

# 21<sup>st</sup> Century Recovery: Science Meets Spirituality

**Oregon Recovers Conference  
June 8th, 2019**

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Chief Medical Officer  
Central City Concern**

# Thank you for the opportunity!

- Step Twelve: “Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics, and to practice these principles in all our affairs.”
- The joy of living is the theme of A.A.’s twelfth step and action is its key word here we turn outward toward our fellow alcoholics/addicts who are still in distress.
- Moment of contemplation

# Andy Mendenhall M.D.

- Family Medicine 2000-2009
  - OHSU Residency
  - ER Medicine VAMC, Reedsport
  - Providence Medical Group- Family Medicine and Immediate Care Practice
    - Hospitalist, Emergency Medicine, Hospice
- Addiction Medicine 2005-Present
  - Hazelden
  - HealthWorksNW
  - HazeldenBettyFord
  - CleanSlate Treatment Centers
  - Central City Concern

# Central City Concern-SUDS Continuum

- 1. Hooper Detoxification and Stabilization Center
- 2. Letty Owings Center
- 3. CCC Recovery Center
- 4. Eastside Concern
- 5. CEP- Community Engagement Program
- 6. LEAD-Program
- 7. Sobering Center
  
- Our 13,000 patients served annually interface with Primary Care, Mental Health Care and Housing with limited capacity.
- Active partnerships and referral pathways with more than 40 agencies in the tri-county region.
- Full-spectrum SUDS continuum.
  - Abstinence-only → Permanent Housing

## Disclosures

- Hold a small equity-share in two SUDS treatment companies providing direct-care to patients.
  - CleanSlate Treatment Centers                      Northampton, MA
  - BoulderCare    Portland, OR
- All information presented today is based in the medical literature except for the information that is specifically identified as not having a peer-reviewed, literature-based background.
  - References provided in the context of the footnotes.

## Goals for Today's Talk

- 1. Learn about the disease of addiction.
  - ACES/Trauma
- 2. Learn about population-health and how systems of healthcare delivery (includes addiction treatment) approach the epidemic of addiction in our region.
  - Population segments
  - Evidence-based clinical practice
- 3. Talk about Recovery Culture and Introduce the concept of Recovery Diversity.
- 4. Lots of Q&A throughout the talk

## Contempt Prior to Investigation: Pre Big Book...

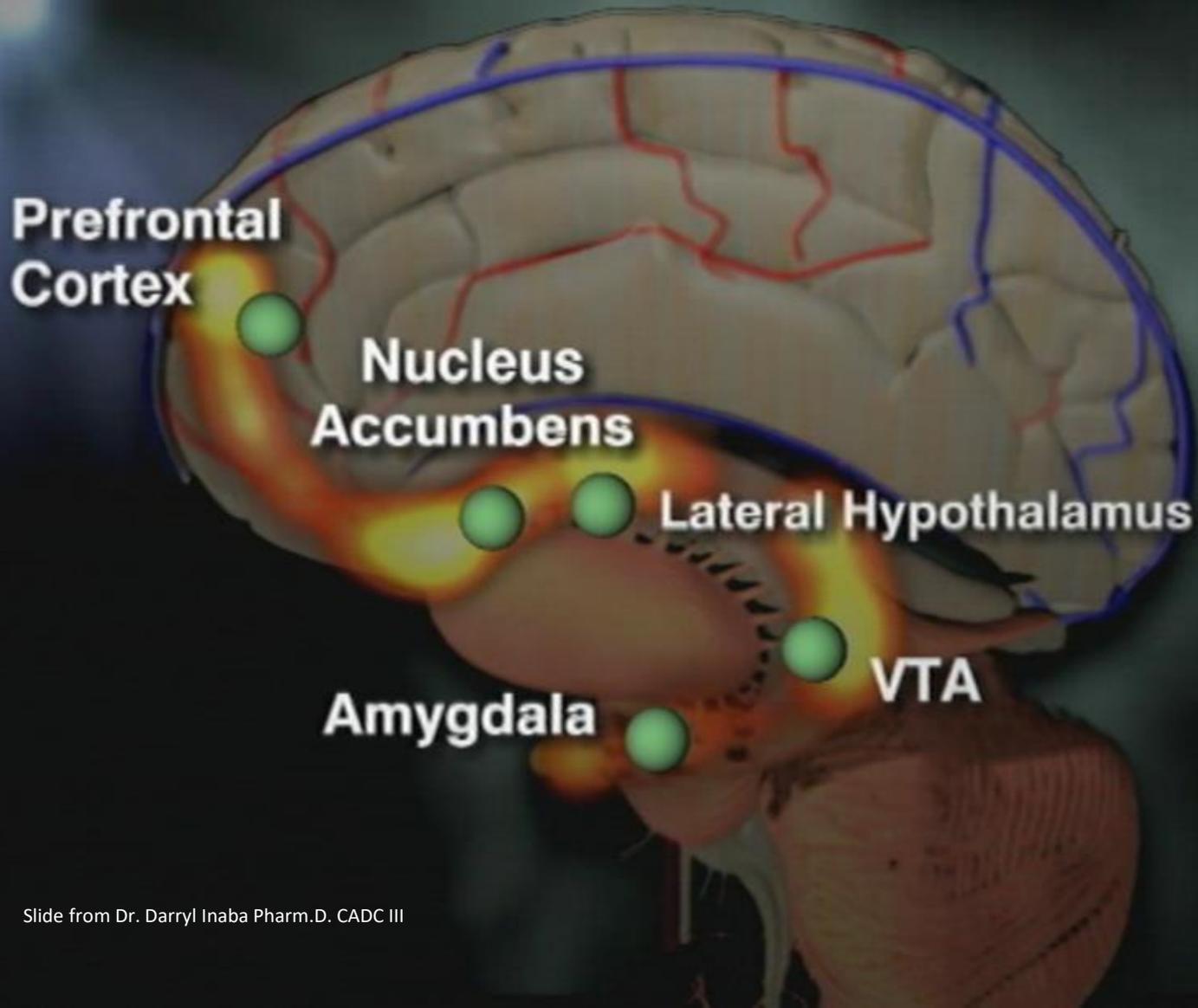
- Herbert Spencer was an English philosopher, biologist, anthropologist, sociologist, and prominent classical liberal political theorist of the Victorian era.
- “There is a principle which is a bar against all information, which is proof against all arguments and which cannot fail to keep a man in everlasting ignorance — that principle is contempt prior to investigation.”
- Contempt defined: the feeling that a person or a thing is *beneath consideration, worthless, or deserving scorn*.

Spencer co-opted this from 18th century British theologian William Paley.....

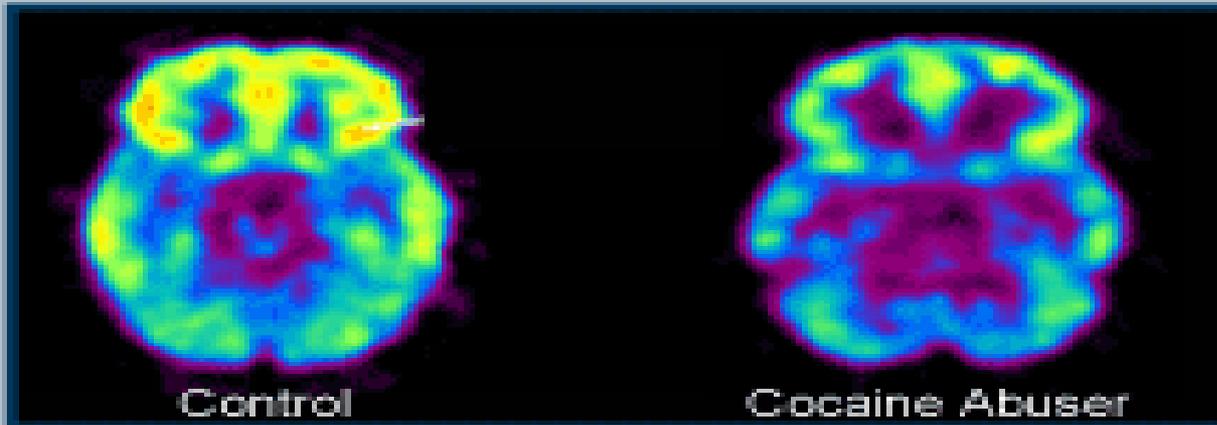
# A Metaphor for Severe Substance Use Disorder



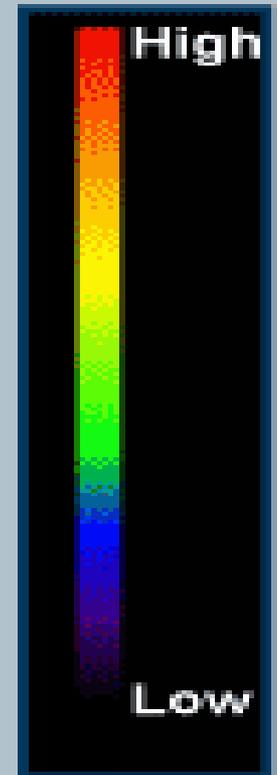
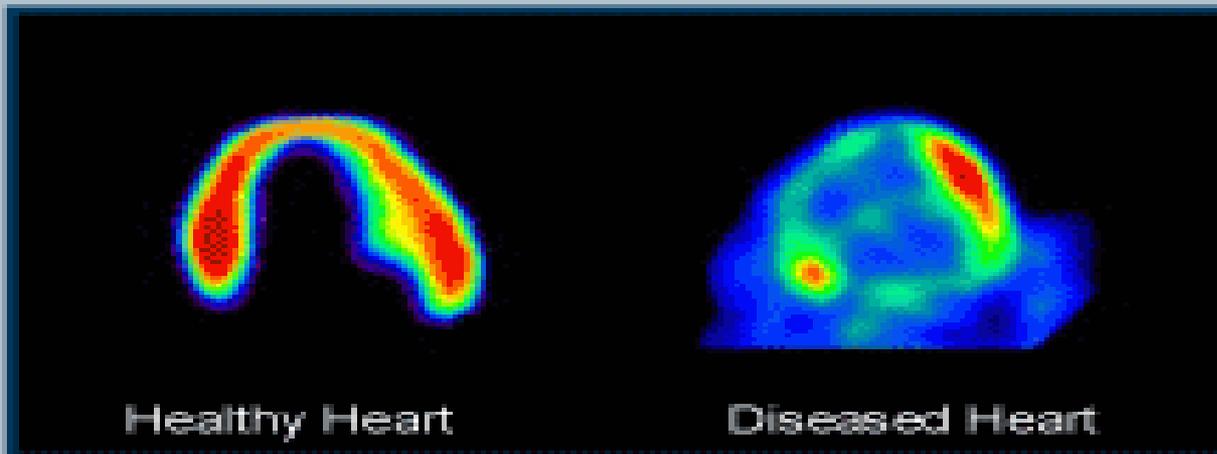
# reward/reinforcement pathway



