OUD FOR THE HOSPITALIST

Ankit Arora, MD
Assistant Professor, Hospital Medicine
Addiction Medicine Consult and Educational Service (ACES)
University of Kentucky

FACULTY DISCLOSURE

I have no financial disclosures

LEARNING OBJECTIVES

- Recognize the treatment gap for OUD.
- Identify the barriers to MOUD prescribing.
- Feel more comfortable prescribing MOUD.
- Develop a framework to deescalate inpatient substance use.
- Reduce risk by deploying Harm reduction strategies.

EXPECTED OUTCOME

- Increase provider engagement in management of OUD.
- Narrow OUD treatment gap.
- Improve patient outcomes.

OUD

WHAT IT IS

ASAM DSM5: “Chronic, relapsing disease of the brain characterized by compulsive opioid use that leads to clinically significant distress or impairment, even when the individual wishes to stop or it negatively impacts their life”.

WHAT IT IS NOT

NOT a moral failure.

IMPACT

- Prevalence: 3.7% US adult population diagnosed with OUD in 2022. ~ 10 million adults.
- 760,000 inpatient admissions and 66 million outpatient emergency department (ED) visits annually. Annual Cost of care estimated at $95.4 billion.
- Highest rates between age 25-54. Opioid use disorder costs businesses, governments, and households almost $1 trillion per year.

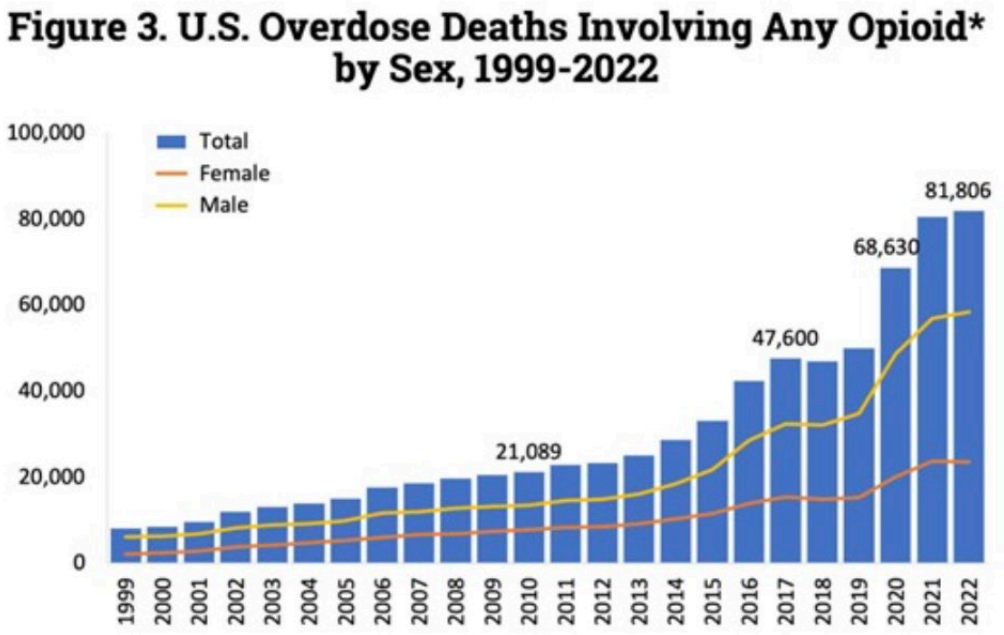
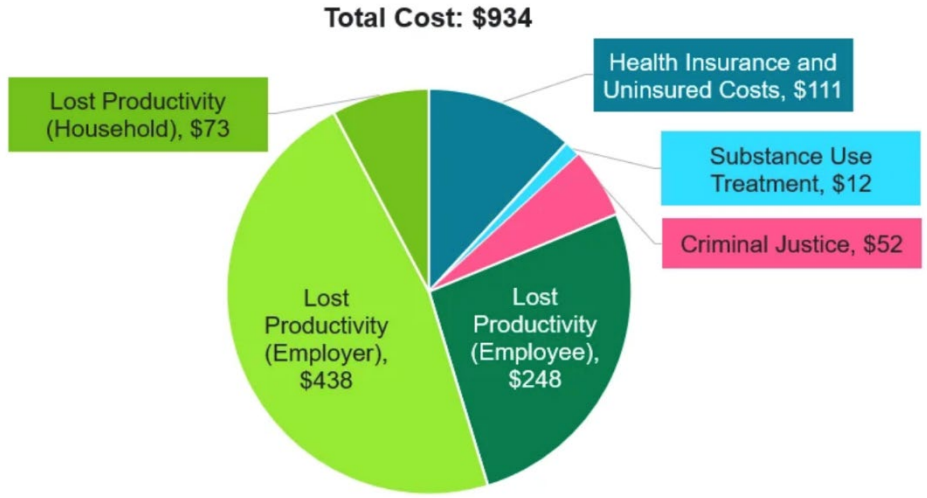


Figure 2. Annual National Cost of OUD Excluding Patient Burden, 2024 ($ Billion)



KENTUCKY

- In 2019, Kentucky was among the top ten most highly affected states by the opioid crisis, with a drug overdose age-adjusted mortality rate of 32.5/100,000, approximately 50% higher than the national rate (21.6/100,000).
- In 2023, 1,984 Kentuckians lost their lives to drug overdose, a rate of 45.9 deaths per 100,000 residents.
- Doctors write enough prescriptions for 79.5% of residents to have one.

