

# Addiction = Chronic Disease

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# Agenda

- Stigma vs. Health
- Genetics role in addiction
- Addiction = Chronic Brain Disease
- Addiction is treatable
- Models for treating addiction in Primary Care
- Panel discussion

# The Stigma of Addiction

“Addiction is primarily a social problem, not a health problem.”

**Reality... Addiction is a Medical Disease**



# Genetic Heritability

Twin and adoption studies confirm a genetic role

- Account for between  $\frac{1}{2}$  and  $\frac{3}{4}$  of the **risk for addiction.**
- Twins (Monozygotic) > Dizygotic

Genetic factors appear to be stronger drivers than environmental factors for initiation of substance use at an early age.



# Genetic Heritability

## “Traditional” Medical Diseases

- HTN → 0.25-0.5
- Diabetes Type 1 → 0.30 to 0.55
- Diabetes Type 2 → 0.80
- Adult-onset Asthma → 0.36-0.70

## Substance Use Disorders

- Heroin → 0.34
- Marijuana → 0.52
- Alcohol → 0.52
- Cigarette → 0.61

Monozygotic > Dizygotic



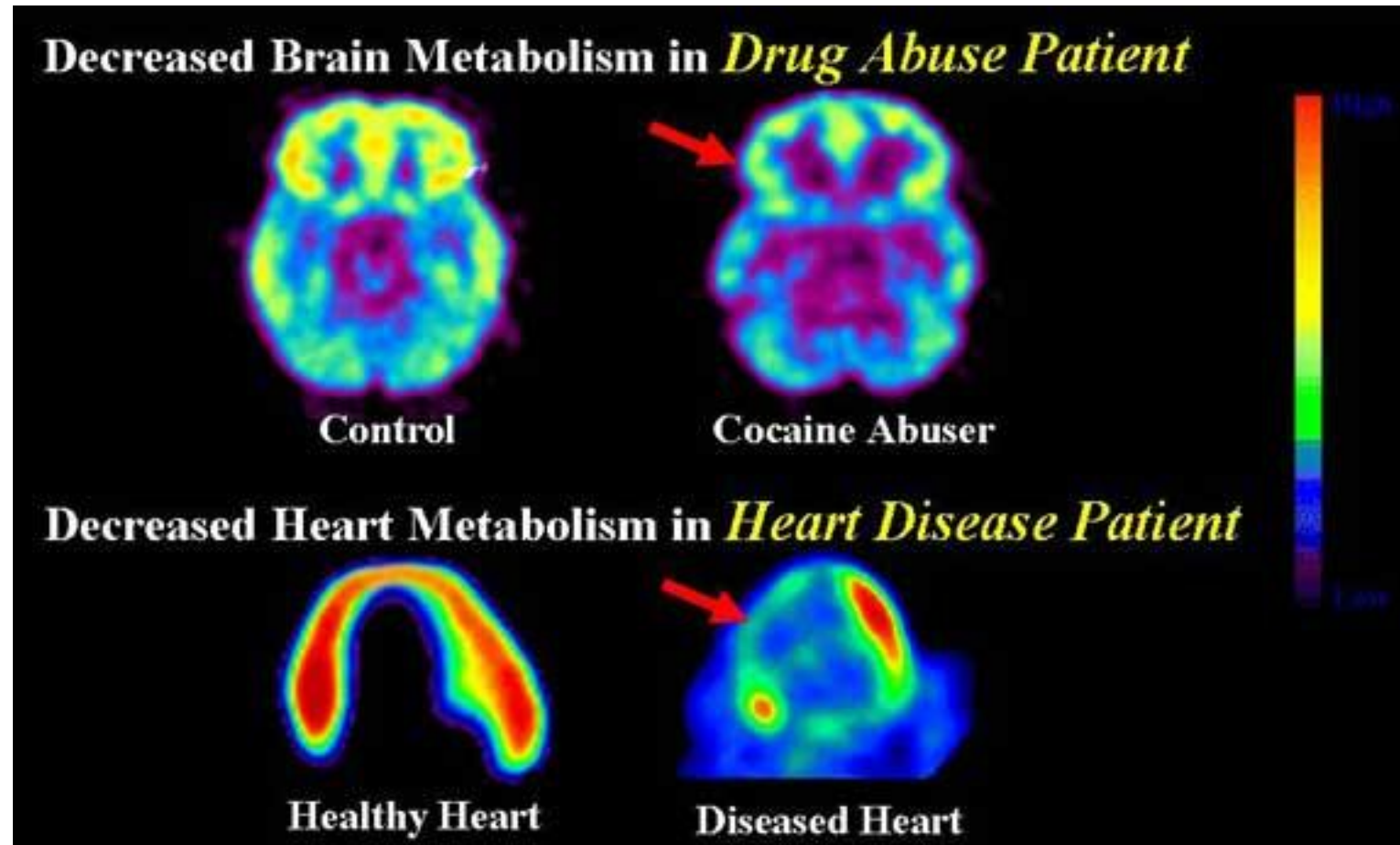
\*0.0 = genetics are not a contributing factor at all

