Medication Assisted Treatment for Opiate Use Disorder

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Opiate Abuse: A Public Health Crisis

National Statistics: Center for Disease Control 2016

- Heroin use has increased across the US among men and women, most age groups, and all income levels
- Between 2002 and 2013, the rate of heroin-related overdose deaths nearly quadrupled, and more than 8,200 people died in 2013.
- Heroin use more than doubled among young adults ages 18–25 in the past decade.
- Since 2010, in accounting for all heroin use in the US, rate of use has increased by 200%
- Philadelphia, PA one of the worst epidemics: 2015 720 opiate overdose deaths, 1 in 4 heroin users
- Prescription painkiller overdoses killed nearly 15,000 people in the US in 2008. This is more than 3 times the 4,000 people killed by these drugs in 1999.
- In 2010, 1 in 20 people in the US (age 12 or older) reported using prescription painkillers for nonmedical reasons in the past year.

Local Statistic: San Diego Prescription Drug Task Force 2014

- In 2014 244 San Diegans died from an unintentional prescription drug overdose (22% increase from 2013)
- 105 people died from a heroin overdose (34% increase from 2013)

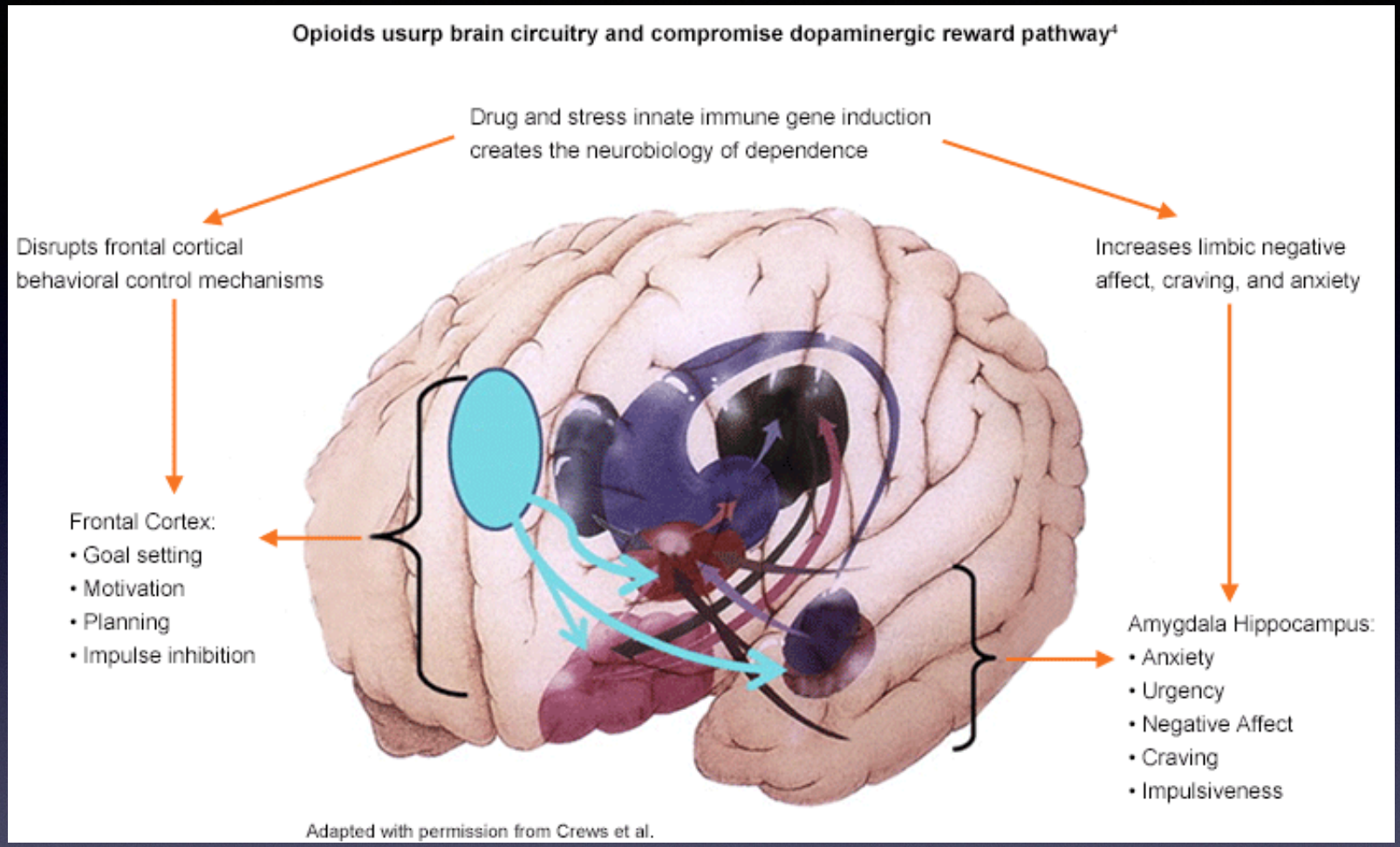
What are Opiates?