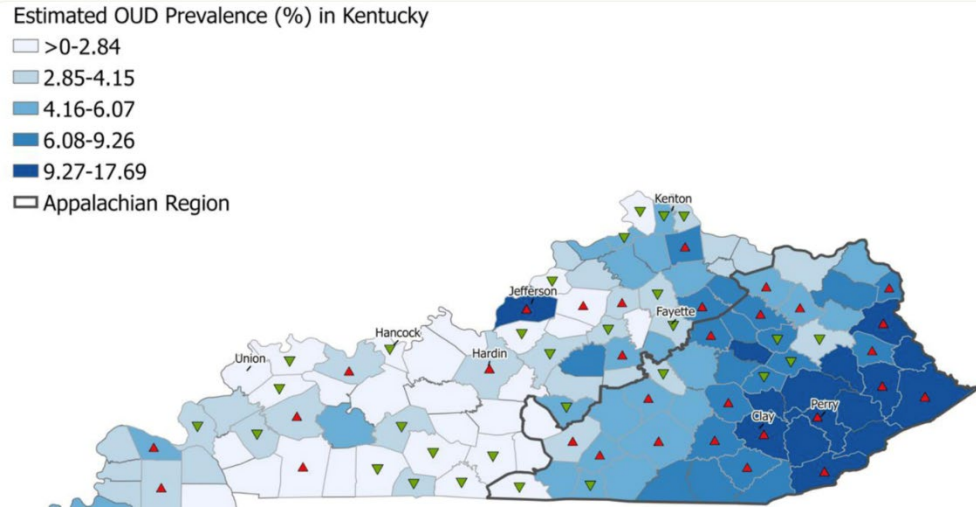


Figure 4. Projected case rates of OUD across US states, 2024

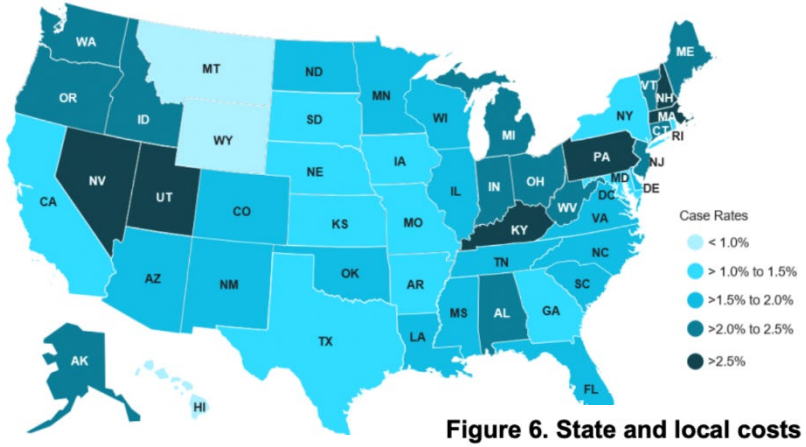
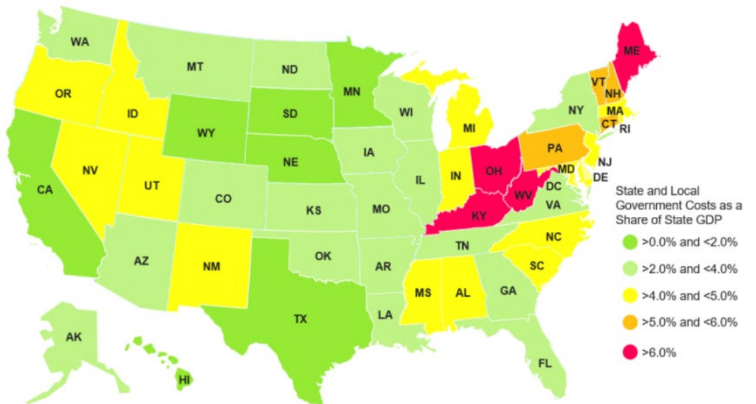
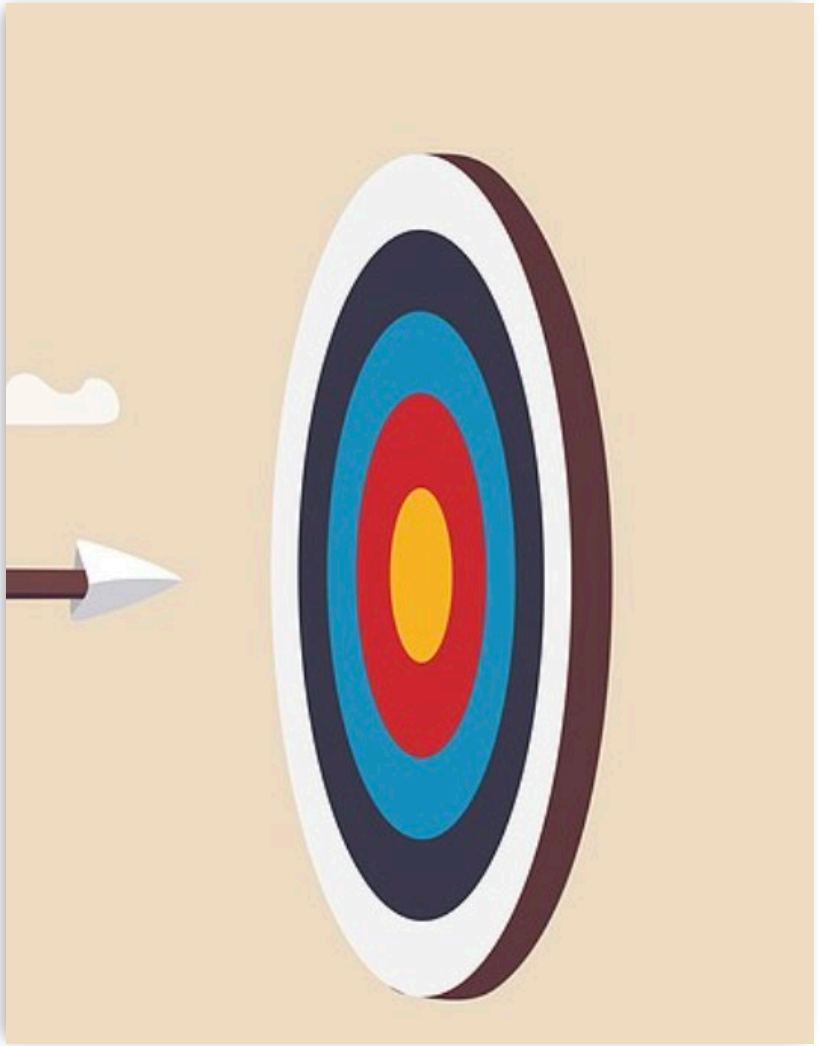