# Tissue Diseases: Addiction and Ischemic Cardiomyopathy

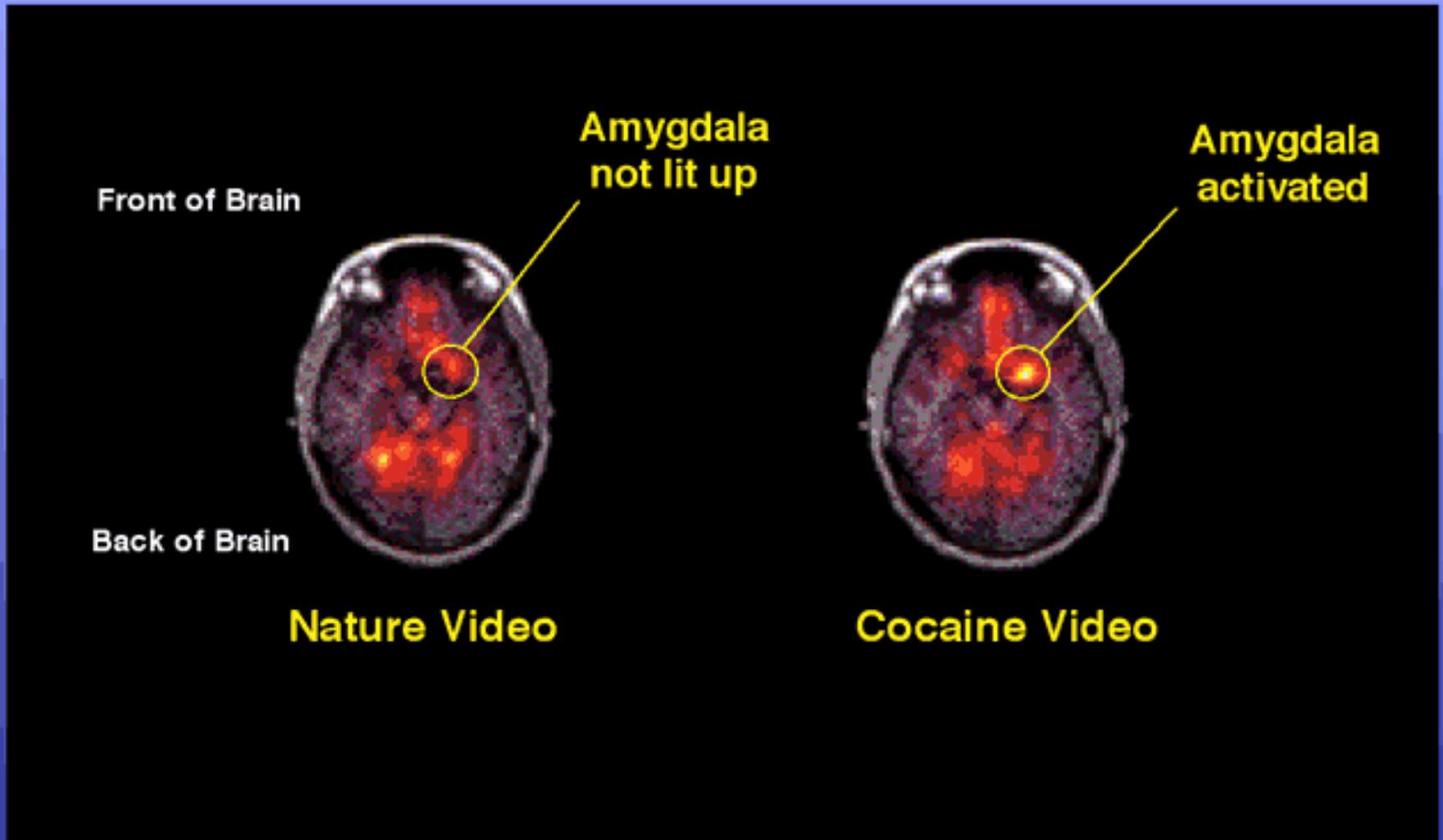


Decreased Heart Metabolism  
in Heart Disease Patient



<https://archives.drugabuse.gov/publications/drug-abuse-addiction-one-americas-most-challenging-public-health-problems/addiction-chronic-disease>

# The Memory of Drugs



**Saliency: The Act or State of Being Prominent in Consciousness is the descriptor for REWARD MEMORY**

Level of susceptibility:



Low

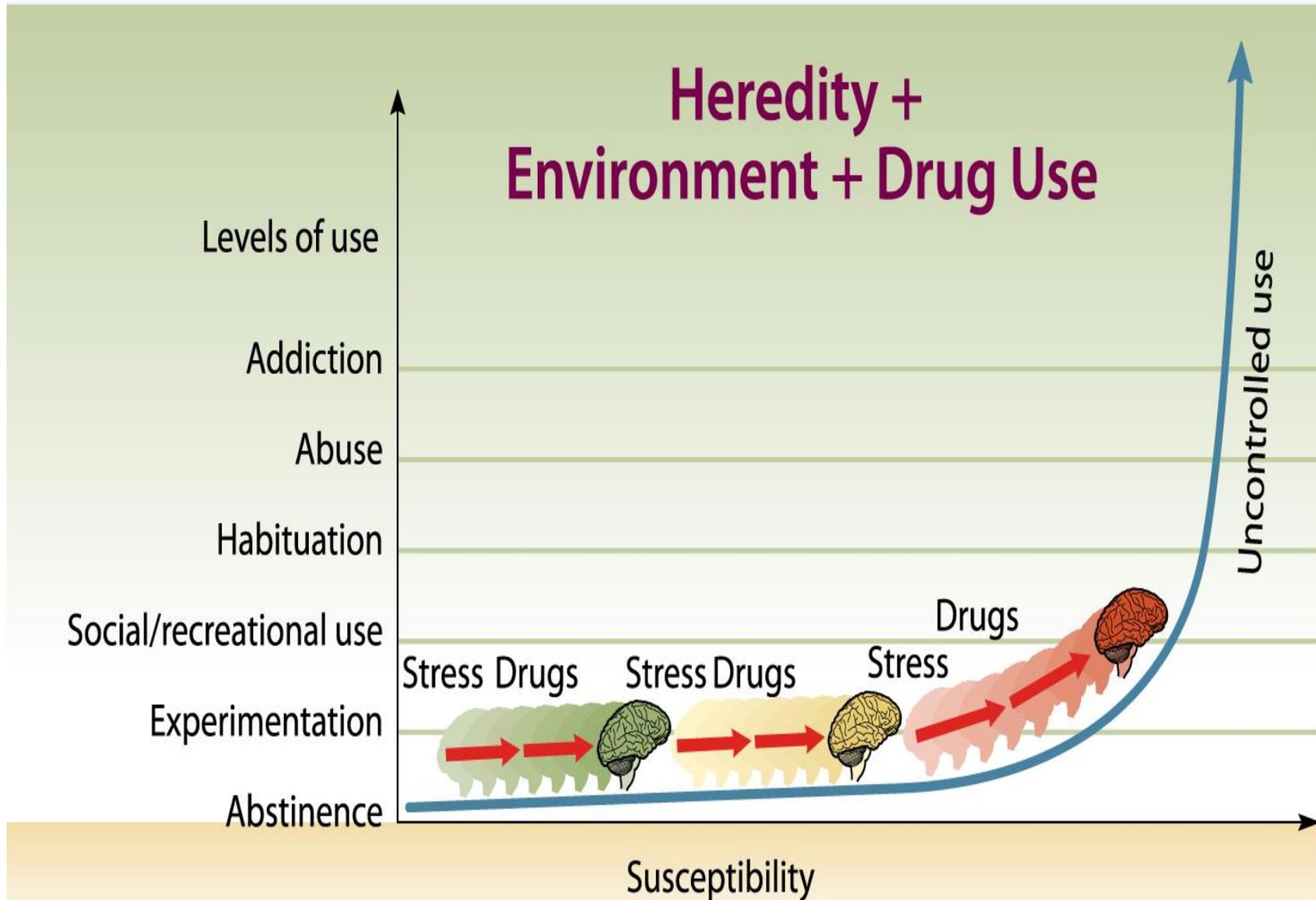


Moderate



High

# Heredity + Environment + Drug Use



# Toxic Stress/Trauma: Adverse Childhood Events

- Drs. Vincent Felitti and Robert Anda, co-founders of the ACE Study.
- Five Related to Self:
  - Physical abuse
  - Verbal abuse
  - Sexual abuse
  - Physical neglect
  - Emotional neglect.
- Five are related to Others:
  - Parental Substance Use Disorder
  - Maternal Victim of domestic violence
  - Family member in jail
  - Family Member with a Diagnosed Mental Illness, d
  - Disappearance of a parent through divorce, death or abandonment.
- 2/3 of Drug Use Problems may be attributed to ACEs

[Am J Prev Med.](#) 1998 May;14(4):245-58. Felitti et. al.

**Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study.**

[http://www.cambridge.org/gb/knowledge/isbn/item2709685/?site\\_locale=en\\_GB](http://www.cambridge.org/gb/knowledge/isbn/item2709685/?site_locale=en_GB)

# Toxic Stress/Trauma and Adverse Childhood Events

## Adverse Childhood Experiences Are Common

### Household dysfunction:

Substance abuse	27%
Parental sep/divorce	23%
Mental illness	17%
Battered mother	13%
Criminal behavior	6%

### Abuse:

Psychological	11%
Physical	28%
Sexual	21%

### Neglect:

Emotional	15%
Physical	10%

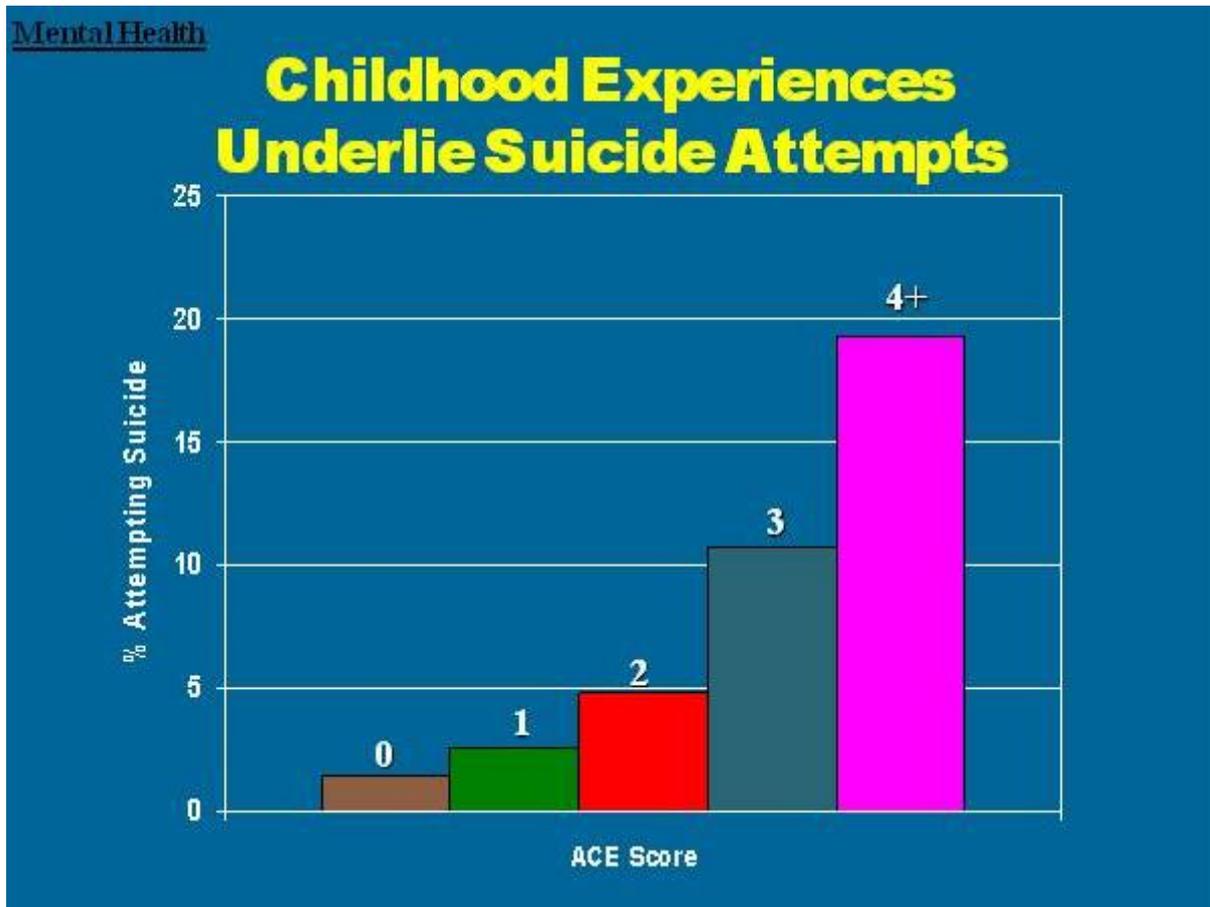
# Outcomes Related to ACES



[Am J Prev Med.](#) 1998 May;14(4):245-58. Felitti et. al.

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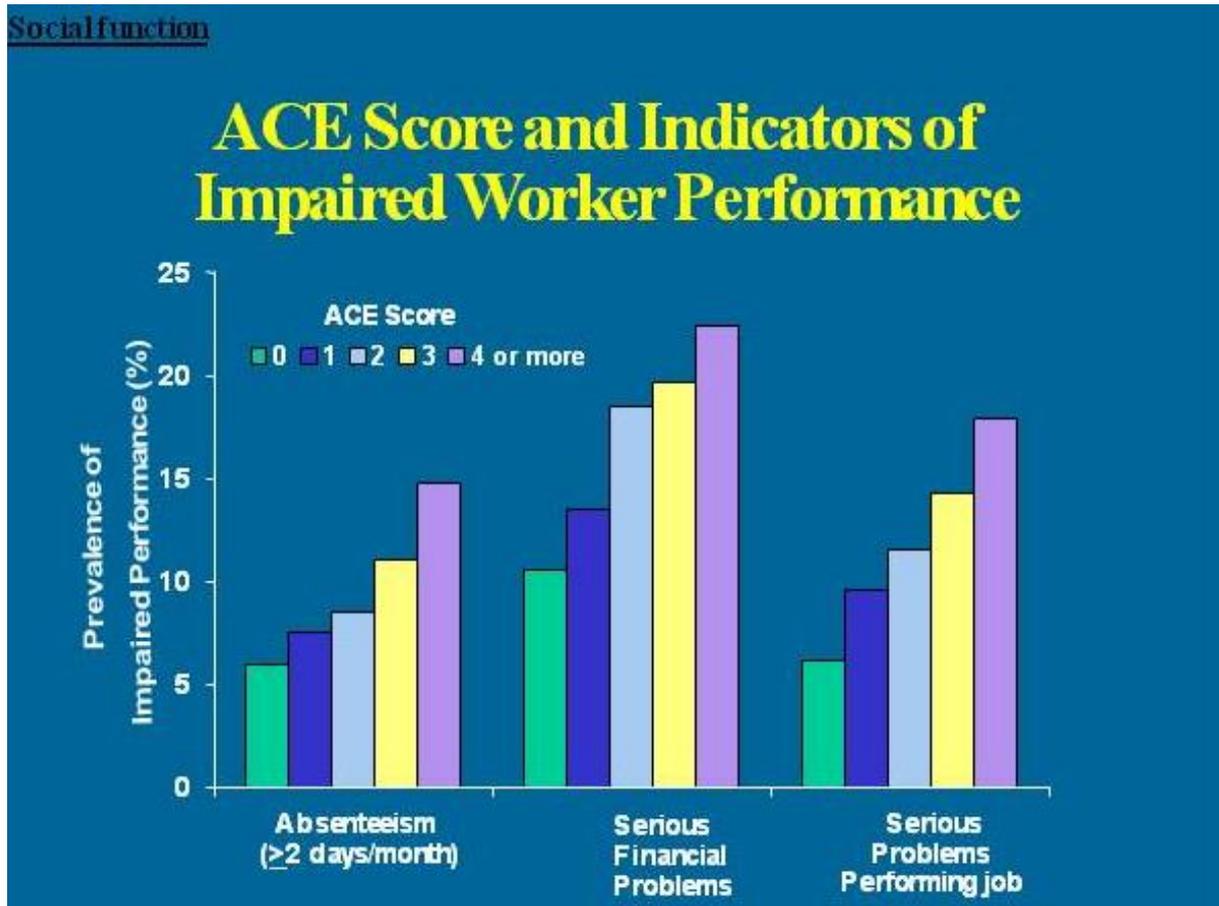
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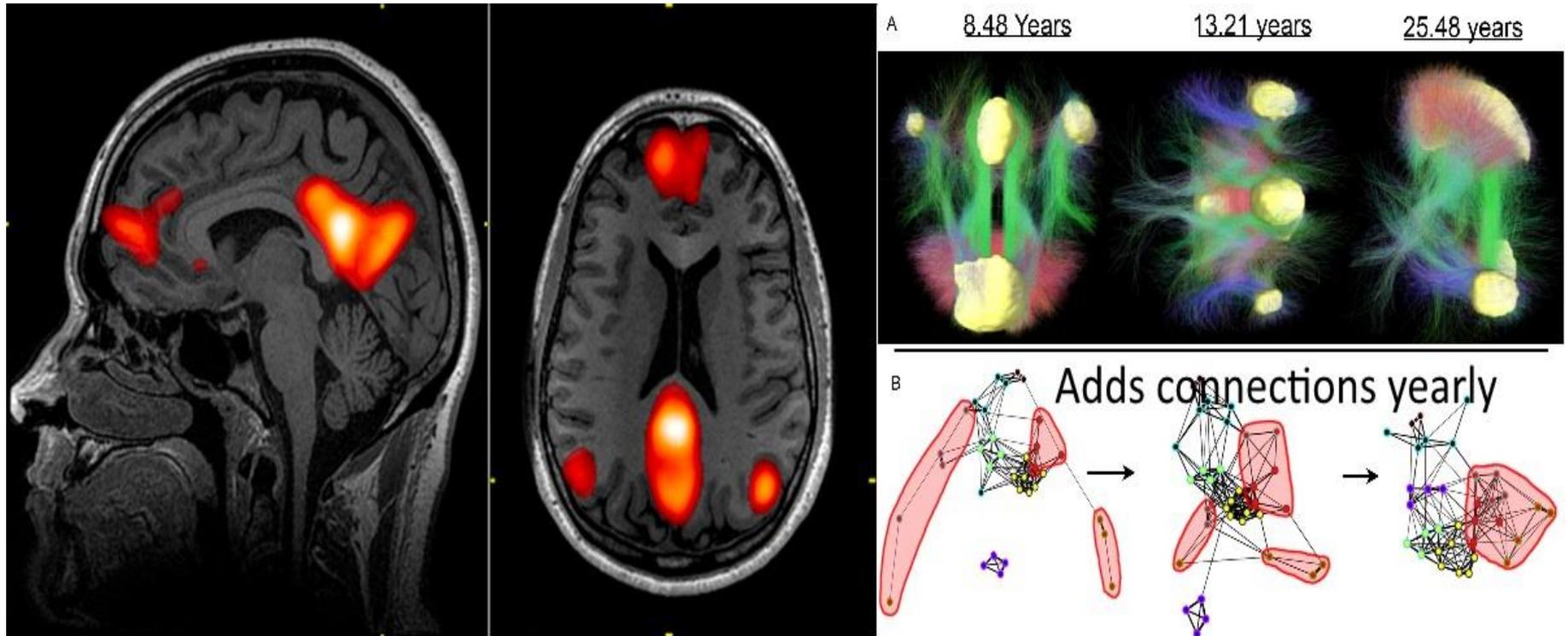
# PTSD and Substance Use Disorders

- National epidemiologic studies,
  - 46.4% of individuals with lifetime PTSD also met criteria for SUD (1).
  - 27.9% of women and 51.9% of men with lifetime PTSD also had SUD
  - Women with PTSD were 2.48 times more likely to meet criteria for alcohol abuse or dependence and 4.46 times more likely to meet criteria for drug abuse or dependence than women without PTSD.
  - Men were 2.06 and 2.97 times more likely, respectively (2)
- Combat Trauma and SUDS +/- TBI History +/- Persistent Pain
  - Service members in the Iraq and Afghanistan Theaters

1. Back, S. E., Waldrop, A. E., & Brady, K. T. (2009). Treatment challenges associated with comorbid substance use and posttraumatic stress disorder: Clinicians' perspectives. *American Journal of Addiction, 18*. 15-20. doi: 10.1080/105505490802545141

2. Kessler, R. C., Sonnega, A., Bromet, E. J., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52*, 1048-1060. doi: 10.1001/archpsyc.1995.03950240066012

# Trauma Imprints and Alters the Default Mode Network



This is what we are up against. Only recently discovered, it's called "The Default Mode Network," and when we are not focused on a task, it kicks in and starts chatting with us at a rate of 300-1000 words per minute. It produces mostly negative self-talk, and is fully developed by age 25!