Opiate receptors are located throughout the central nervous system (brain) and peripheral nervous system (intestines, lungs).

Natural neurotransmitters (endorphins, nociceptin) bind to opiate receptors —> leads to activation of the receptor —> leads to classic effects associated with opiates : pain relief, euphoria, respiratory depression, constipation, cough suppression

Repeated use of opiates in the form of heroin/prescription narcotics —> less opiate receptors/decreased sensitivity —> tolerance —> need more opiate to maintain same effect

Take away opiates after tolerance develops —> over-excitation of nor-adrenergic center of brain —> irritability, anxiety, sensitivity to pain, diarrhea



In opiate withdrawal both the limbic system (emotion) and the frontal cortex (judgement, logic) are affected in a profound way.

The limbic system has the ability override/influence the frontal cortex

Consequences of Opiate Use Disorder

Health:

- Overdose leading to death or permanent anoxic brain injury

- High risk of blood borne illness: hepatitis C, HIV

- Other: endocarditis/sepsis, accidents

Drug Culture:

- Drug culture is inherently dangerous

- High risk of physical or sexual assault

Legal:

- Criminal activity to support habit

- Possession and sales, transport

Life disruption:

- Inability to work

- Impaired relationships

- Feelings of low self worth

Treatment Options

Non-Medication:

- Abstinence based therapy: psychotherapy, 12-step

Medication Assisted Therapy:

- Opioid Agonist therapy: buprenorphine (suboxone, subutex), methadone
- Opioid Antagonist therapy: naltrexone (vivitrol)

Opioid Agonist Therapy

Concept: interrupt the pattern of abuse, damaging behaviors, and lessen risk associated with illicit opiate use.

Use of long acting opiate (buprenorphine):

- **Suppresses cravings for opiates** (interrupt damaging pattern of use, free individual to pursue healthy lifestyle, repair relationships, work)
- **Suppress withdrawal symptoms** (individual more likely to succeed if not feeling sick)
- **Block the effects of other opiates** (decrease risk of overdose, lessen the risk of associated with illicit opiates)

What does the evidence say?

Study 1:

Weiss et al, Adjunctive Counseling During Brief and Extended Buprenorphine-Naloxone Treatment for Opioid Dependency, *Arch Gen Psychiatry* 2011

Questions:

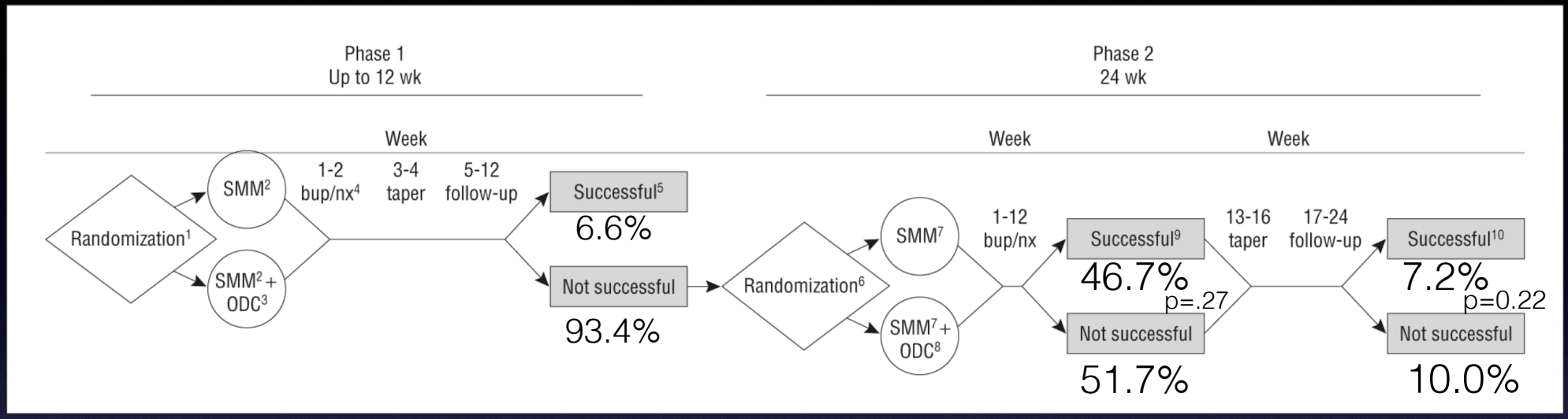
- Is there a difference in outcomes between patients treated with short course buprenorphine (2 week maintenance, 2 week taper) vs. patients treated with extended course buprenorphine (12 week maintenance, 4 week taper)?

- Is there a difference in outcomes between those patients who received buprenorphine only vs buprenorphine + opioid dependence counseling?

- What was the rate of relapse 8 weeks following completion of taper?

Design:

- 653 prescription opiate dependent patients, DSM IV OUD
- Randomized to bup vs bup + counseling



Phase 1:

- 2 week bup stabilization —> 2 week taper —> 8 week post medication followup
- **Results Phase 1:** 6.6% of patients had successful outcomes (ie no positive urine screens)

Phase 2:

- 12 week bup maintenance —> 4 week taper —> 8 week post medication followup
- **Results Phase 2:** 49% as a whole had successful outcomes at the end of treatment (week 13) vs 8.6% had successful outcomes 8 weeks after taper (91% of patients relapsed) ($p<0.001$)

- **Results Phase 2:** 37% of individuals in the group with lifetime use of heroin were successful at the end of treatment (week 13)

Conclusions

- 653 prescription opiate dependent patients, DS
- There was statistically no difference in outcomes between the bup group vs bup+ counseling
- Rate of relapse after taper of buprenorphine was >90%, even after 12 weeks (phase1) of treatment.
- Patients stabilized with extended course of buprenorphine (phase 2) had considerably better outcomes than did those who had been tapered off medication.
- Even with extended course, more than half of patient's relapsed

What does the evidence say?

Study 2:

Fiellin et al, Primary Care Based Buprenorphine Taper vs Maintenance Therapy for Prescription Opiate Dependence, JAMA intern med 2014

