Hennepin Healthcare

Medication Treatment for Opioid Use Disorder

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Addiction Medicine / Internal Medicine

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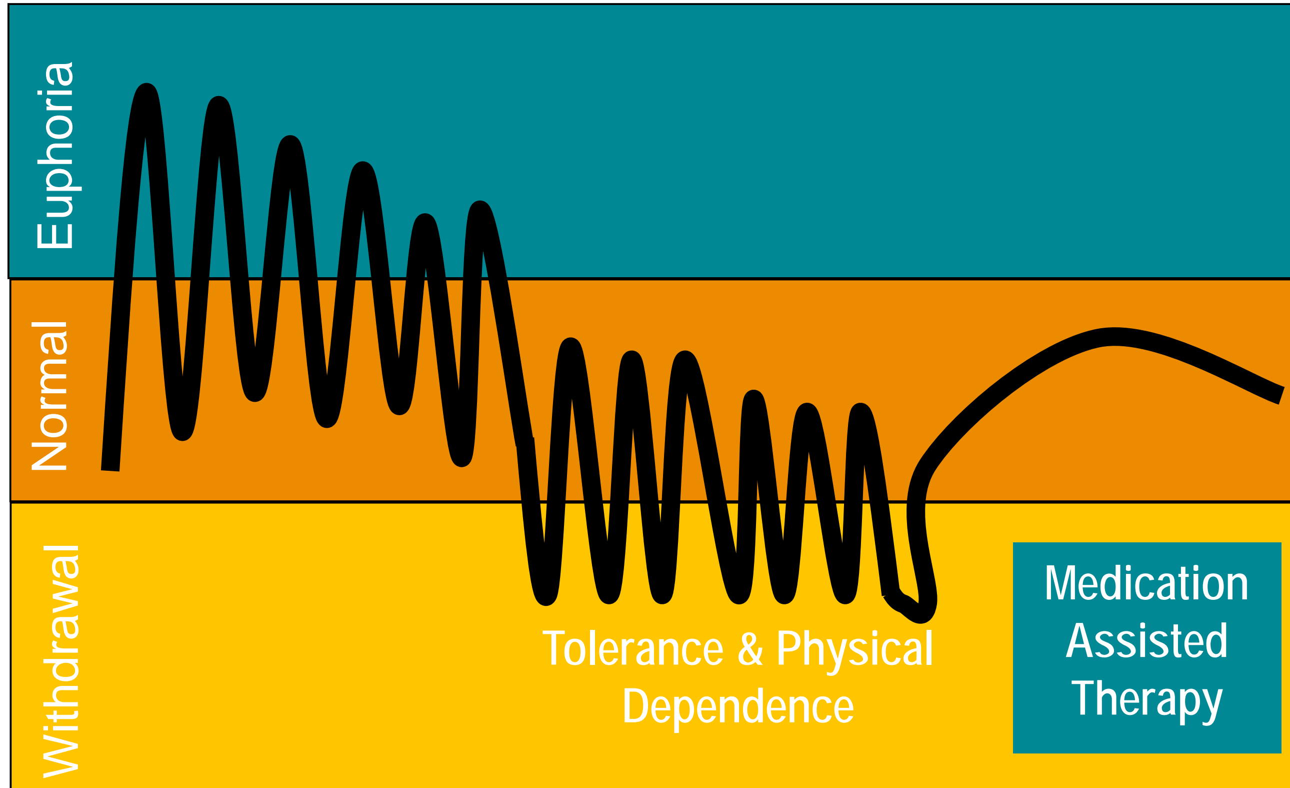
Medications for Opioid Use Disorder

- Buprenorphine
  - Transmucosal (i.e., generic, Suboxone, Subutex, Zubsolv, Bunavail)
  - Implantable (Probuphine)
  - Subcutaneous depot injectable (Sublocade)
- Naltrexone
  - Oral (ReVia)
  - Intramuscular depot injectable (Vivitrol)
- Methadone