Figure 6. State and local costs of OUD as a percentage of state GDP, 2024



PURPOSE OF MOUD

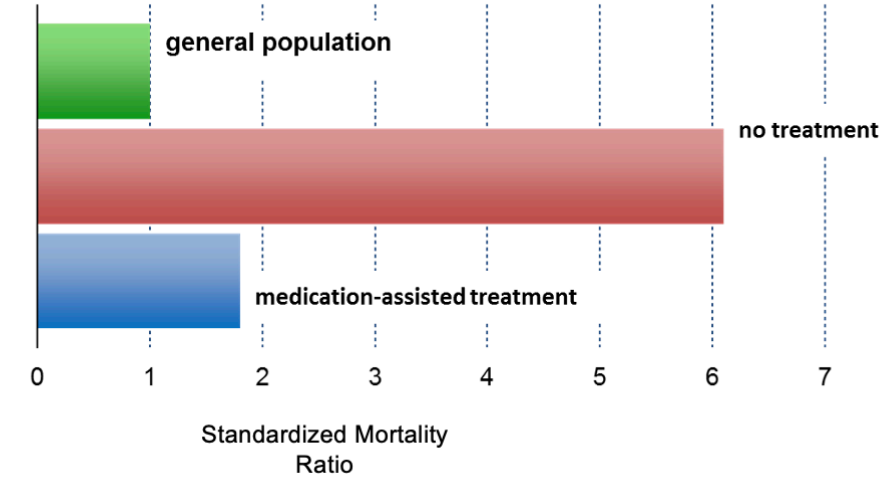
- Reestablish of balance in the reward pathways in the brain away from substances.
- Control symptoms of opioid withdrawal.
- Reduce opioid cravings.
- Block the reinforcing effects of ongoing opioid use.
- Promote and facilitate patient engagement in recovery oriented activities.
- Safe and effective during pregnancy and breastfeeding. (Category C)



EFFECTS OF MOUD

- Reduce mortality.
  - All cause and opoid related mortality.
- Reduce associated morbidity.
  - Infectious complications.
  - Transmission of blood borne viruses.
  - Incarcerations.
  - Significantly decrease the cost of care.
- Increase retention in addiction treatment.
- Improve general health, well being, and quality of life.

Death rates:



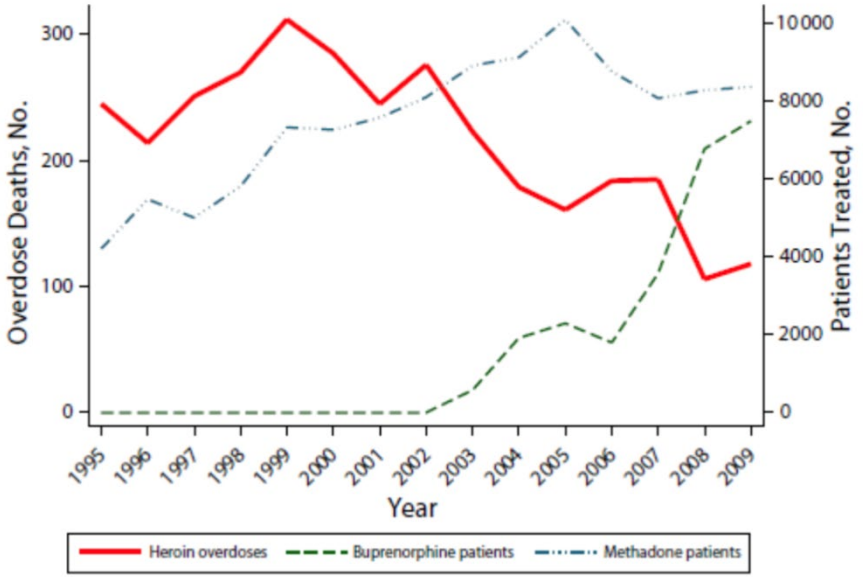


FIGURE 1—Heroin overdose deaths and opioid agonist treatment: Baltimore, MD, 1995–2009.