\*\* 1.0 = genetics are the only factor

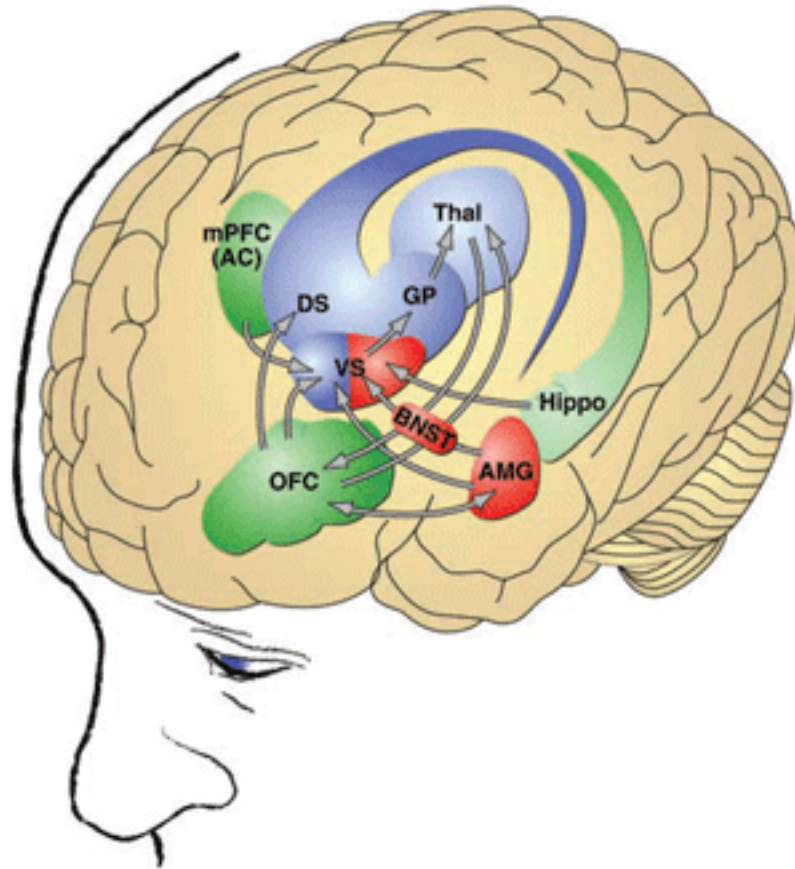
# Addiction = Chronic Brain Disease

1. Brain diseases → some form of behavioral expression
  - Alzheimer's = memory loss
  - Schizophrenia = unusual perceptions of reality and mood changes
  - Opioid addiction = cravings which lead to uncontrollable compulsion
2. Precipitated by fundamental, long-term, changes to the biological structures and functioning of this organ

# Addiction and Changes to biological structures



# Neurobiology of Addiction



## Binge/intoxication

- ventral striatum (VS), including nucleus accumbens  
euphoria, reward
- dorsal striatum (DS)  
habits, perseveration
- global pallidus (GP)  
habits, perseveration
- thalamus (Thal)  
habits, perseveration

## Withdrawal/negative affect

- amygdala (AMG), bed nucleus of the stria terminalis (BNST), together also known as the "extended amygdala"  
malaise, dysphoria, negative emotional states
- ventral striatum (VS)  
decreased reward

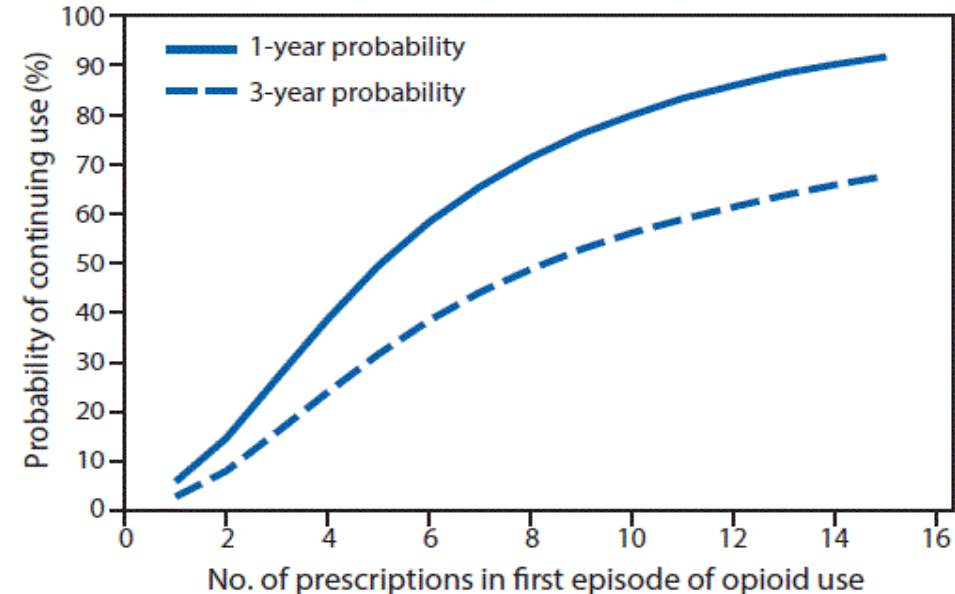
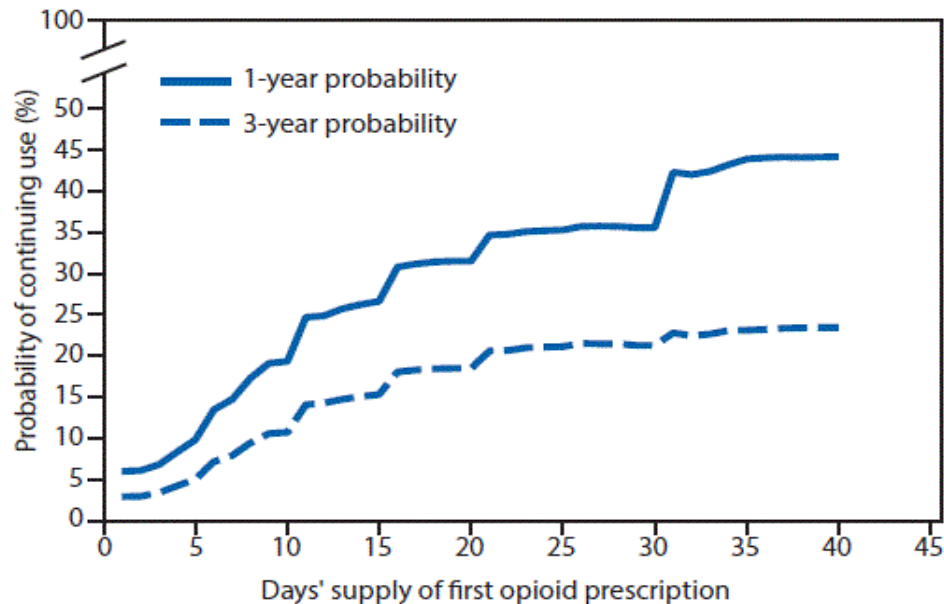
## Preoccupation/anticipation