“Detox” has no long-term effect on outcomes; it is medication maintenance that saves lives and reduces relapse



Acute Use

Chronic Use

Alford, Boston University, 2012

Pharmacotherapy for Opioid Addiction: **Methadone**

- Most effective
  - ↑ survival, treatment retention, employment
  - ↓ illicit opioid use, hepatitis and HIV infections, criminal activity
- Highly regulated, dispensed at Opioid Treatment Programs (OTP)
  - Supervised daily liquid administration with take-home doses if stable
  - Counseling, urine testing
  - Psychiatric, medical services often not provided
  - **Illegal** to prescribe methadone **for addiction** in general practice
- Cost-effective
  - Every dollar invested generates $4-5 in savings

Pharmacotherapy for Opioid Addiction: **Methadone**

Daily, observed dosing

- Full opioid agonist
- Onset within 30-60 minutes
- Long-acting: 18-50 hour $t_{1/2}$ → Daily dosing effective for addiction
- Dose 20-40 mg for acute withdrawal
- >80 mg for craving and “blockade”
- Analgesia mean duration 5-8 hours
- To evaluate stability, ask about take-home doses
- **Multiple** medication interactions

Advise treatment until social, medical, psychiatric, legal, and family issues stable

- “Detox” therapy has no long-term effect on outcomes
- Longer duration, “higher” dose treatment (average 80-120 mg) most effective
- For some patients methadone therapy should be lifelong, as risk of relapse is high after cessation

METHADONE…

DECREASES RISK OF HIV AND HEPATITIS C INFECTION

Highly effective

FACTS

Improves pregnancy outcomes

Reduces relapse

One of the WHO list of 100 essential meds that should be available worldwide

Still addicted

Can't nurse your baby

Always sedated

Gets in the bones

MYTHS

Can't drive

BAD FOR YOUR BABY

Rots your teeth

Pharmacotherapy for Opioid Addiction: **Buprenorphine**

- 2000 Federal Drug Addiction Treatment Act (“DATA-2000”):
  - Legalized office-based addiction treatment by physicians
  - Required 8-hour training and federal waiver
- 2002: Suboxone (buprenorphine/naloxone) FDA approved
  - Outcomes much superior to psychosocial treatment alone
  - Longer treatment duration more effective
- Compared to methadone:
  - Similar abstinence from illicit opioids and decreased craving
  - Slightly lower retention in treatment
  - Can be prescribed in general practice, lowering barriers to treatment