PRACTICE GAP

The delay between disease onset and initial treatment receipt is estimated to be 4 to 7 years

BARRIERS TO MOUD

- Stigma.
- Concerns about medication diversion.
- Inadequate profession Education and Training-Health workforce/law enforcement.
- Legal and Regulatory barriers.
- System fragmentation.

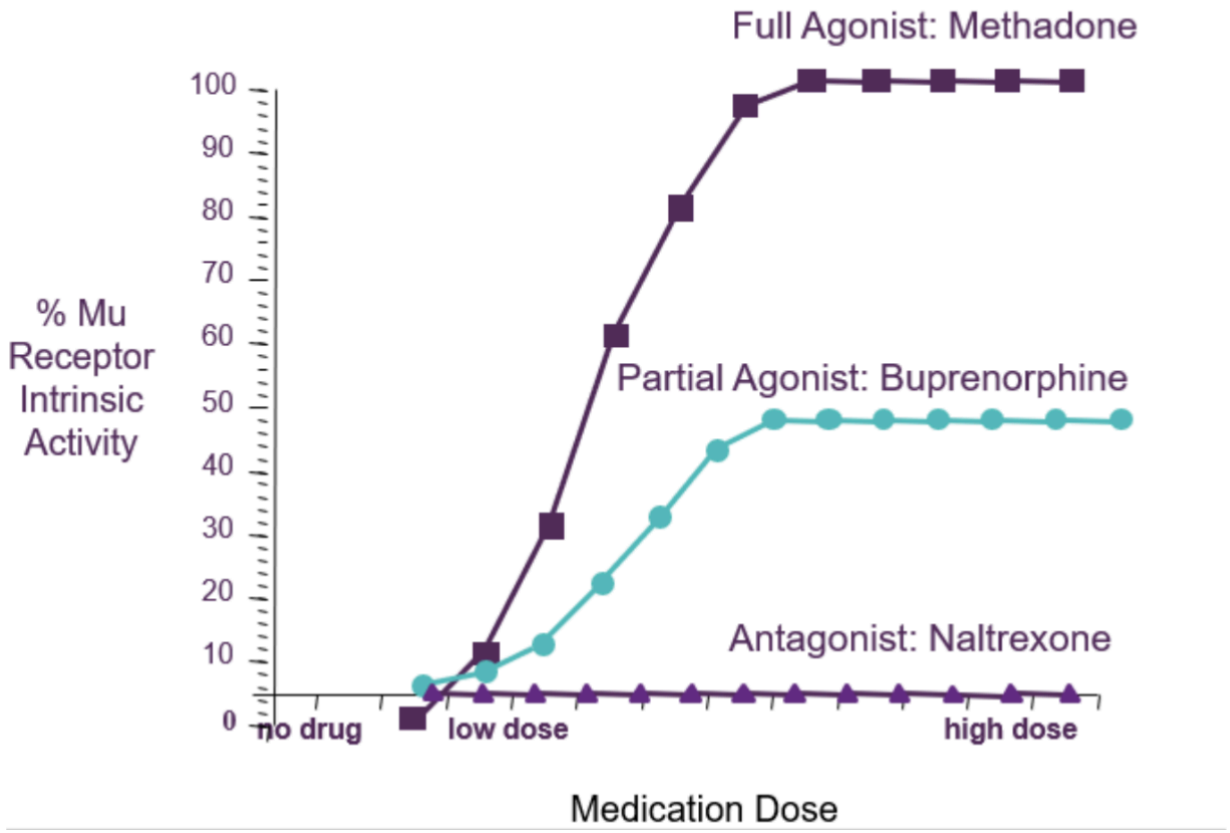
HOSPITALIST's ROLE

- Hospitalists on FRONT LINE against OUD.
- OUD is a Chronic treatable condition. There are effective, FDA-approved medications which are underutilized.
- MOUD increases engagement, retention and completion of care.
- MOUD decreases 30 day readmission rates, overall costs and all cause mortality.
- Prescribing does not require an Addiction Medicine or Psychiatry consult.
- Every step of our workflow is an opportunity to make an intervention.

MOUD INDICATED FOR

- Individuals with opioid use disorder.
- Individuals with opioid use disorder and chronic pain.
- Individuals with chronic pain with opioid misuse.
- Adolescents >16 years of age.
- Pregnant persons.
- Individuals involved with the criminal legal system.