- anterior cingulate (AC)
- prefrontal cortex (mPFC), orbitofrontal cortex (OFC)  
subjective effects of craving, executive function
- basolateral nucleus of the amygdala  
conditioned cues
- hippocampus (Hippo)  
conditioned contextual cues



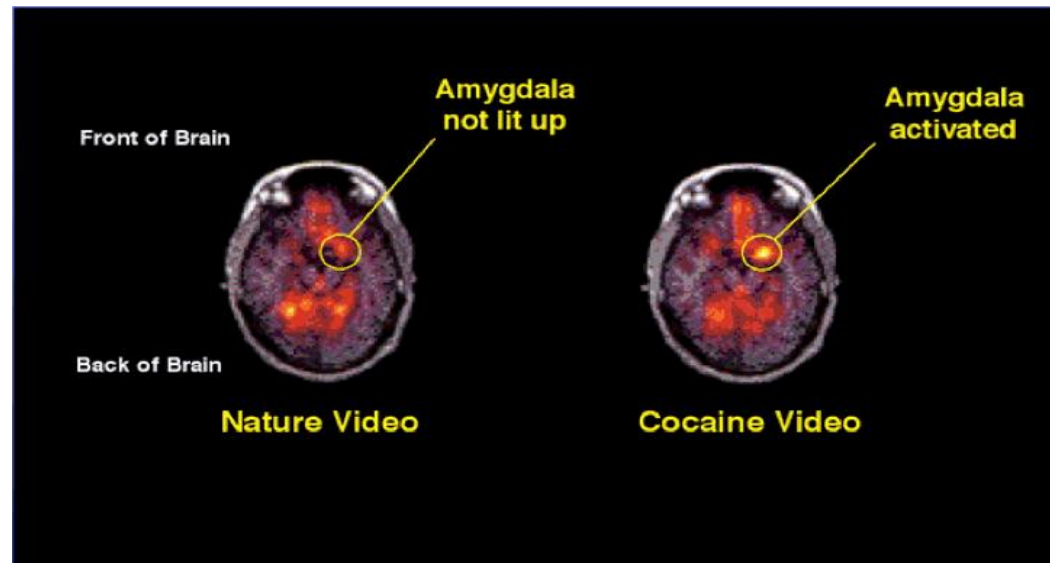
# Addiction can happen to anyone

1. The longer you are prescribed an opioid the greater likelihood you'll develop addiction.
  - Prevalence rates as high as 50% for an opioid use disorder on chronic opioid therapy
  - Opioid therapy >90 days at >120 MME = 100x's as likely to develop OUD
  - But this can happen much soon than 90-days