Buprenorphine vs methadone

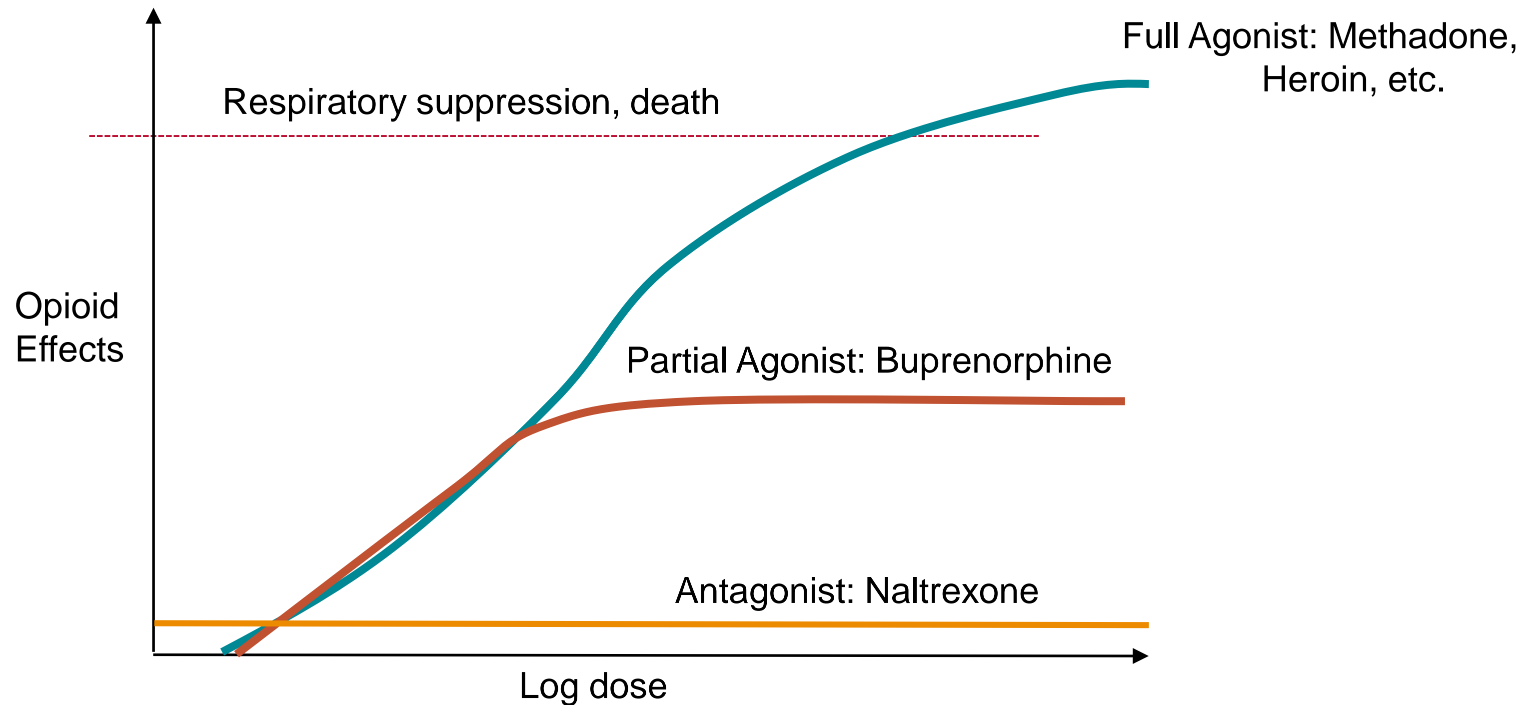
Like methadone:

- Reduces IVDU, HIV, HCV, overdose
- Retains pt in treatment
- Decreases craving and illicit opioid use
- Stops withdrawal
- Covered by Medicaid
- Very long term treatment usually necessary

Unlike methadone:

- Low potential for overdose
- Prescribed in standard clinic visit
- Withdrawal required for induction
- Little sedation
- Easy taper/detox

Why is Overdose Potential Low with Buprenorphine?