MOUD: Options and Opioid receptor activity



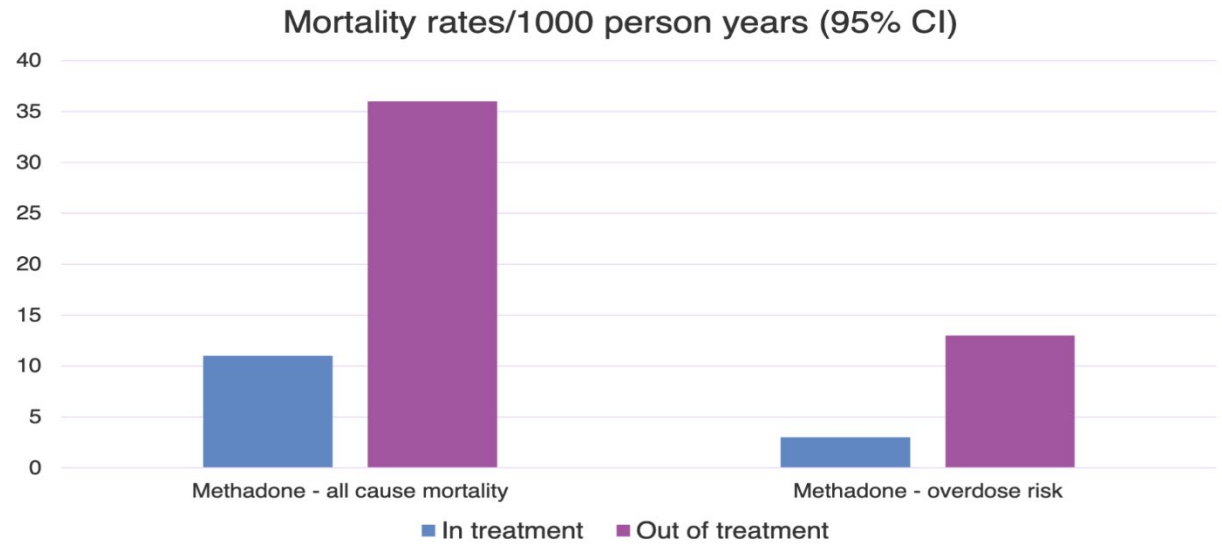
Methadone fully activates receptor with complex pharmacokinetics: risk of overdose during initiation

Buprenorphine has high receptor affinity and ceiling effect: risk of precipitated withdrawal with high potency synthetic opioids, must already be in opioid withdrawal before initiation

Naltrexone competitively binds to receptor with no opioid activity: need to be fully abstinent from opioids prior to initiation

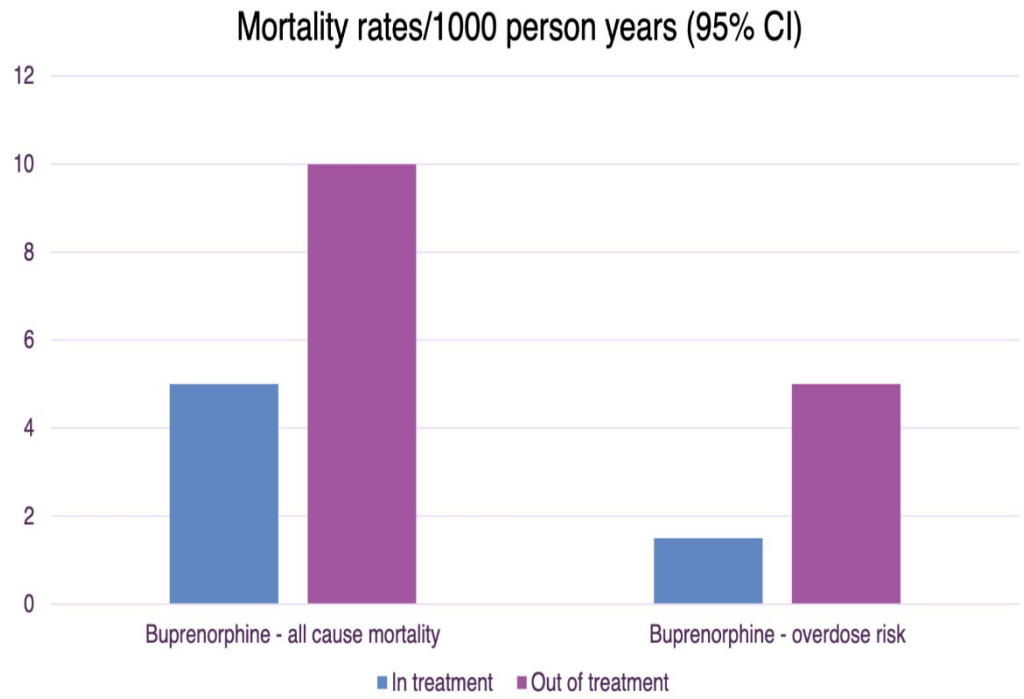
METHADONE

- >50 years of data support.
- Full agonist, variable half life.
- Once daily dosing.
- Clinical considerations:
  - Requires careful monitoring.
  - Multiple drug-drug interactions.
  - Prolongs QTc. EKG prior to dose titration.
  - Increased risk of mortality in first 2 weeks of treatment due to unique and complex pharmacokinetics.
  - Increased risk respiratory depression with concurrent use of other CNS depressants, and in patients with decompensated liver disease.
  - Dispensed in liquid form through Federally regulated Methadone clinics. Cannot be prescribed through Rx for indication of OUD.
  - Inpatient induction not recommend w/o dedicated Addiction service.