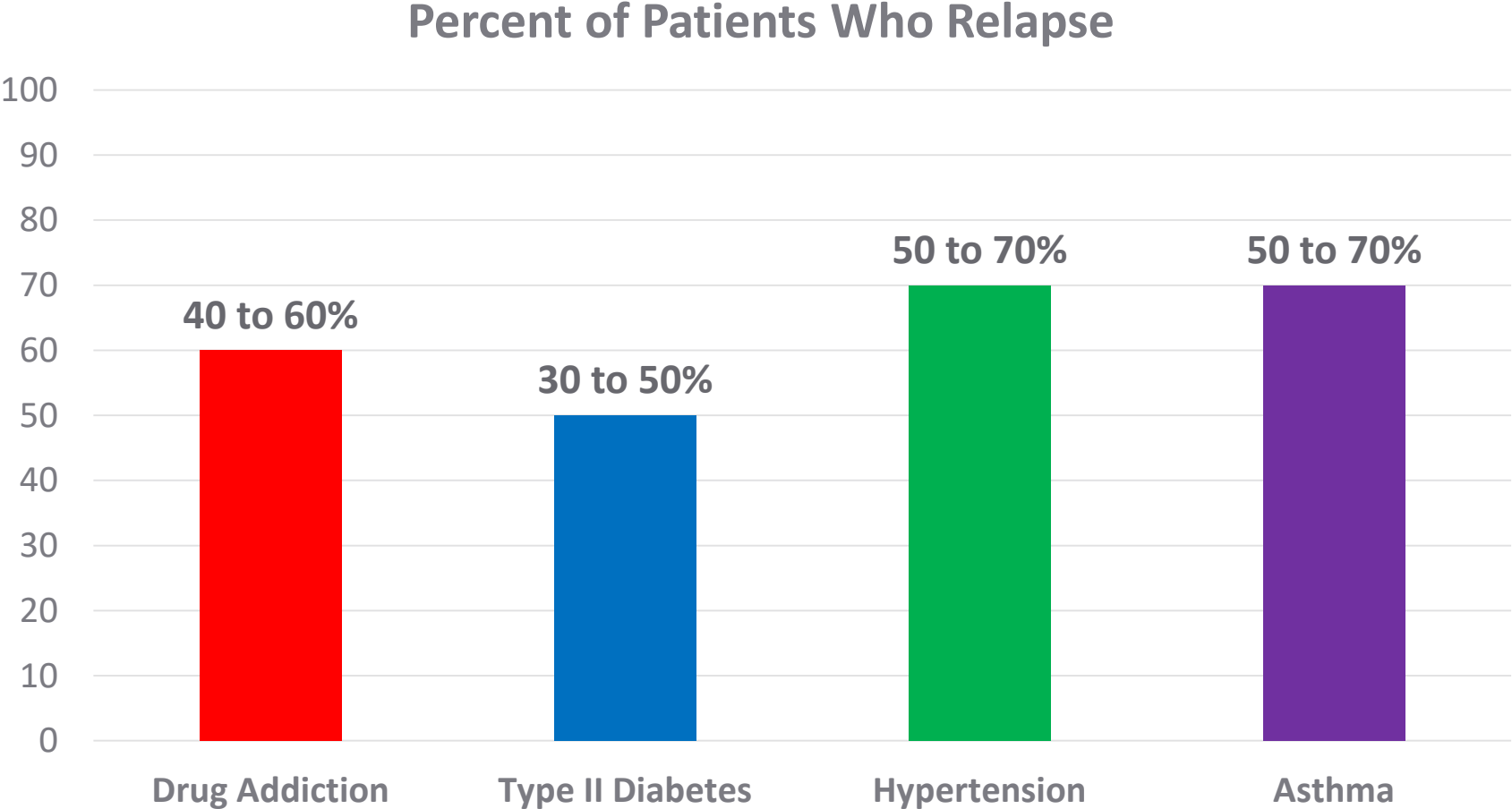


# Wait a minute... addiction was a choice

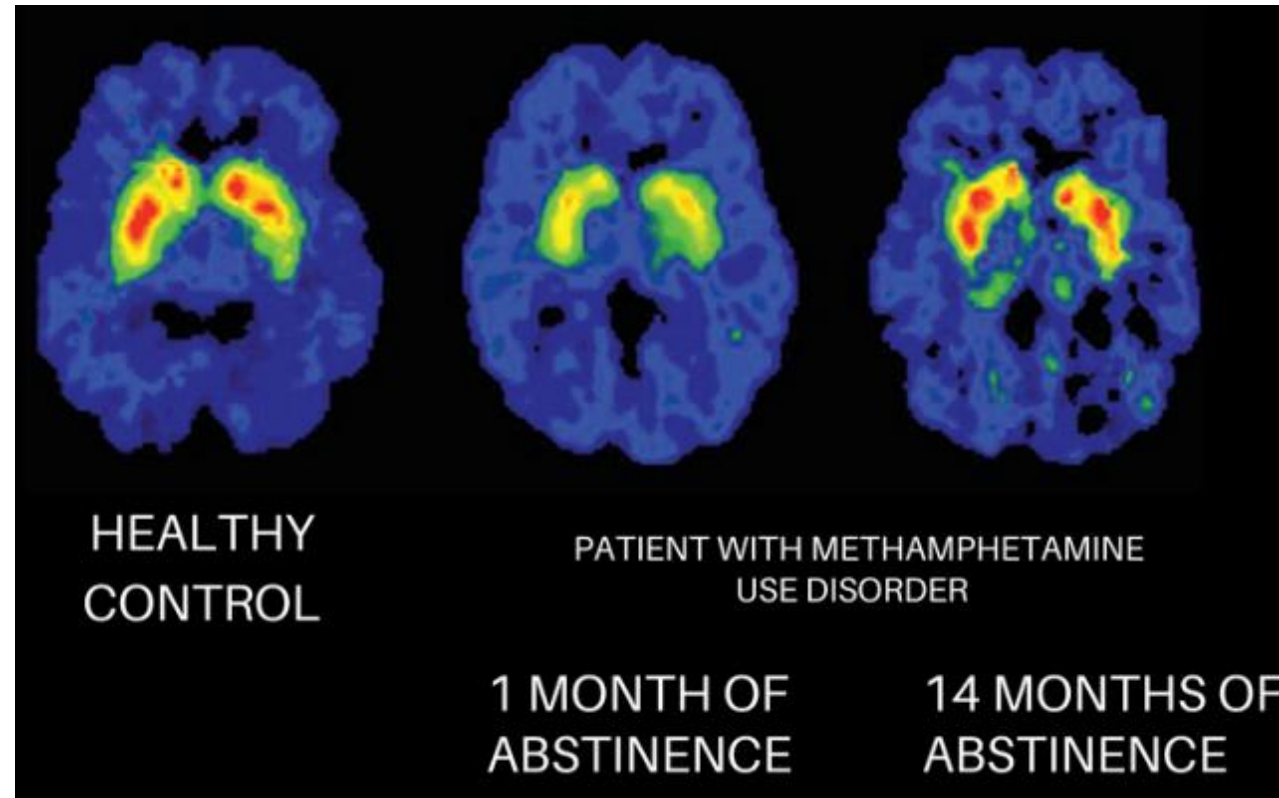
2. ...they chose to try it for the first time = their fault
  - Initial voluntary misuse does **NOT** make their condition any less the result of disease
  - Addiction = INVOLUNTARY COMPULSIVE USE, cravings **CANNOT** be controlled = Chronic Condition