Pharmacotherapy for Opioid Addiction: **Buprenorphine**

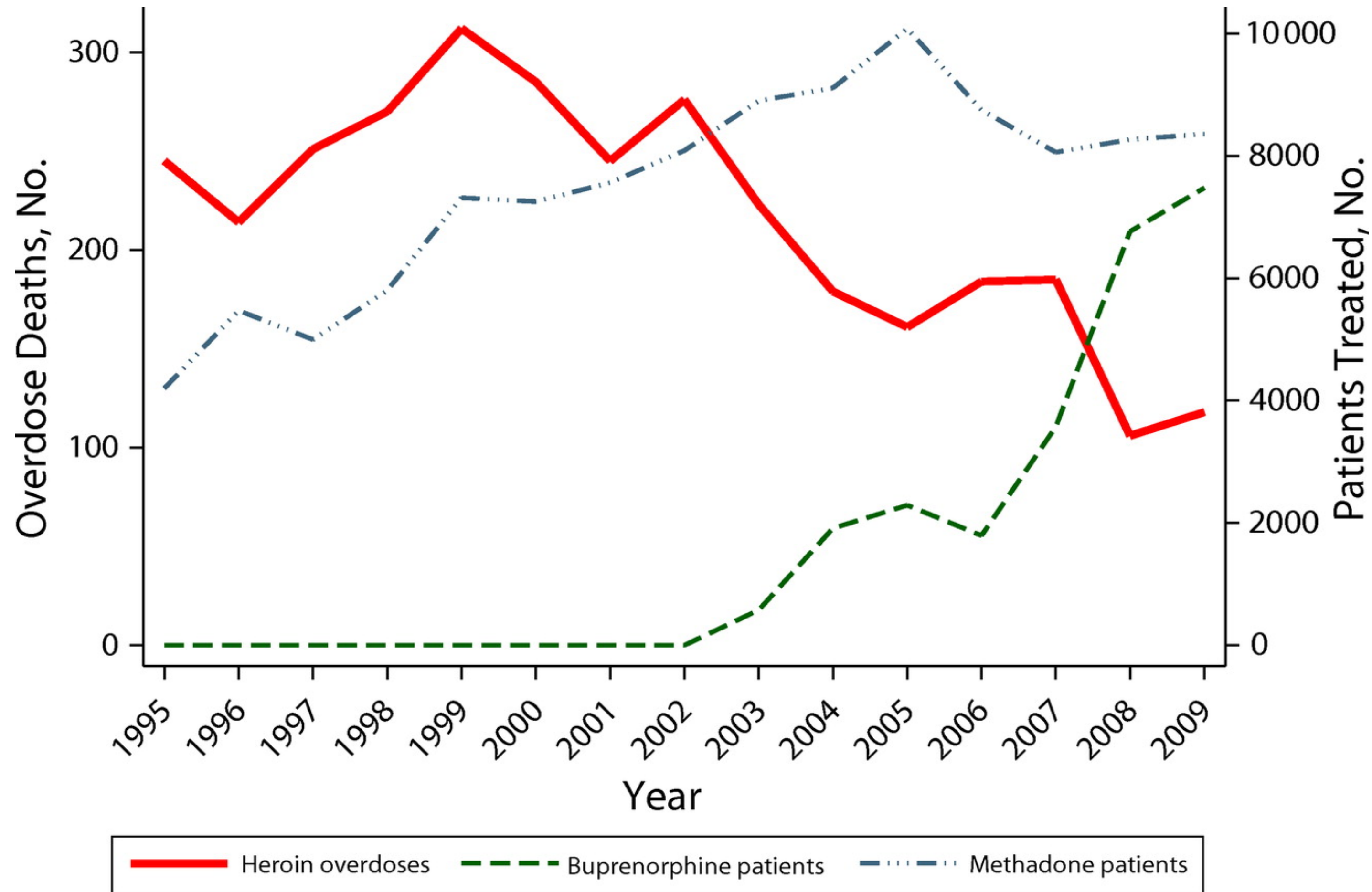
- Partial opioid agonist, so safer than methadone
- High mu receptor affinity, so blocks other opioids
  - Requires induction with patient in mild-moderate withdrawal
  - Induction from methadone more difficult (taper to ~30 mg)
- Often formulated with naloxone - abuse deterrent
- Transmucosal, implant, and subcutaneous depot formulations
- Home induction safe and effective, widely adopted
- Implant approved for stable patients on ≤8 mg buprenorphine
  - Provides 6 months supply

The NEW ENGLAND JOURNAL of MEDICINE

Trials of sublingual buprenorphine

Author, Journal	Year	"n"	Setting	% still participating in treatment
Fudala, NEJM	2003	461	Multicenter research trial	57% @ 6 months
Alford, JGIM	2006	85	Acad med Ctr/ Community clinic; ½ patients homeless; nurse case mgr	81% @ 12 months
Mintzer, Ann Fam Med	2007	99	4 primary care practices	54% @ 6 months
Cunningham, Fam Med	2008	41	Urban community health center	71% @ 3 months
Soeffing, J Subst Abuse	2009	255	Urban academic health center	57% @ 12 months