- Thoughts or Questions?
- Take Home Messages;
  - Chronic brain disease
  - Learning component and likely an inflammatory component
  - Survival Biology Turned Upside Down
- Trauma is harmful
  - Developmental differences in brain structures and activities
- Elevated ACES Score → Higher probability of SUD, MH, Chronic Medical Condition and Social Dysfunction

# Public Health Concepts

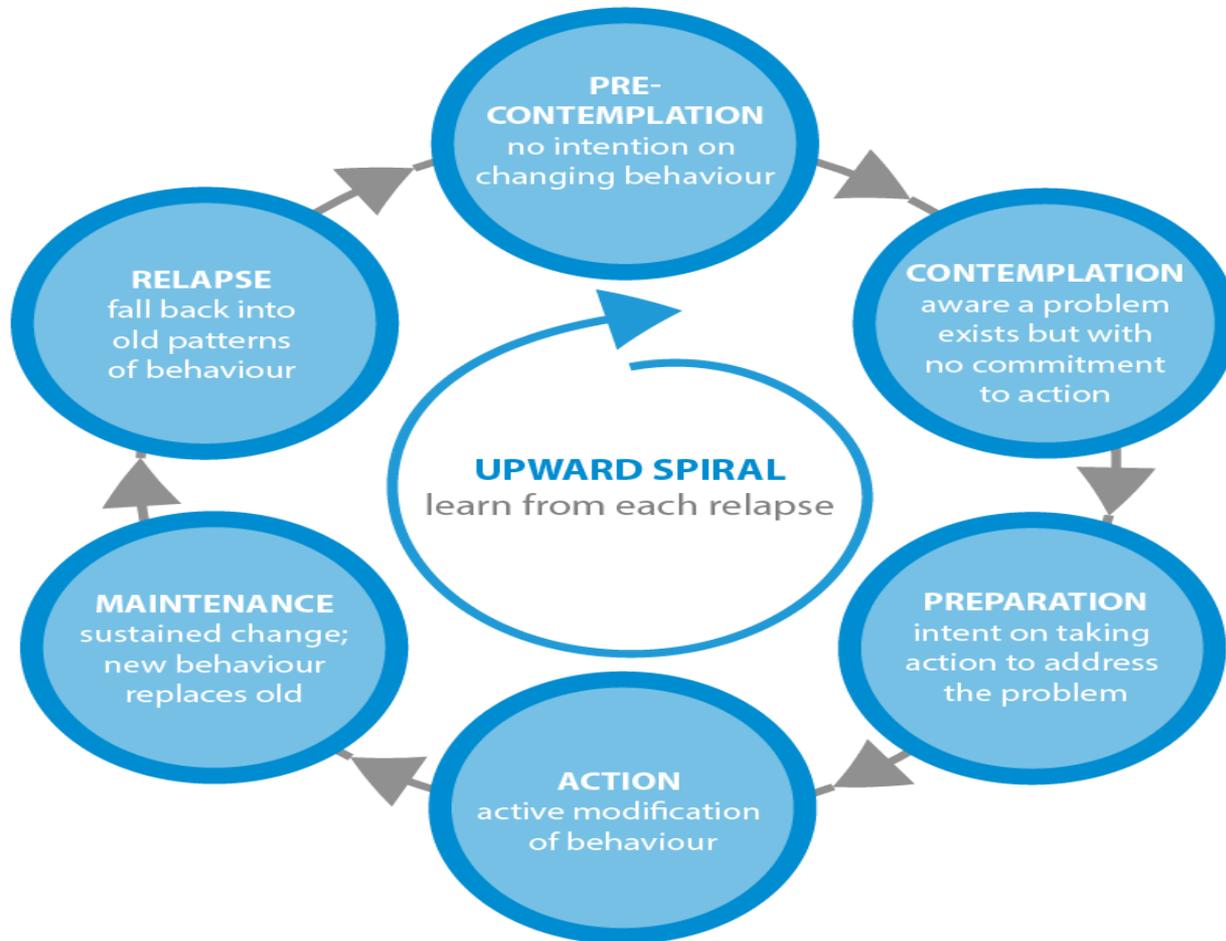
- Number Needed to Treat
  - The number of people that need to do something for a set period of time in order to prevent one harmful outcome or to create one positive outcome.
  - i.e. Preventing kidney failure and a need for dialysis by treating diabetes.
- Number Needed to Harm
  - The number of people that need to be treated to have one bad outcome or consequence related exclusively to the treatment.
  - i.e. Diabetes and complications of low blood sugar.

# Broad Philosophic Context

<b>Diabetes Tight Glycemic Control</b>	<b>A1C&lt;7.0%</b>	<b>NNT 250</b>	<b>NNH 6</b>
<b>Hypertension</b>		<b>NNT 29-118</b>	
<b>Hypercholesterolemia</b>	<b>Primary Prevention Secondary Prevention</b>	<b>NNT 22-80 NNT 7-9.1</b>	<b>NNH 63-167</b>
<b>Alcohol Use Disorder</b>	<b>Acamprosate Total Abstinence Naltrexone Total Abstinence Naltrexone Zero Heavy Drink</b>	<b>NNT 12 NNT 20 NNT 12</b>	
<b>Buprenorphine</b>	<b>Retention in Treatment</b>	<b>NNT 2-4</b>	

# Another Concept in Human Behavior: Stages of Change

## STAGES OF CHANGE



## The Challenge in Population Health for SUDS

- Helping More People Achieve an improvement in their substance use disorder(s).
  - Quality of life
  - Reduce Health Care Cost
  - Disrupt the cycle of ACES
- “Progress Not Perfection....”
- Diabetes as an example of chronic disease management.
- Consider the ASAM Dimension: Environment of Recovery

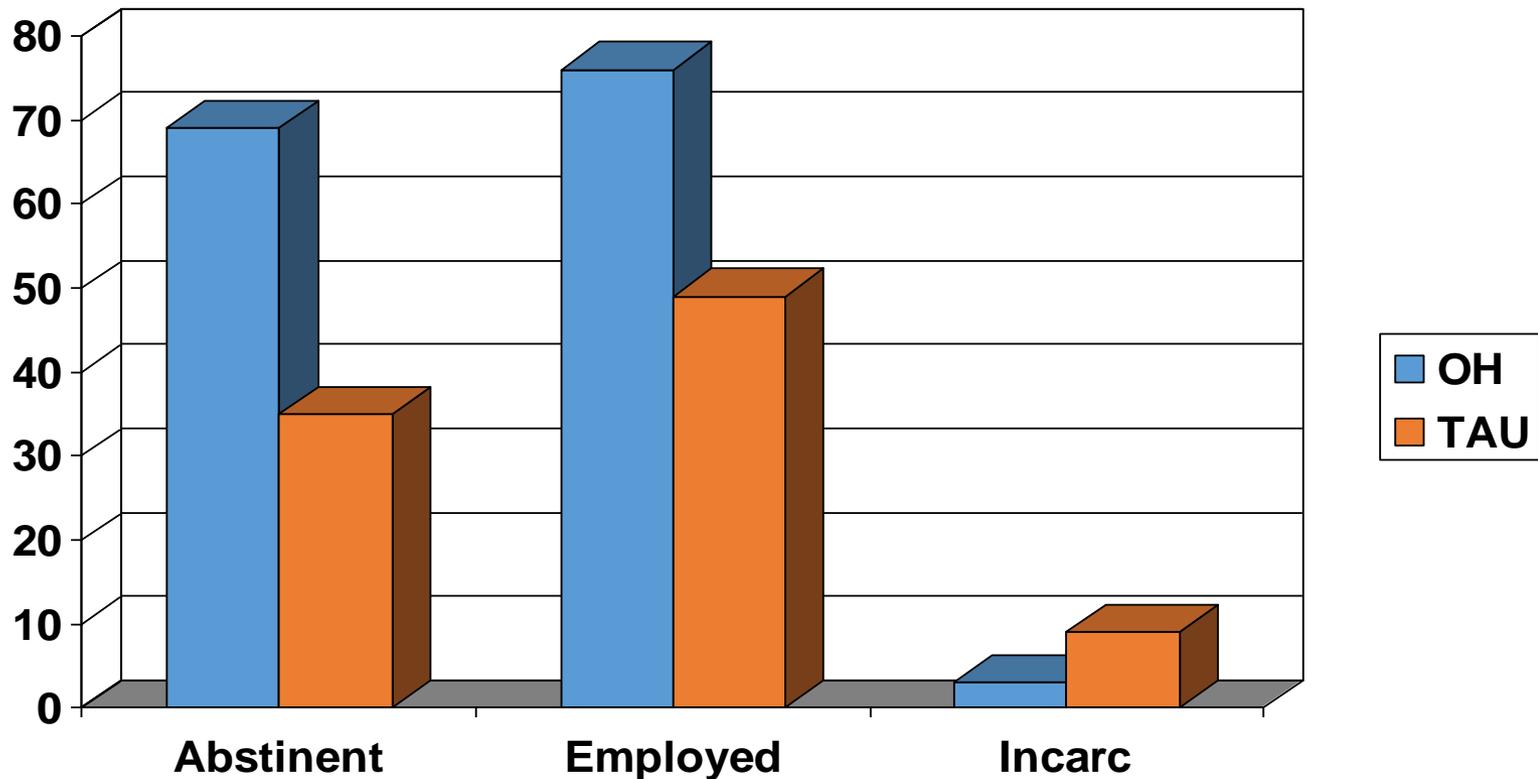
# Let Us Talk About Treatment

- What do we know;
  - Combination of person-centered, individualized treatment.
  - Levels of Care: Outpatient → Residential
    - ASAM Criteria for Patient Placement
  - Treatment of Co-occurring conditions
  - Medication Supported Recovery Options
  - Longitudinal Management
  - Environment of Recovery that is supportive
- Insurance Companies have limited benefits.
- Access to all of the above modalities is typically limited.
  - Some limits are philosophical in nature
  - Others are financial → Oregon is bottom 10 for SUDS Services.