# You relapsed = You're not serious or committed



# It takes time for your brain to recover



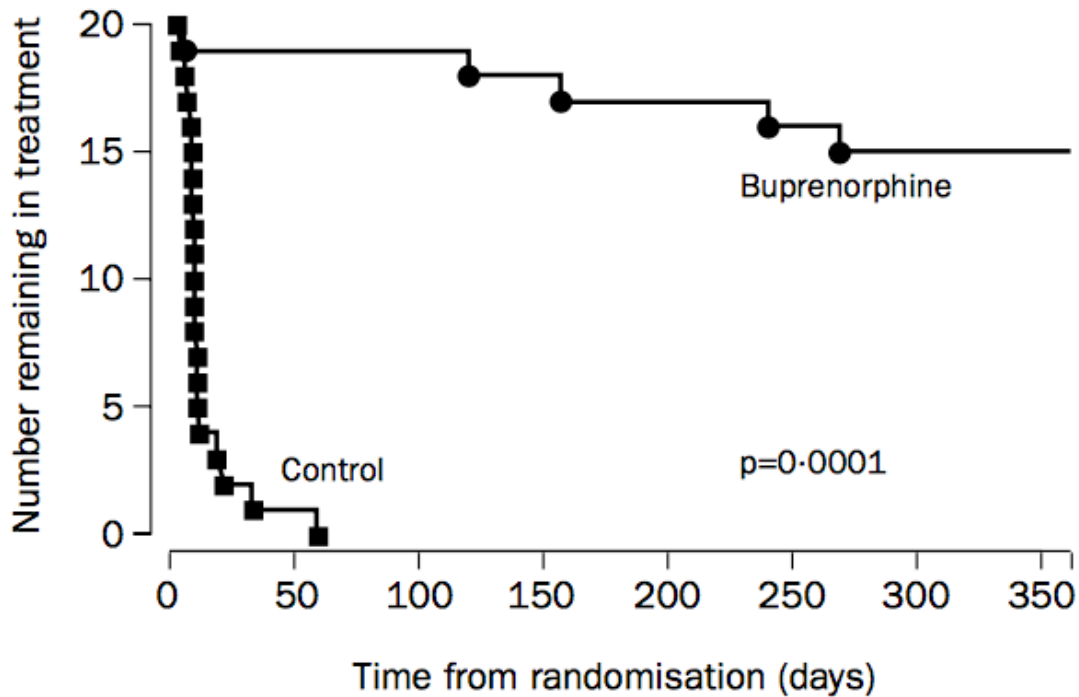
# Selective forgiveness and understanding

## 3. What other choices lead to chronic disease

- Diet and Exercise → Diabetes, Hypertension and Congestive Heart Failure to name a few.



# Addiction is a treatable disease—Buprenorphine



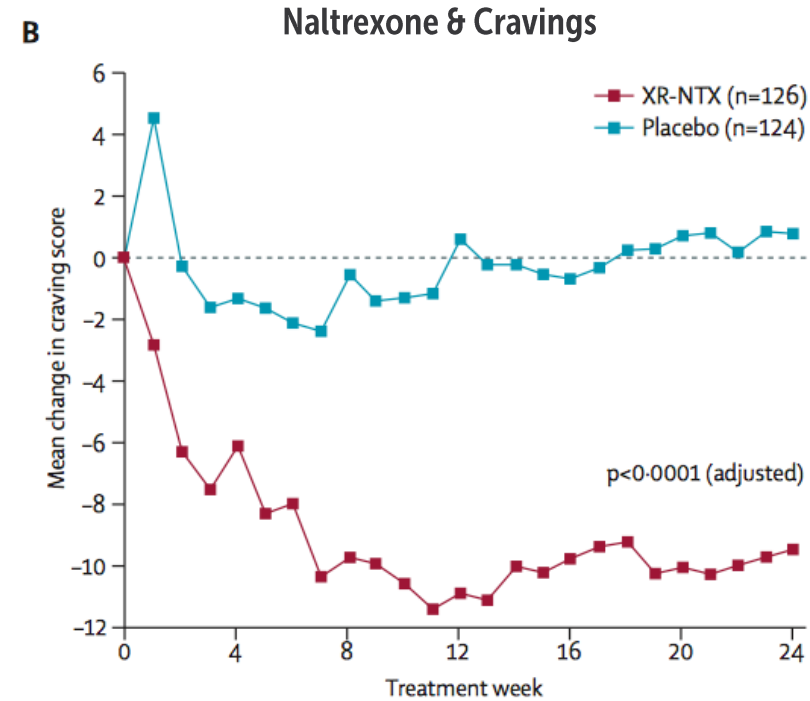
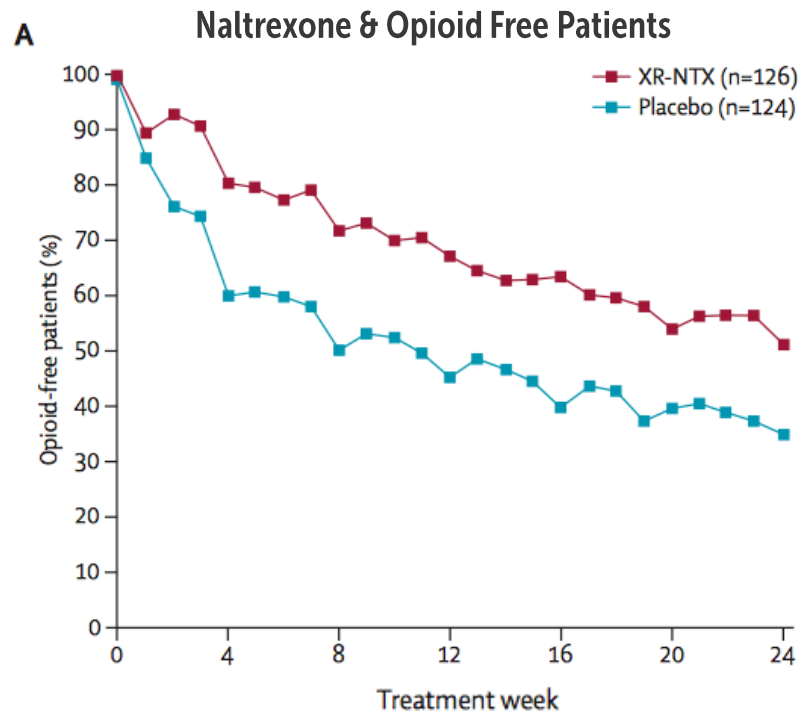
## Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies

Luis Sordo,<sup>1,2,3</sup> Gregorio Barrio,<sup>4</sup> Maria J Bravo,<sup>1,2</sup> B Iciar Indave,<sup>1,2</sup> Louisa Degenhardt,<sup>5,6</sup> Lucas Wiessing,<sup>7</sup> Marica Ferri,<sup>7</sup> Roberto Pastor-Barriuso<sup>1,2</sup>

**THM:** Buprenorphine for OUD is associated with a **50% or greater** reduction in the probability of overdose death.

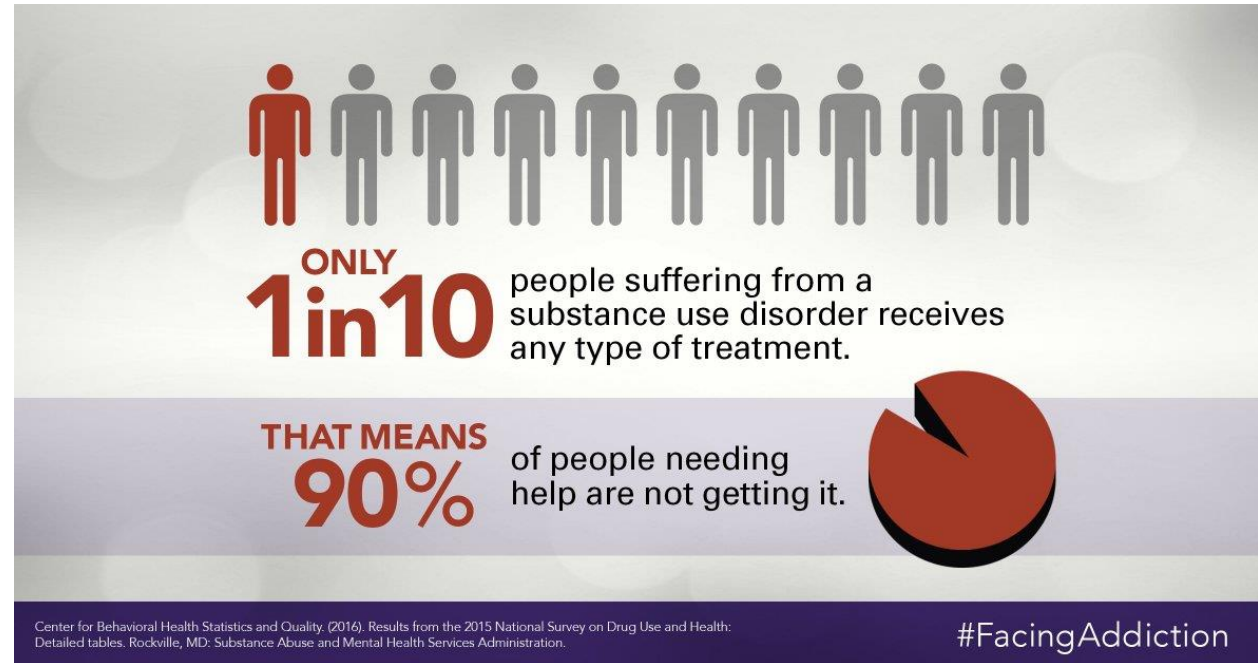
**THM:** Buprenorphine at all doses is more effective than placebo in retaining patients in treatment

# Addiction is a treatable disease—Naltrexone



**THM:** Naltrexone added to standard federal probation lead to **70%** less opioid use and **50%** less incarceration

# Access to treatment is critical



**THM:** Few receive anything that approximates evidence-based care

**THM:** In contrast, 70%-80% of people with diseases such as HTN and DM receive care



# You are making a big difference

Published in final edited form as:

*J Subst Abuse Treat.* 2017 July ; 78: 1–7. doi:10.1016/j.jsat.2017.04.005.

