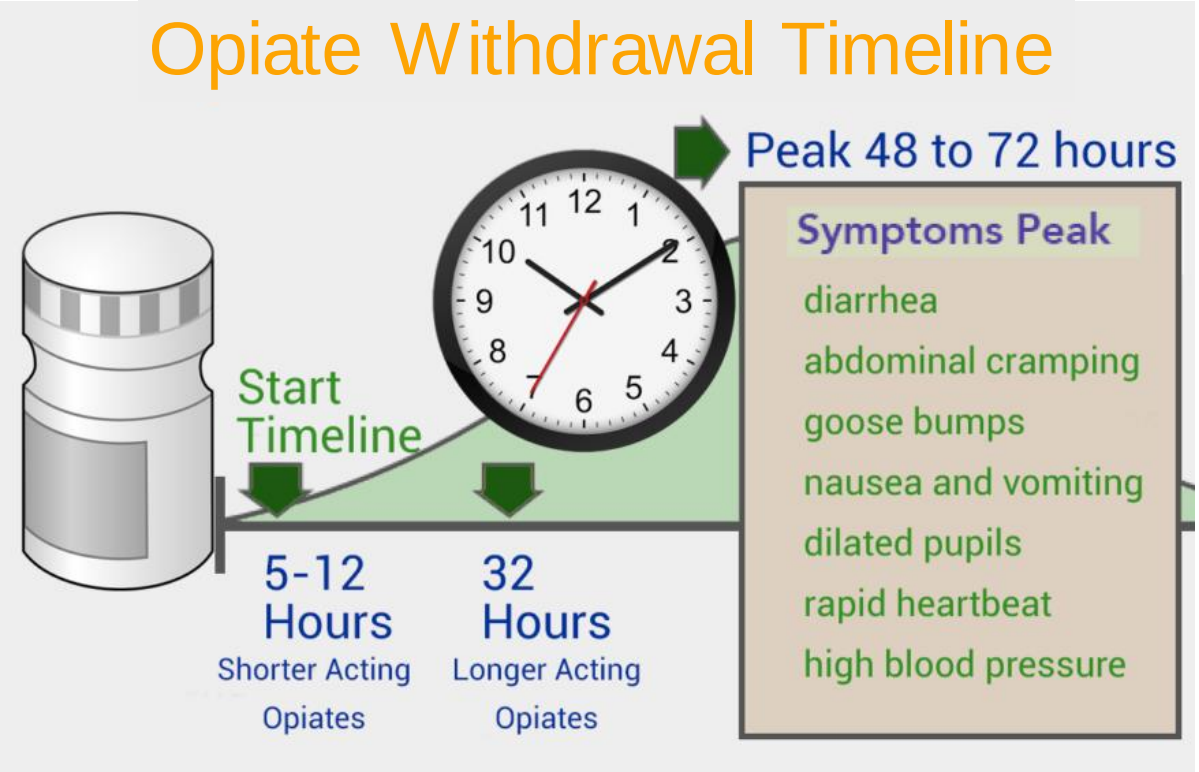
Opioid Withdrawal: Measured by COWS (Clinical Opioid Withdrawal Scale)
Mild 5-12; Moderate 13-24; Moderately severe 25-36; Severe >36



- Muscle aches
- Sweats
- Agitation
- Nausea
- Runny nose
- Tachycardia
- Insomnia
- Dilated pupils
- Yawning

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Criteria for Giving First Dose Buprenorphine

- If short acting opioids:
  - COWS >11-12 or
  - No opioid use in 3 days *and* clinical UDS negative for opioids

- If transitioning from long acting opioids (eg methadone)
  - Consider COWS > 11-12

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Adjunct medications for Opioid Withdrawal

Medication	Opioid withdrawal symptom
Clonidine 0.1-0.2 mg po q 6 hours prn	Restlessness, anxiety
Tizanidine 2-6 mg po q 6 hours prn	Muscle cramps, all over body pain
Hydroxyzine 25-100 mg po q 6 hours prn	Anxiety, restlessness
Trazodone 25-100 mg po qhs prn	Insomnia
NSAIDS, tylenol- consider scheduling	Pain
Zofran 4-8 mg po q 6 hours prn	Nausea, vomiting
Loperamide 2-4 mg po q 4-6 hours prn	Diarrhea

- Discuss with patient what are most bothersome symptoms and what has worked for them in the past
- Consider scheduling meds if appropriate