## Now let us consider the Environment of Recovery

- Small Clinical Trial of Oxford House
- Oxford House is a 12-step influenced, peer-managed residential setting in which almost all patients attend AA/NA
- 150 Patients randomized after inpatient treatment to Oxford House or TAU
- 77% African American; 62% Female
- Follow-ups every 6 months for 2 years, 90% of subjects re-contacted
- Community, Connectedness, Relationships, Empathy

# At 24-months, Oxford House (OH) produced 1.5 to 2 times better outcomes



# Alcohol Use Disorder Pharmacological Treatment

- Traditional mutual-help groups: Alcoholics Anonymous
  - 15% participation at 12 months
    - Est. Total Abstinence Rate 8-9%/12 months
  - Extremely helpful to those who regularly attend
    - Most choose not to attend
- Pharmacotherapy
  - Naltrexone 50mg once daily
    - Increases the alcohol abstinence rate to 12-13% at 12 months
    - Reduces heavy drinking days in >70% of patients by 80%
  - Acamprosate 330mg, two tabs three times per day
    - Doubles the abstinence rate to 17-18%.
    - Minimal impact on heavy drinking days.
  - Disulfiram – Makes people sick if they drink.
  - Others: Gabapentin, Topamax, Baclofen, Varenicline

# Opioids

- The epidemic.... 200,000+ Deaths since 2000.
- Prescription Opioids, Heroin, Fentanyl...
- Frighteningly reinforcing and rapidly create physiologic dependency.
- Epigenetic change in midbrain reward wiring in animal models of physiologic opioid dependency.
  - Inflammation response during periods of being “High.”
  - Explains the utility of maintenance medications.

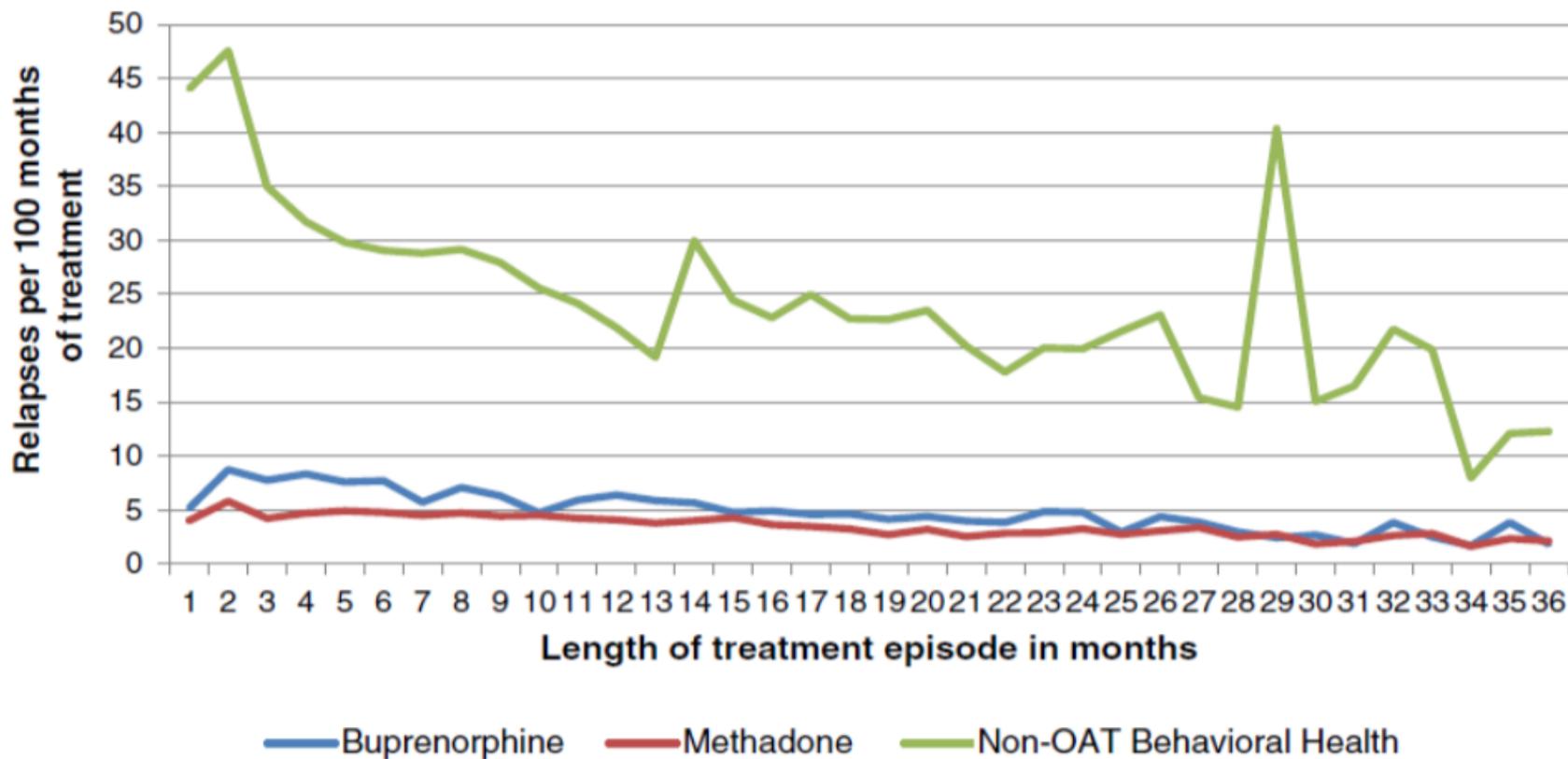
# What do we know about Opioid Use Disorders

- Treatable
- Multiple treatment episodes are necessary:
  - John Kelly Ph.D., MGH
  - “Average Patient with OUD will present for their initial treatment episode after five years of problemativ use of opioids and subsequently require 5-6 treatment episodes over 7-8 years to achieve 12 months of continuous opioid abstinence.”
- Part of this challenge is a lack of access to medication to support recovery.

# Patients Maintained with OAT Demonstrate VASTLY Less Relapse with Opioids.

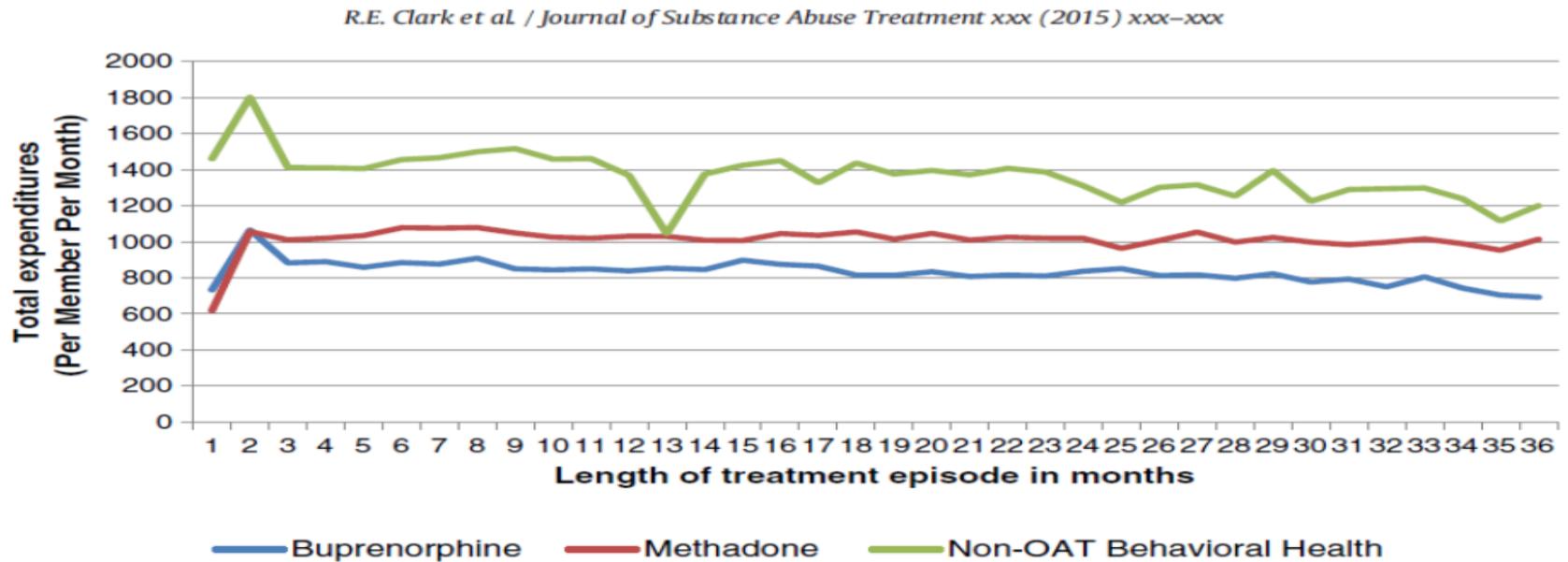
(OAT = Opioid Agonist Treatment)

J Subst Abuse Treat. 2015 October ; 57: 75–80. doi:10.1016/j.jsat.2015.05.001.