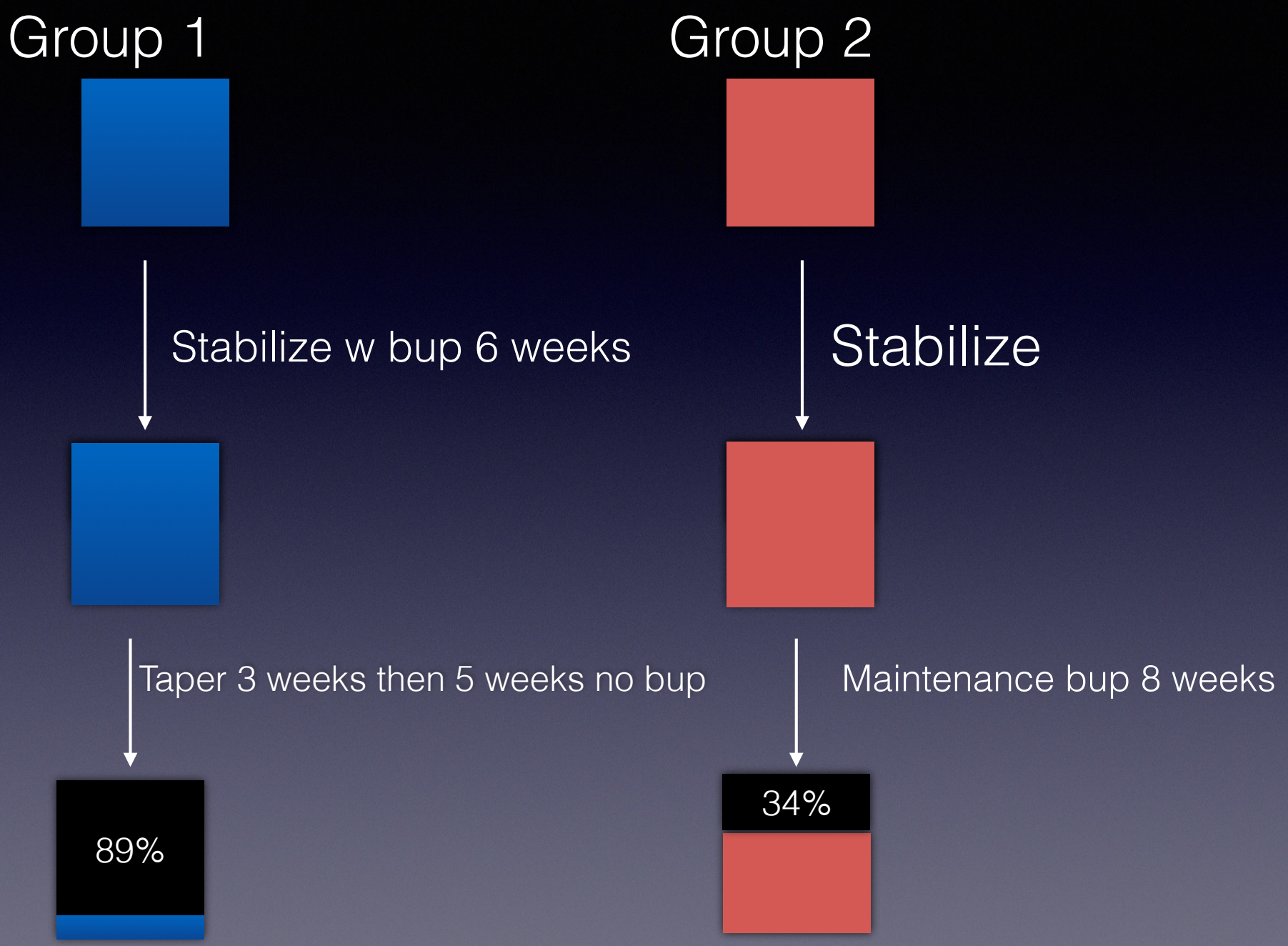
Questions:

Is there a difference in outcomes for a group tapered from buprenorphine after stabilization vs a group with ongoing maintenance buprenorphine?

Design:
- 113 prescription opiate dependent patients, DSM IV OUD
- Randomized trial clinical trial, 14 weeks

Group 1: Taper group
- Stabilization for 6 weeks with bup —> taper for 3 weeks —> 5 weeks no bup

Group 2: Maintenance group
- Stabilization with bup —> Ongoing buprenorphine therapy until completion of study


Group 1
Group 2
Stabilize w bup 6 weeks
Stabilize
Taper 3 weeks then 5 weeks no bup
Maintenance bup 8 weeks
89%
34%

	Taper Group	Maintenance Group
%positive utox samples	65%	47%
Days per week opiate use after taper complete	1.27	0.47
% of patients drop out from relapse	89%	34%

From: **Primary Care–Based Buprenorphine Taper vs Maintenance Therapy for Prescription Opioid Dependence: A Randomized Clinical Trial**