Donroe, CMAJ 2016

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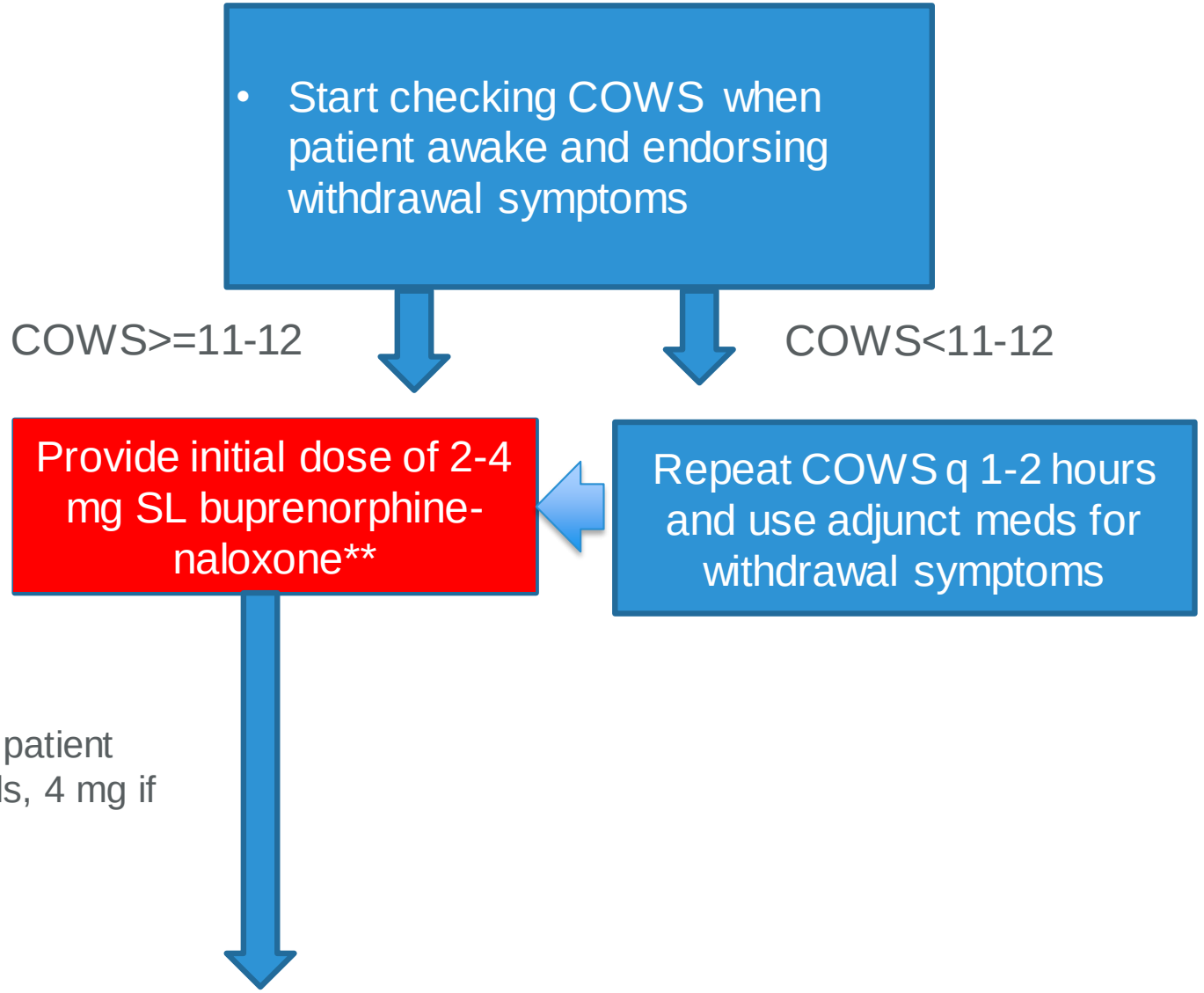
Buprenorphine Induction – first dose