52,350 Medicaid Patients in MA followed for 6 years

# What are the costs of caring for patients? (OAT = Opioid Agonist Treatment)



J Subst Abuse Treat. 2015 October ; 57: 75–80. doi:10.1016/j.jsat.2015.05.001.

# Recovery and Treatment Culture

- Recovery Culture: How a clinical program, housing program and/or a community is informed and thereby provides services and support to patients, clients or its participants.
  - Guidance and interpretation of 12-Step Recovery
    - Alcoholics Anonymous, Narcotics Anonymous, Marijuana Anonymous
      - Ex. Bulletin 29 Narcotics Anonymous 1996:
      - WORLD SERVICE BOARD OF TRUSTEES BULLETIN #29 Regarding Methadone and Other Drug Replacement Programs
    - “We make a distinction between drugs used by drug replacement programs and other prescribed drugs because such drugs are prescribed specifically as addiction treatment. Our program approaches recovery from addiction through abstinence, **cautioning against the substitution of one drug for another**. That's our program; it's what we offer the addict who still suffers. **However, we have absolutely no opinion on methadone maintenance or any other program aimed at treating addiction**. Our only purpose in addressing drug replacement and its use by our members is to define abstinence for ourselves.”

# Recovery and Treatment Culture

## WORLD SERVICE BOARD OF TRUSTEES BULLETIN #29 Regarding Methadone and Other Drug Replacement Programs

- “Members on drug replacement programs such as methadone are encouraged to attend NA meetings. *But, this raises the question: "Does NA have the right to limit members participation in meetings?"* We believe so. While some groups choose to allow such members to share, it is also a common practice for NA groups to encourage these members (or any other addict who is still using), to participate only by listening and by talking with members after the meeting or during the break. This is not meant to alienate or embarrass; this is meant only to **preserve an atmosphere of recovery in our meetings.**”
- Historical Message/Interpretation: Medication Support is “Still Using” and/or “Not in Recovery”

# Review Medications to Support OUD

- 1. Buprenorphine and Buprenorphine/Naloxone products
  - Sublingual Films and Tablets
  - Depo-Injection formulation (Sublocade)
- 2. Methadone
  - Daily dispensing through Opioid Treatment Programs
- 3. Depo-naltrexone (Vivitrol)
  - Oral naltrexone is not indicated- has been shown to increase overdose death rate in the OUD population.

# Receptor Pharmacology

Figure 1  
How OUD Medications Work in the Brain



Empty opioid receptor

**Methadone**



*Full agonist:  
generates effect*

**Buprenorphine**



*Partial agonist:  
generates limited effect*

**Naltrexone**



*Antagonist:  
blocks effect*

## What do these medications help patients achieve?

- Longer engagement in treatment.
- Reduction in a return to opioid use.
- Marked reductions in Infectious disease infection rates.
- Reduction in overdose and overdose death-rate.
  
- This is achieved by:
  - Reducing CRAVING/SALIENCE for Opioids
  - Stabilizing acute and post-acute withdrawal symptoms.



# Population Segments

- The concept of separating a population into groups that are similar.
  - i.e. healthy people, chronically ill people, people that are in hospice
- Also separate a group with a single illness into separate “segments” or groups.
  - Substance Use Disorders
    - Stage of Change
    - Primary Substance of Choice
    - Financial Demographic
    - Geography or distance to a treatment resource
- Why? So we can help more people by understanding the population better.

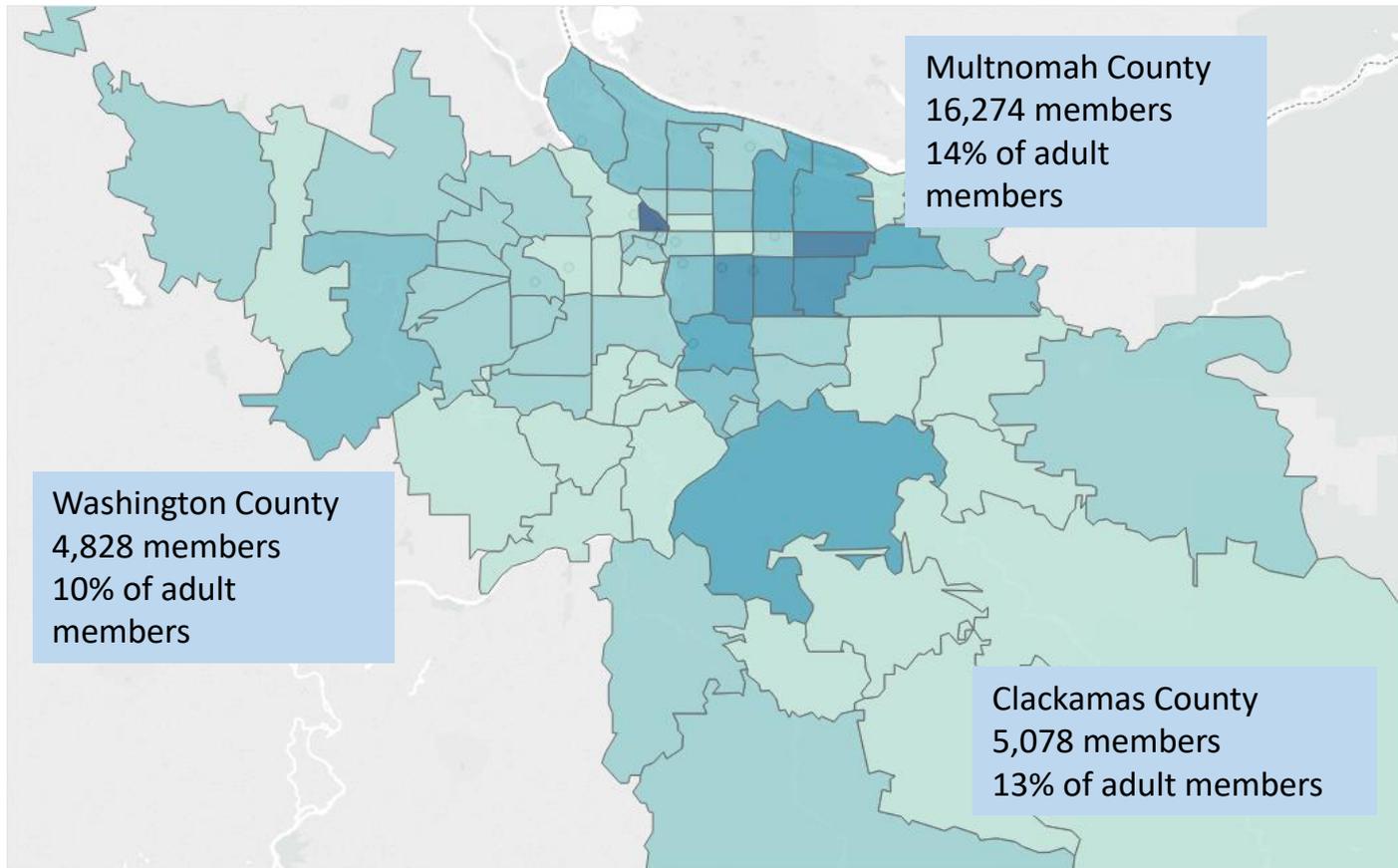
## Approximately 26,000 Health Share members have an SUD diagnosis.

(active Health Share members with a SUDs diagnosis between July 2017 and June 2018)

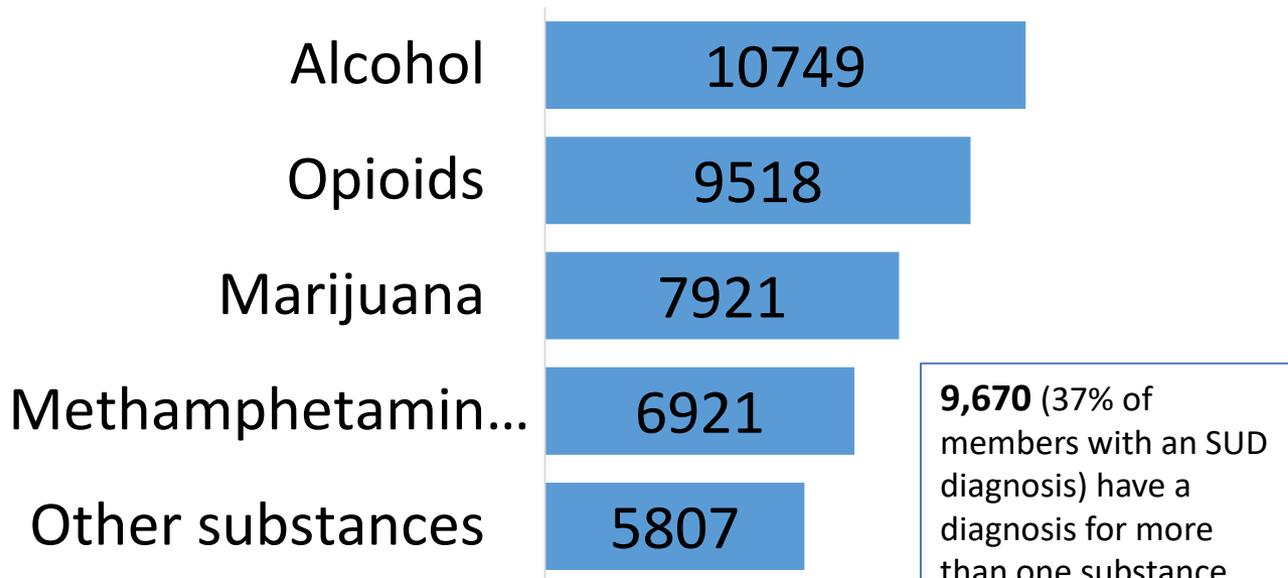


- **8% of members overall**
- **13% of the adult population**
- *This likely under-counts people impacted by substance use disorder, as it requires a diagnosis*