BUPRENORPHINE/NALOXONE

- FDA approved since 2002.
- Partial agonist, long half life.
- Available as transmucosal film or tablet. Once/twice daily dosing.
- Also available in LAI-B form for weekly, biweekly or monthly dosing.
- Clinical considerations:
  - Dispensed through Rx leading to easier and more widespread access.
  - Minimal to no effect on Qtc, much lesser drug-drug interactions.
  - Ceiling Effect with lower opioid overdose risk.
  - Preferred choice for most patients.
  - Risk of precipitated withdrawal.
  - Careful titration and preference of Mono product In patients with decompensated liver disease.
- Adios X Waiver! Everyone with a Schedule II DEA can now prescribe buprenorphine.



TRADITIONAL INDUCTION

Initiated when patient in mild-moderate withdrawals as ascertained by:

- Duration since last dose
- COWS >8-10

Short acting	>12h
Long acting	>24h
Methadone	>72h

Day 1: 4 mg-> Wait 1h-> Another 4mg (additional 4mg PRN for max 8-12mg on day 1).

Day 2: Total Day 1 dose in AM + 4-1 PRN x 2 for COWS >8 for max 16mg on day 2.

MICROINDUCTION

Day	Dose	Full Agonists
1	Buprenorphine 150mcg buccal BID	Continue full dose
2	Buprenorphine 300mcg buccal BID	Continue full dose
3	Buprenorphine 600mcg buccal BID	Continue full dose
4	Buprenorphine/naloxone 2mg/0.5mg SL BID	Continue full dose
5	Buprenorphine/naloxone 4mg/1mg SL BID	Continue full dose
6	Buprenorphine/naloxone 8mg/2mg SL daily	Last day if no ongoing acute pain
7	Buprenorphine/naloxone 12mg/3mg SL daily	None if no ongoing acute pain
8+	Dosing can be adjusted based on patient's needs	

Sample protocols developed by Dr. Laura Fanucchi and the University of Kentucky Addiction Consult and Education Service and adapted from Weimer (2020) and Wong (2021).

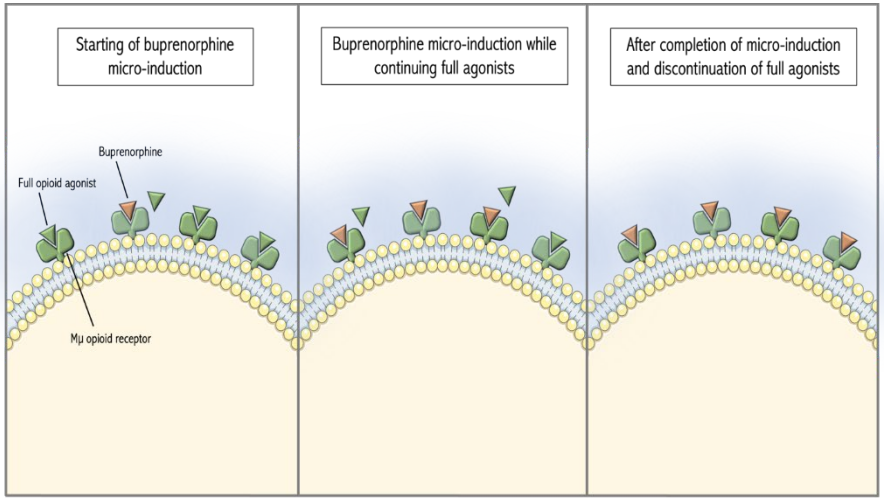


Figure 2: Activity at the mμ opioid receptor during buprenorphine micro-induction. The Figure was adapted from De Aquino and partly generated using Servier Medical Art, provided by Servier, licensed under a Creative Commons Attribution 3.0 unported license.[11]

NALTREXONE

- Opoid antagonist.
- Available in daily PO and LAI-N formulations.
- Clinical considerations:
  - Induction after atleast 7-10 days of complete abstinence. Risk of precipitated withdrawal.
  - High rates of non-adherence with PO therapy.
  - No mortality benefit. Best seen as second line therapy. Considered in patients in sustained remission, those unable to/not willing to take agonist therapy.
  - Can cause liver injury warranting interval Hepatic function panel checks.