**2 mg dose if patient uses opioid pills, 4 mg if uses heroin

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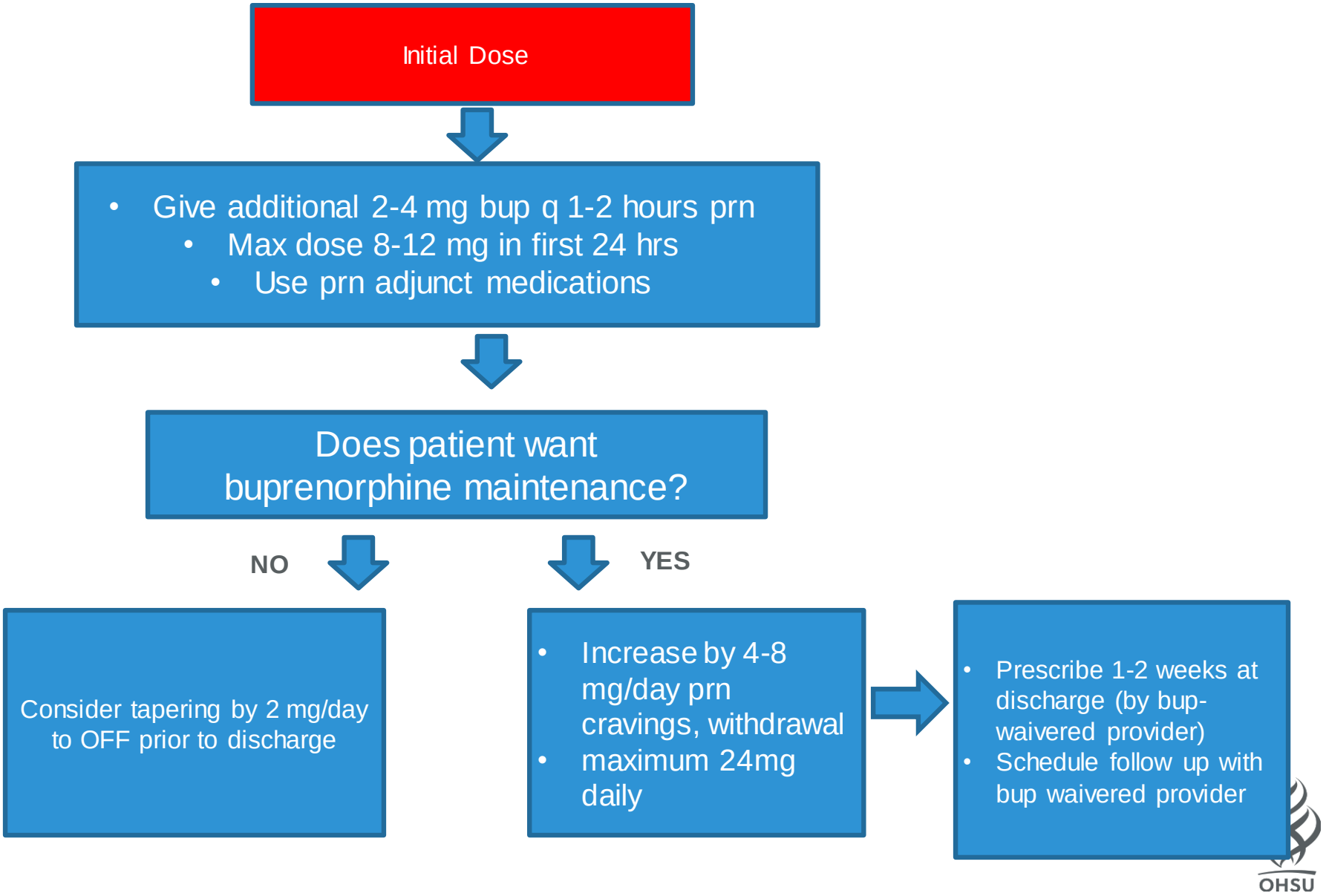
Buprenorphine Induction Continued



Suggested Induction & Stabilization Dosing Schedule

	Suggested Dosing*	Maximum Dose
Day 1	2-4mg (wait 45 min) + 4mg x 2, if needed	12mg
Day 2	Day 1 dose + 4mg if needed (single dose)	16mg
Day 3	Day 2 dose + 4mg if needed (single dose)	20mg
Day 3-28	May increase dose 4mg per week, if needed (single dose)	24mg

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BUP/NX Dose Administration

- Directly observe all doses placed under tongue
- **Don't need to swallow saliva**
- Keep under tongue for minimum of 10 minutes and until tablet completely dissolved
- Check to make sure tablet dissolved

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Recognizing Precipitated Withdrawal

- Occurs within ~30 minutes after first buprenorphine dose
- Looks like worsening opioid withdrawal
- It is not subtle

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What if patient has precipitated withdrawal?

1. **Push forward with buprenorphine induction (more bup on mu receptors will make patient feel better)**

2. Use non-opioid adjunct medications to manage withdrawal symptoms.

3. If severe, can give low-dose benzodiazepines to alleviate withdrawal symptoms.

If patient prefers, can stop or wait longer for the next dose of buprenorphine

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Buprenorphine Microinduction : taking withdrawal out of the equation

An approach to starting buprenorphine that introduces bup gradually, slowly binding to receptors so patient's don't experience withdrawal and can continue full agonists (e.g. dilaudid, oxycodone).

Example schedule:

- **Day 1: bup/nlx 0.5 mg (1/4 tab)**
- **Day 2: 0.5 mg BID**
- **Day 3: 1 mg BID (1/2 tabs)**
- **Day 4: 2 mg BID**
- **Day 5: 4 mg BID**
- **Stop or taper full agonists**

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Buprenorphine Key Points

- Buprenorphine is a life-saving and SAFE medication for opioid use disorder that can be used to treat acute withdrawal and for maintenance treatment or MOUD
- Traditional Induction requires patients to be in withdrawal
- Inductions require teamwork and communication among patient, nurse, pharmacist, medical provider
- Pathways to treatment after hospitalization are important

Practices that you can integrate starting today

- If you're not yet waivered – sign up for a Buprenorphine waiver training
- Identify withdrawal and treat (with buprenorphine and/or adjunct medications)
- Utilize the IMPACT RN buprenorphine fact sheet
  - Real-time support for ward nurses
- Utilize CA Bridge Quick start tool

Thank You

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