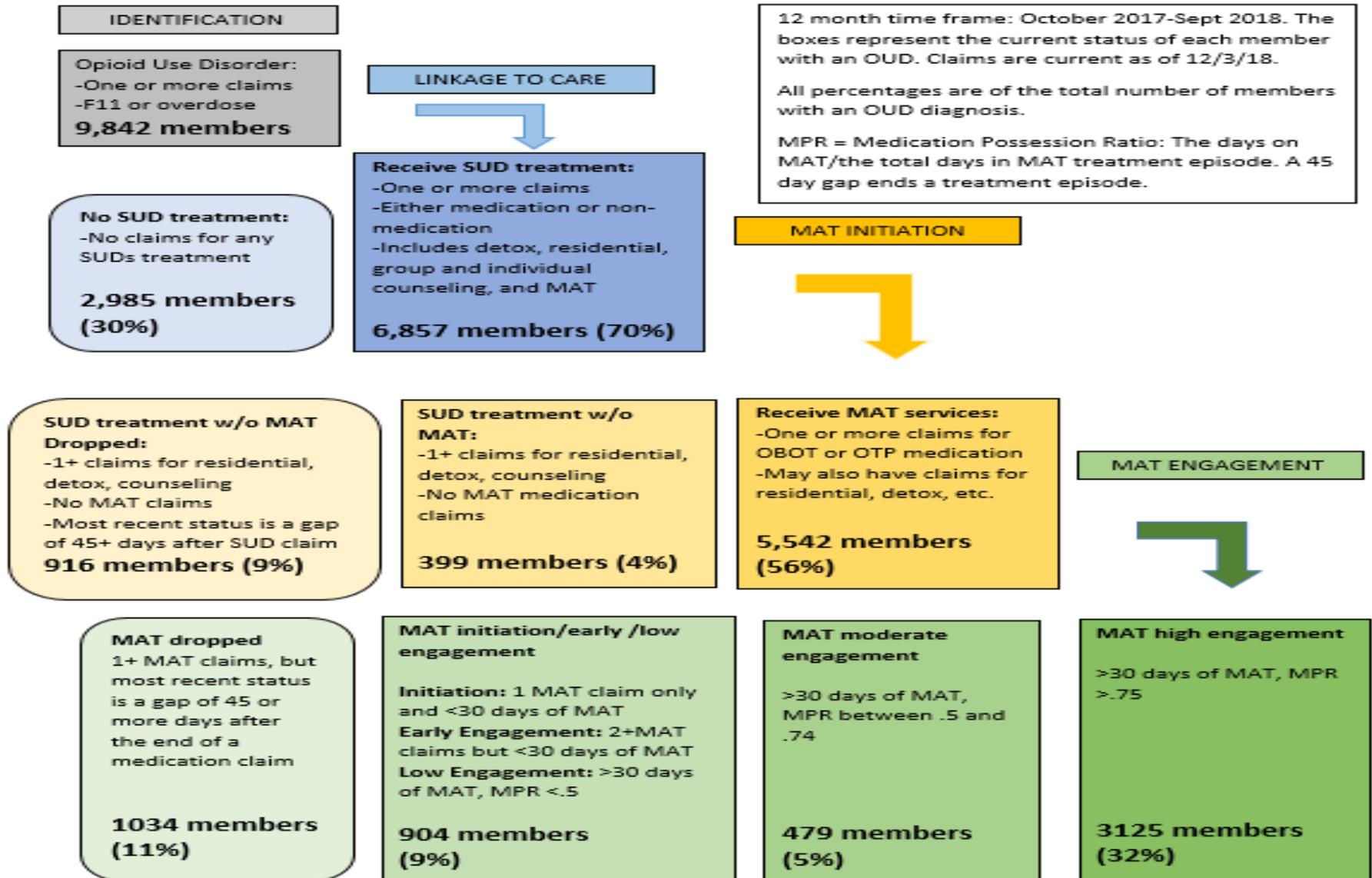
# Members with SUD by Zip



The most common substance types are alcohol, opioids, marijuana, and methamphetamines.



Members can be in more than one group.

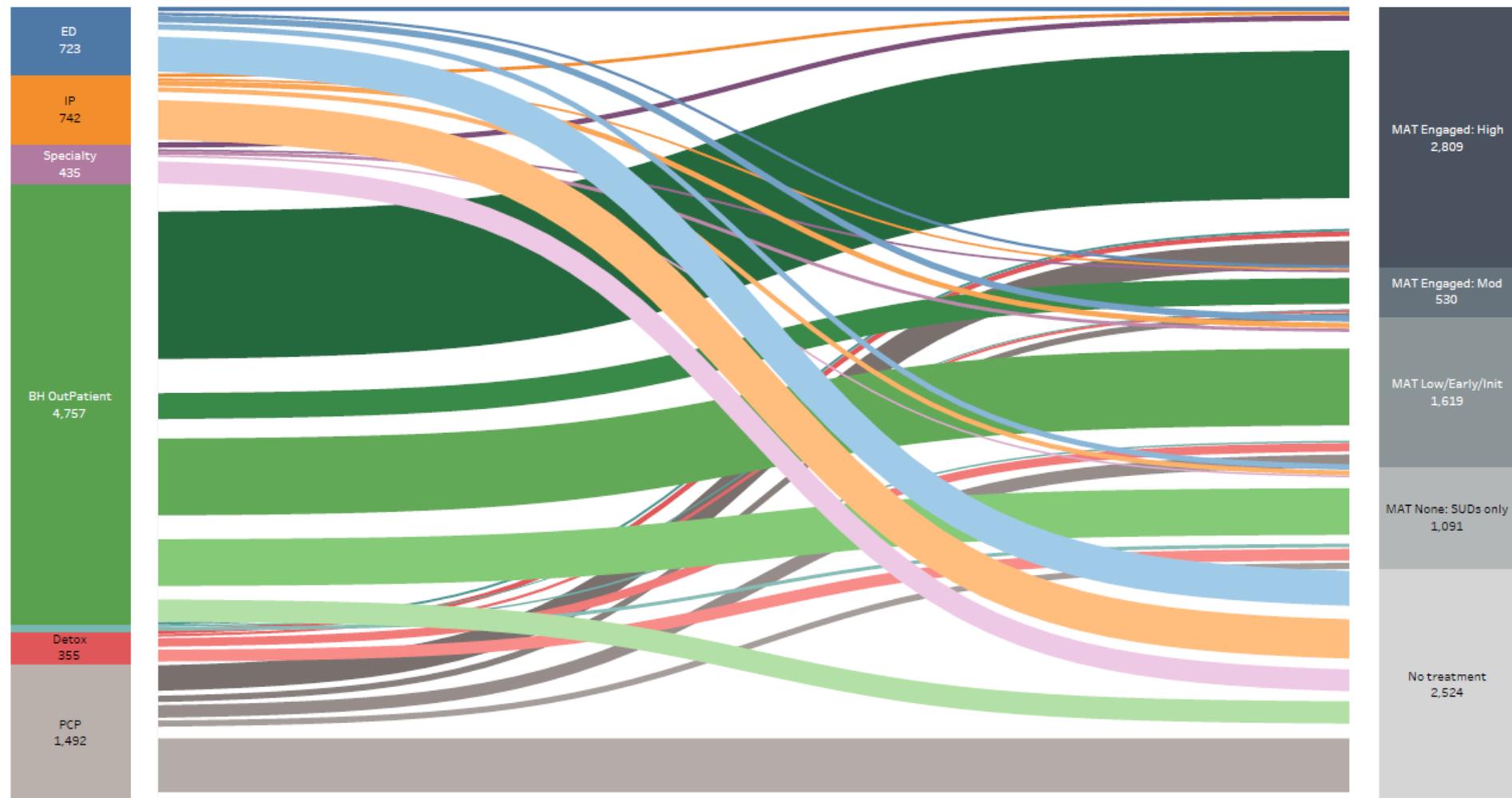


12 month time frame: October 2017-Sept 2018. The boxes represent the current status of each member with an OUD. Claims are current as of 12/3/18.

All percentages are of the total number of members with an OUD diagnosis.

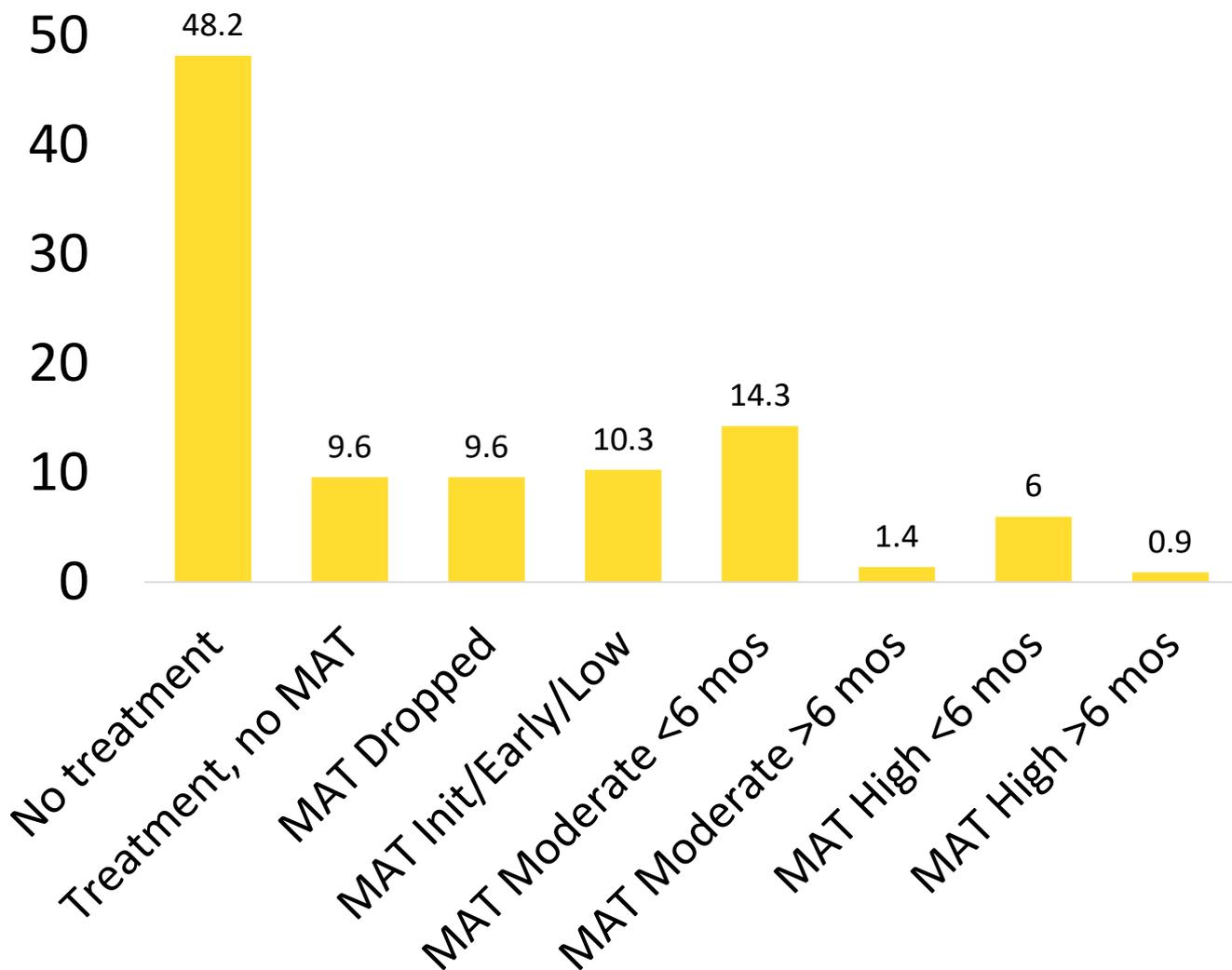
MPR = Medication Possession Ratio: The days on MAT/the total days in MAT treatment episode. A 45 day gap ends a treatment episode.