Buprenorphine reduces overdoses



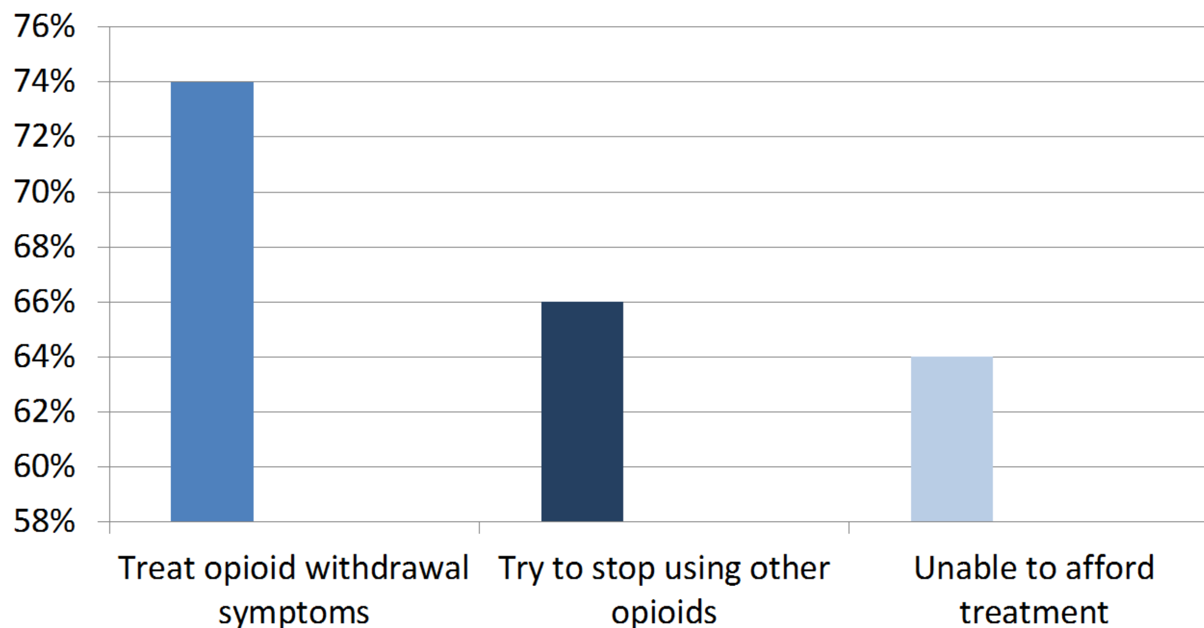
Schwartz, AJPH, 2013

Buprenorphine diversion

- People seeking treatment (Schuman-Olivier, JSAT, 2010):

  ”illicit buprenorphine rarely represents an attempt to attain euphoria. Rather, illicit use is associated with attempted self-treatment of symptoms of opioid dependence, pain, and depression.”

- Proportion of prescribed tablets diverted steady (Johanson, Drug Alcohol Dep, 2012)



Bazazi, J Addict Med 2011

Naltrexone

- Opioid antagonist that blocks other opioids
- Does not lead to physical dependence (or withdrawal)
- Causes acute withdrawal in patients on chronic opioids
- Can be used in office-based settings without added training
- Effective in alcohol use disorder treatment
- Two formulations available:
  - Oral naltrexone (ReVia) 50 mg PO daily
  - Intramuscular depot naltrexone (Vivitrol) 360 mg IM monthly

Intramuscular depot naltrexone for opioid use disorder

- Requires 3-7 days of opioid abstinence prior to initiation with pre-injection naloxone challenge or negative urine drug test
- In comparative RCT of bup/nlx vs IM depot naltrexone (XR-NTX) in patients *at detox* (Lee JD at al, 2017):
  - XR-NTX 28% drop out before induction versus only 6% for Suboxone
  - Nearly all induction failures had early relapse
  - Once inducted, XR-NTX and BUP-NX similar effect for 6 months
  - Overdose and other serious adverse event rates did not differ

Summary:
Medications for Opioid Use Disorder

- Medications are an essential component of evidence-based treatment
- Methadone and buprenorphine are the most effective pharmacotherapies
- Injectable depot naltrexone may be used, but only in select patients
- Primary care teams can play an important role in treatment

Questions?

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