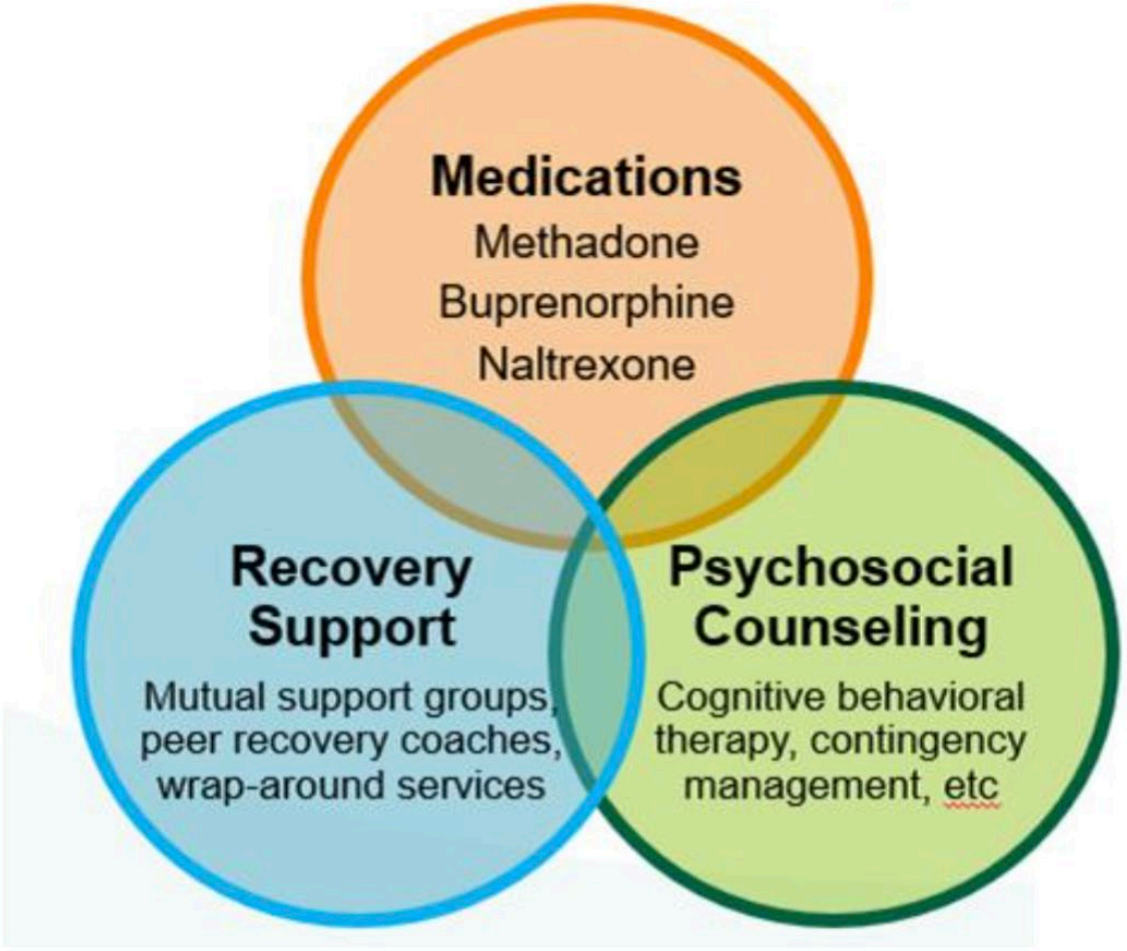
	Methadone	Buprenorphine	Naltrexone
Mechanism of Action	Full mu receptor agonist	Partial mu agonist	Mu receptor antagonist
Benefits for Withdrawal	Treats cravings and withdrawal		Does **not** treat withdrawal, minimal treatment of cravings
Mortality Benefits	Reduce all cause mortality Reduce opioid-overdose mortality		Has **not** been proven to reduce all cause mortality
FDA Approval for OUD	Treatment of OUD		Relapse Prevention

Source: Substance Abuse and Mental Health Services Administration. Medications for Opioid Use Disorder. Treatment Improvement Protocol (TIP) Series 63 Publication No. PEP21-

HOSPITALIST's MOUD CHECKLIST

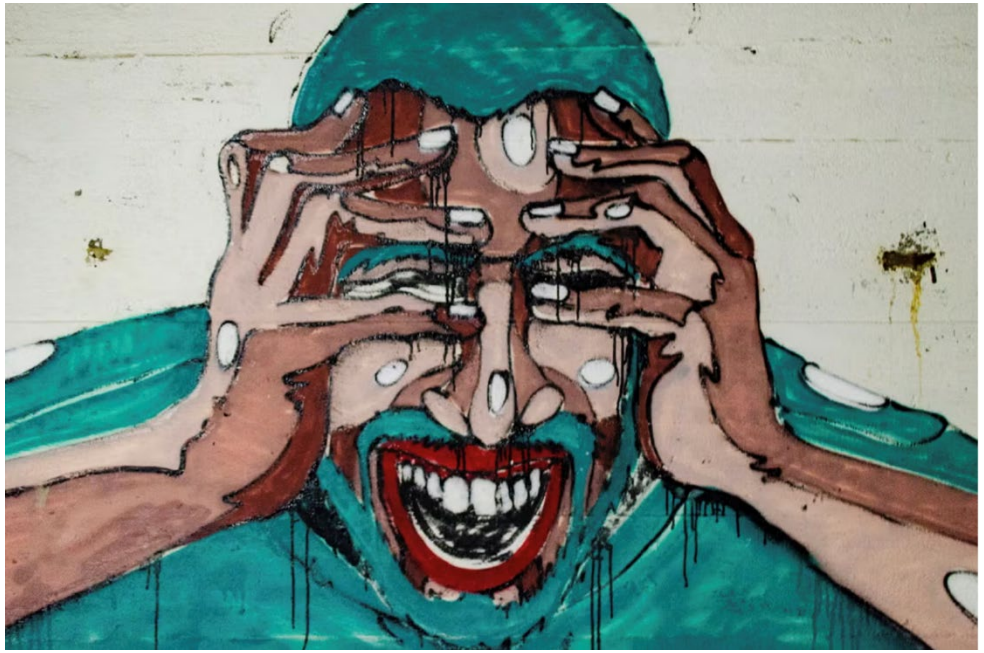
- Obtain relevant history, Check on respiratory status. Obtain UDS with reflex confirmatory testing, liver function testing and EKG. COWS scoring maybe considered.
- **Re Methadone:** Not on home med list. Confirm dosing with methadone clinic, Obtain Qtc. Resume methadone as appropriate. Ensure follow up with Methadone clinic prior to discharge. Cannot be prescribed at discharge. If possible, Consider avoiding weekend discharge.
- **Re Buprenorphine/naloxone:** Confirm dispense report and compliance. After UDS confirms presence, resume medication as appropriate. Consider mono component for decompensated liver disease. Consider LAI-B at discharge. Ensure adequate supply/follow up PTD.