## Why Aren't Physicians Prescribing More Buprenorphine?

Andrew S. Huhn, Ph.D.<sup>1</sup> and Kelly E. Dunn, Ph.D.<sup>1</sup>

<sup>1</sup>Behavioral Pharmacology Research Unit, Johns Hopkins University School of Medicine, Baltimore MD

## Practitioner and Program Data

**Total: 73921**

275 Patient  
Certified

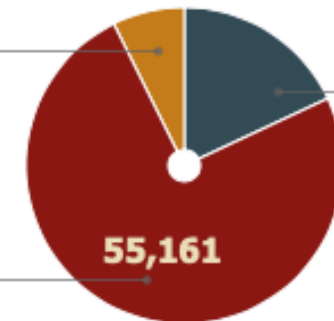
7.3%

100 Patient  
Certified

18%

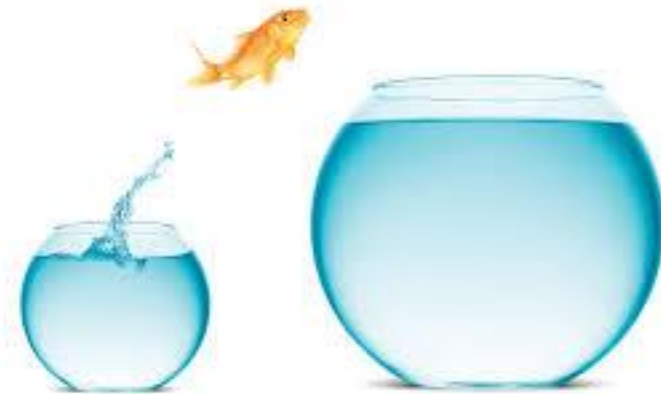
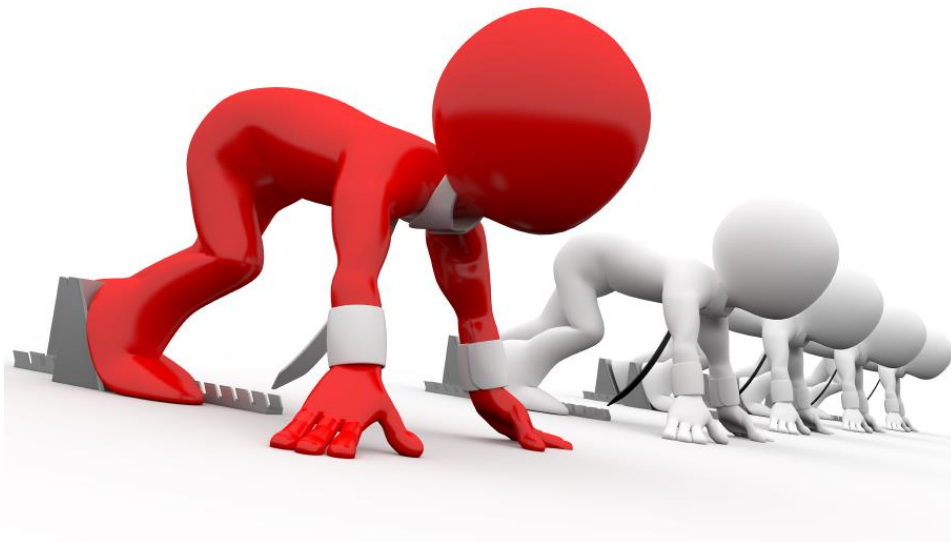
30 Patient  
Certified

74.6%



**THM:** Approx. **48%** of X-waivered physicians prescribe on average **5** patients per provider

# Starting or Expanding your MAT Services



# The clinical champion



# Different MAT clinic types

- Integrated Primary Care Clinic
- Integrated Behavioral Health Clinic
- Group MAT Visits
- Dedicated MAT Clinic
- Walk-In Clinic for MAT



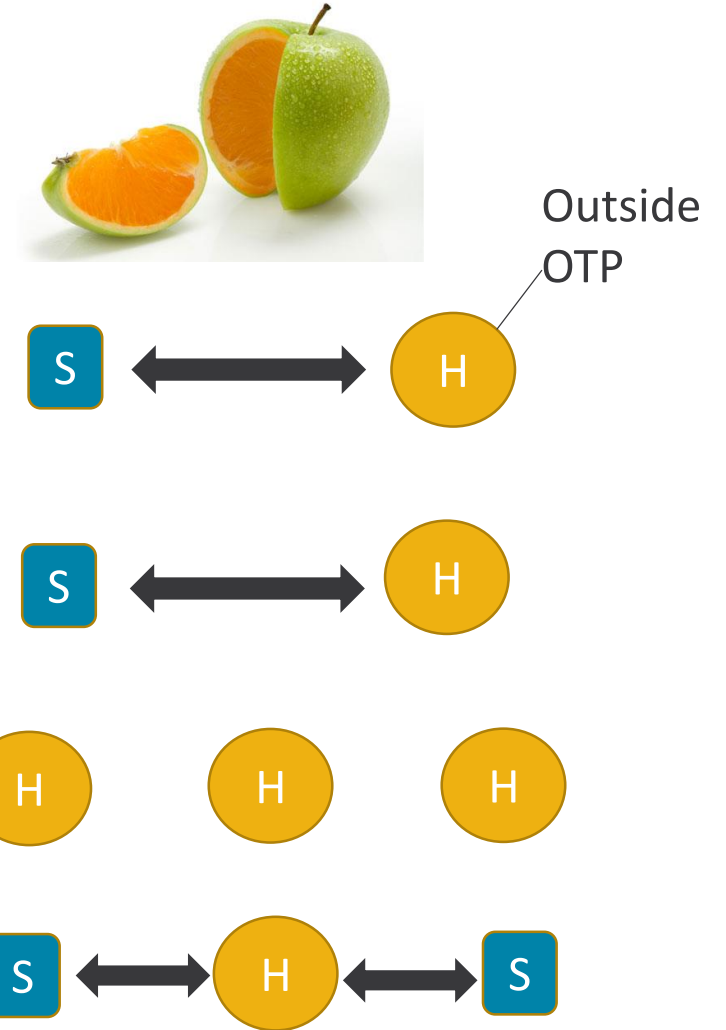
Office inductions



Home inductions

# MAT expansion models

- Integrated vs. standalone
- OTP hub your site spoke
- Internal hub and spoke
- Each site a hub
- Strategic hubs with surrounding spokes