JAMA Intern Med. 2014;174(12):1947-1954. doi:10.1001/jamainternmed.2014.5302

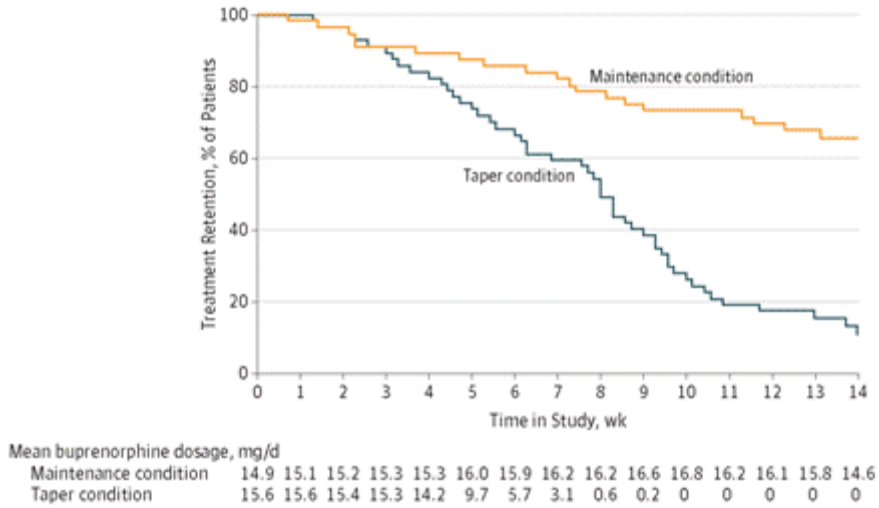


Figure Legend:

Treatment Retention and Mean Buprenorphine Dosage for Patients With Prescription Opioid DependencePatients were assigned to the taper or the maintenance condition. Buprenorphine treatment was administered as a tablet formulation of buprenorphine hydrochloride and naloxone hydrochloride in a 4:1 ratio.

Opioid Antagonist Therapy

Naltrexone Therapy

- Also known as vivitrol, available in oral daily form or monthly injectable form

- Naltrexone is an opioid antagonist. In other words it blocks opiate receptors, occupying the site so that opiate cannot bind

- Naltrexone will prevent a patient from 'getting high' or experiencing the effects of opiate medications and/or heroin

- It is protective in that it is nearly impossible to overdose on opiates while taking

- Naltrexone does not activate the opiate receptors, this means that it does essentially nothing to address opiate cravings

- If the patient is not motivated to take the medication, he/she will stop taking it and use opiates to address cravings

MAT or no?

Each patient is a unique case, there is no blanket protocol in place when deciding to treat with medication vs not treat.

We consider the risks vs potential benefits of treatment in each individual case

<u>Factors Taken into Consideration:</u>
- Motivation to be free of all opiates
- Concurrent use of other substances
- Severity of consequences
- Motivation for one method vs another
- Plans for ongoing recovery and housing
- Use history, relapse history
- Successful abstinence from heroin while taking MAT
- Cultural factors
- Length of time using and age of patient
- Method of use (IV, intranasal, smoking)

FAQ about MAT

-How do you choose suboxone vs naltrexone?

-Dont people abuse suboxone?

-Do people get high on suboxone or ‘are we replacing one addiction with another’?

-Can a patient overdose on suboxone?

-What about dosing?

-Is the medication sedating?

-Isn't this medication really difficult to get off of?

-What are the long term consequences of suboxone?

-How long should someone stay on suboxone?

Final Thoughts

- Opiate addiction qualitatively different than other addictions (Discuss cravings)
- Opiate Use Disorder is a chronic, relapsing illness
- We need to examine our own biases and feelings about people who suffer from addiction
- Empathy for the addict: most of these individuals do not want to continue using, but they don't have good control
- We need to remind ourselves that everyone is an individual and that each persons trajectory to sobriety is not the same
- The decision to treat or not treat is a risk/benefit analysis
- We need to reexamine our ideas of what 'sobriety' means, possibly expand our definition of what this means (Discuss HTN or depression)
- This can be a terminal illness, failure to treat can lead to severe consequences including death. (Discuss overdose patient)