CHRONIC DISEASE MANAGEMENT



IN-HOSPITAL SUBSTANCE USE

- Difficult time for patient.
  - Untreated pain/withdrawal.
  - Cravings.
  - Boredom.
  - Anxiety
  - Insomnia
- Stressful for all involved teams.



APPROACH

- Patient safety.
- Care team huddle, non stigmatizing discussion.
- Hospital policy/Care contract.
- Individualized approach.
- Opportunity to dispose substance/paraphernalia and engage in harm reduction.
- Risk vs benefits, consideration of administrative discharge as last resort for ongoing use.
- Hospital Resources

HARM REDUCTION

- Like people living with other chronic illnesses, people with opioid use disorder can have various goals and readiness for change.
- Harm reduction strategies are practical and essential for reducing morbidity and mortality associated with drug use and addiction.
  - Fentanyl test strips.
  - Check for STI's, Hepatitis panel and vaccination status.
  - Educate on clean needle use and Refer to Needle exchange programs.
  - Narcan (with refills) at discharge.
  - Screen for and Refer to Mental health specialists. Approximately two-thirds of people hospitalized for OUD also had a co-occurring psychiatric diagnosis.

WHEN ALL ELSE FAILS…

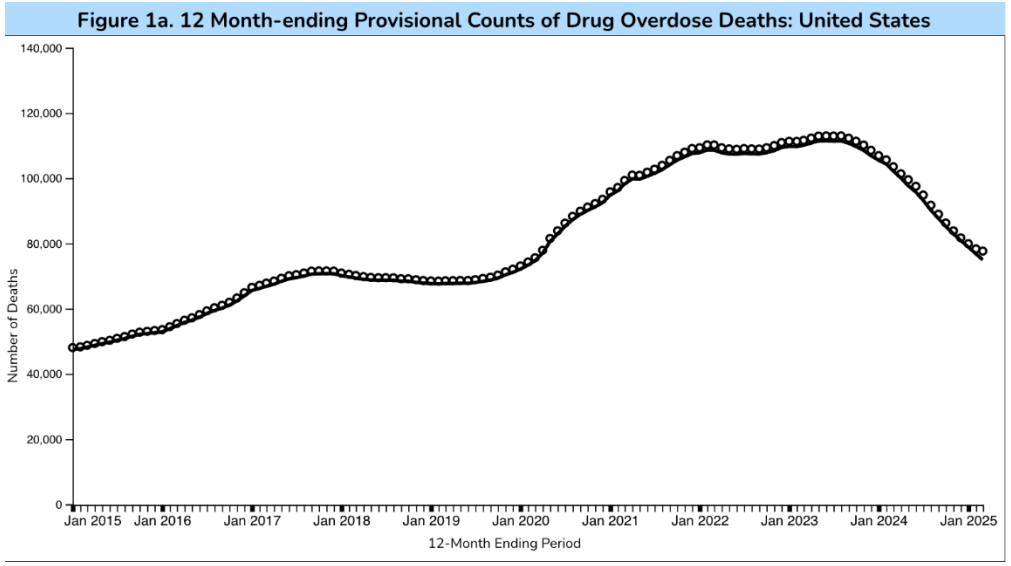
- Remain nonjudgmental and supportive.
- Provide naloxone.
- Keep the door open for future support and/or treatment.
- Provide syringe service program, recovery and peer support service information.

IMPLICATIONS FOR PUBLIC HEALTH PRACTICE

- Increased efforts to engage persons with OUD in treatment.
- Expanded communication about the effectiveness of MOUD is needed.
- Clinicians and other treatment providers should offer or arrange evidence-based treatment, including medications for OUD.
- Pharmacists and payors can support making these medications available without delays.

CONCLUSION

- Chronic relapsing illness. High mortality rate.
- Effective, mortality reducing FDA approved medications available.
- Large Care Gap.
- Hospitalists are on the FRONT LINE against OUD. Time to double down. No X waiver!
- Increase engagement in care.
- **Harm reduction, naloxone!**



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