# References

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# Panel discussion and the journey to providing MAT services



# CommuniCare Health Centers

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Christina Andrade-Lemus, MSW, SUDCC III  
Program Manager, Outpatient SUD  
Services and MAT





**Established 1972 in Yolo County**

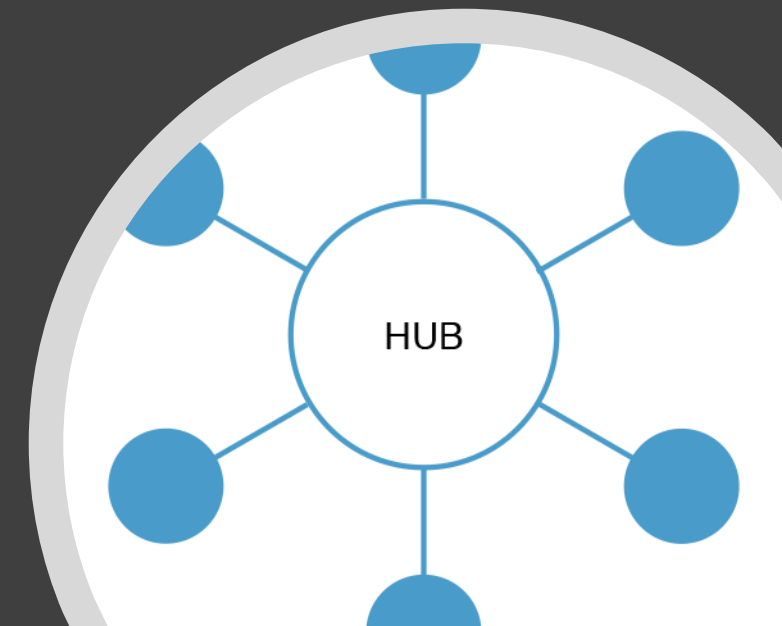
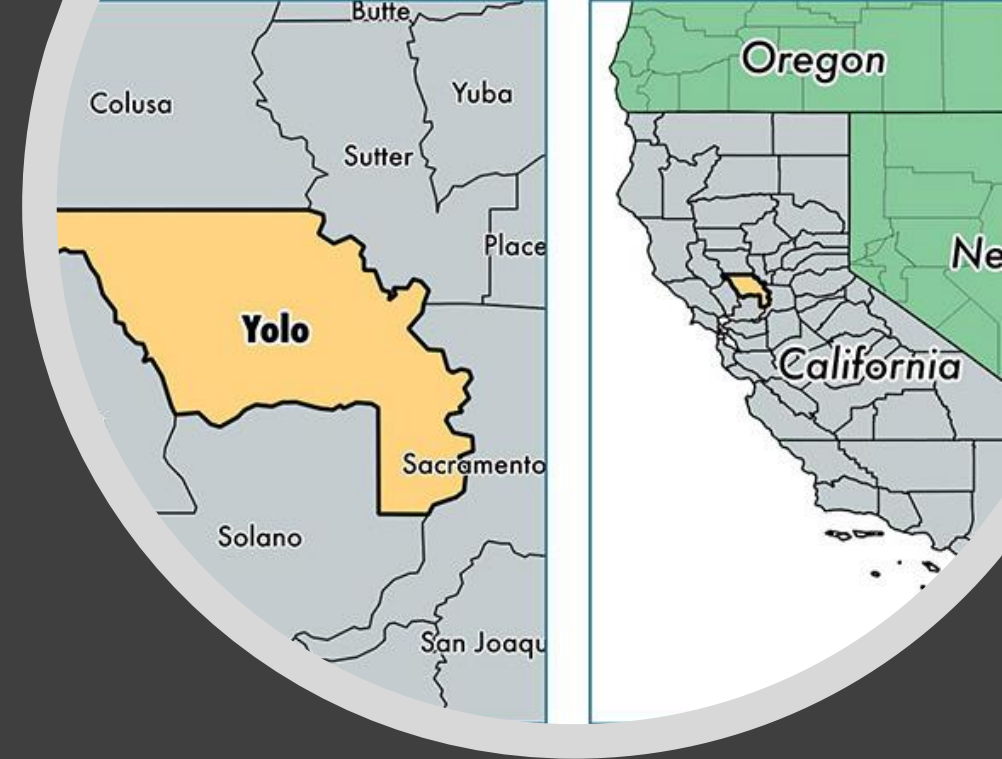
**Federally Qualified Health Center**

**Serves 1 in every 8 Yolo County Residents**

**Primary SUD Provider in the County**

In September 2017, began Hub and Spoke Expansion

- Developed a broader safety net (OUD treatable in primary care)
- Expanded number of prescribers (PA's, NP's)
- Screening at all points of entry
- Integrated health team, if not, work in collaboration with SUD Treatment Services (patient navigator, case manager, peer support etc.)
- Best case scenario; have Behavioral Health/SUD support
- Flows should be immediately responsive
- Reach out to local hospitals, ED's to create bridge when not available





## Initial Challenges:

- Substance Use Treatment as Part of Health Care
- Approach to Care
- Addressing Stigma
- Hiring the Right Staff
- Finding a Champion

## CommuniCare's Interdisciplinary Team:

Registered Nurse, Peer Support, BH Clinician, Prescribers,  
MAT Coordinator, SUD Manager