# Where and How do people navigate the healthcare system?



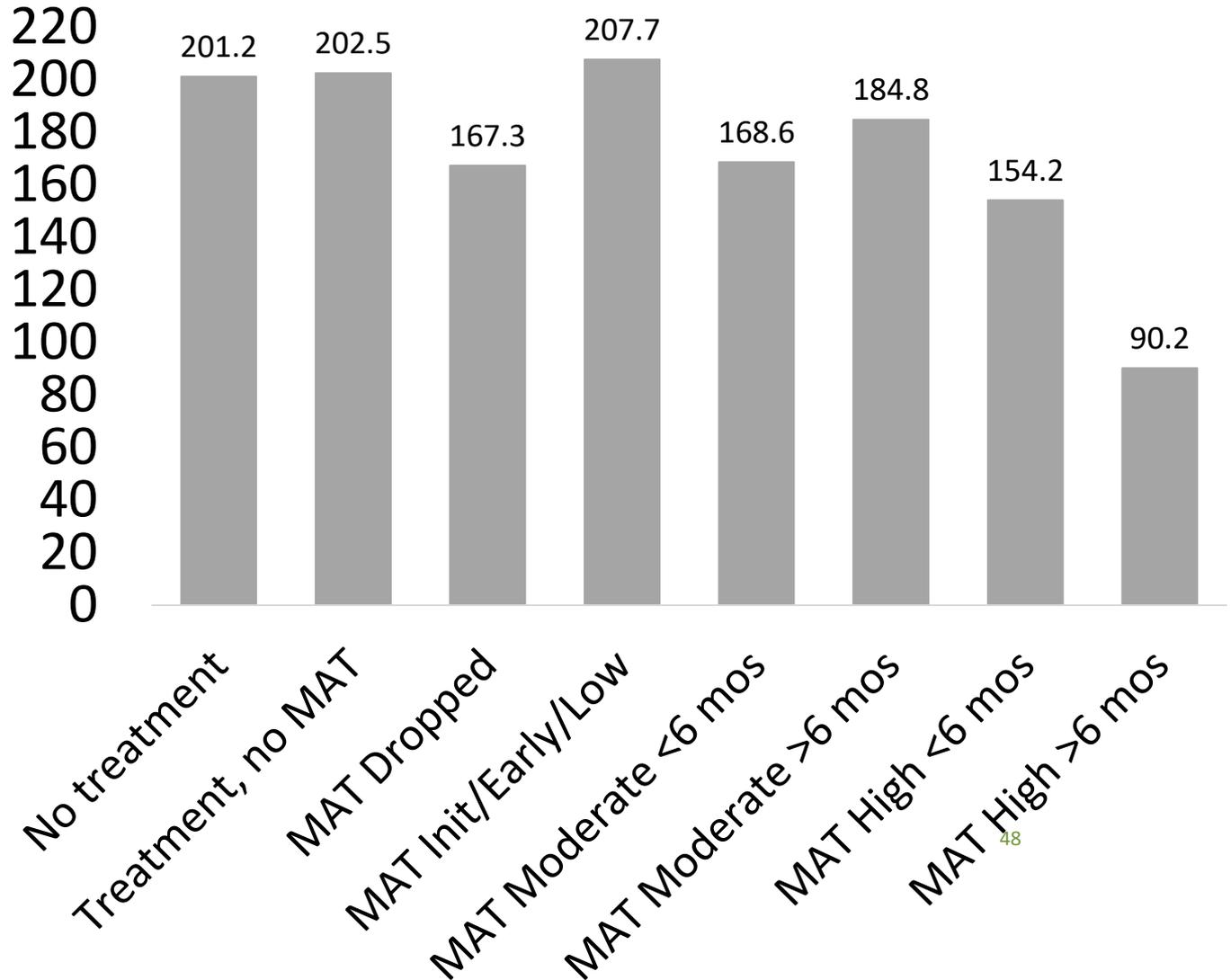
Members in the highly engaged MAT groups have a **700%** lower inpatient utilization rate than members in the no treatment group.

### Inpatient Utilization per 1000 MM



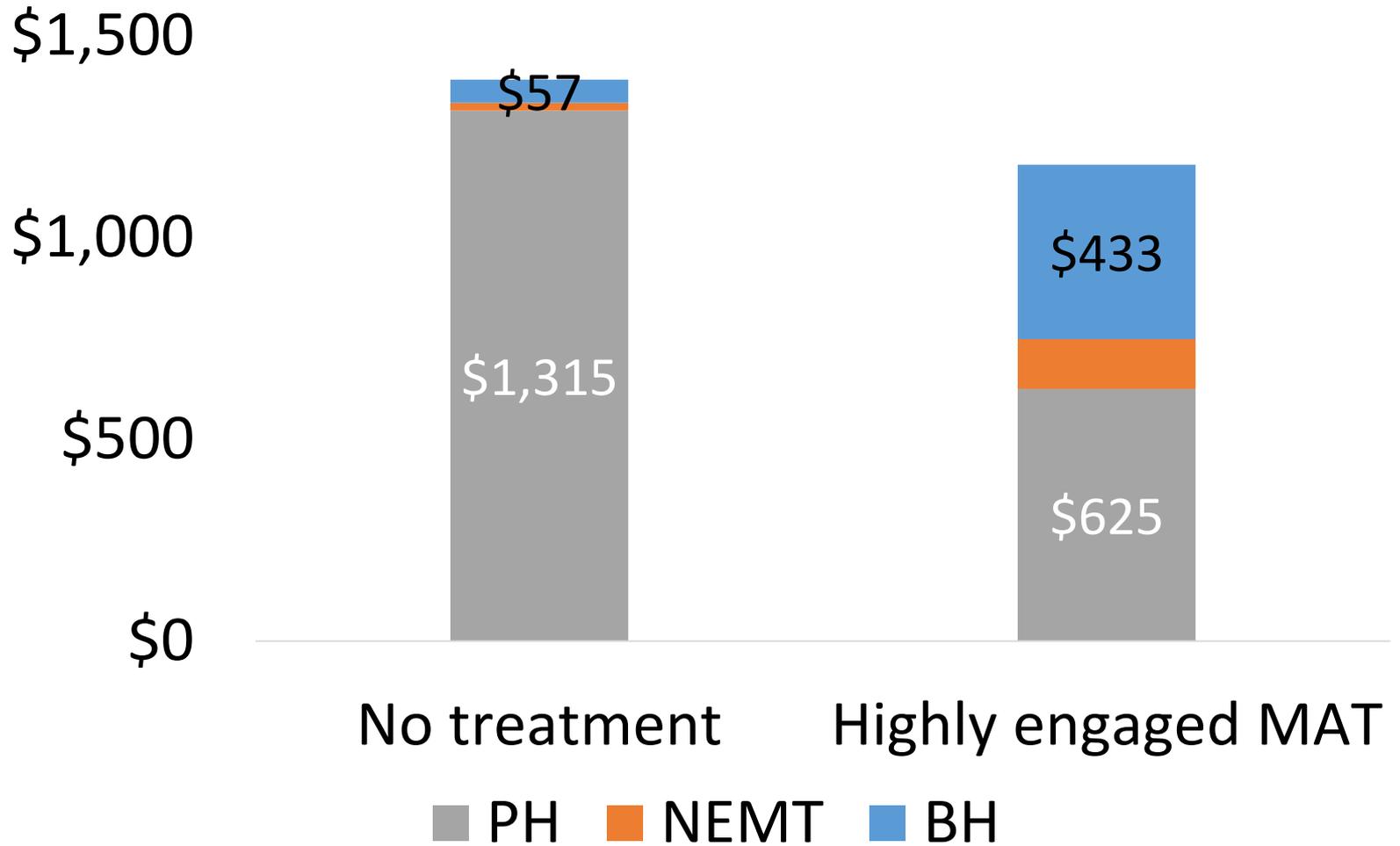
health  
share

## ED Utilization per 1000 MM



Members in the highly engaged MAT groups have a **51%** lower ED utilization rate than members in the no treatment group.

## PMPM Costs by Payer



# Central City Concern: Old Town Clinic OUD Population

## Health Share MAT Initiation and Engagement Rates



Data is from Feb 2018 -Jan 2019, current as of 2/19/2019

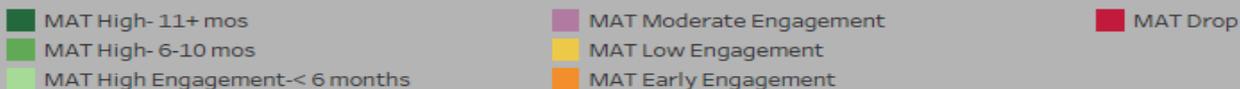
Plan Partner	CareOregon	Clinic Name	Old Town Clinic	Number of members with OUD diagnosis	881
MAT Initiation	72.3%				637
Treatment without MAT	11.9%				105
No treatment	15.8%				139
MAT High Engagement	50.2%				442

### Current MAT Engagement Levels among members who receive MAT services

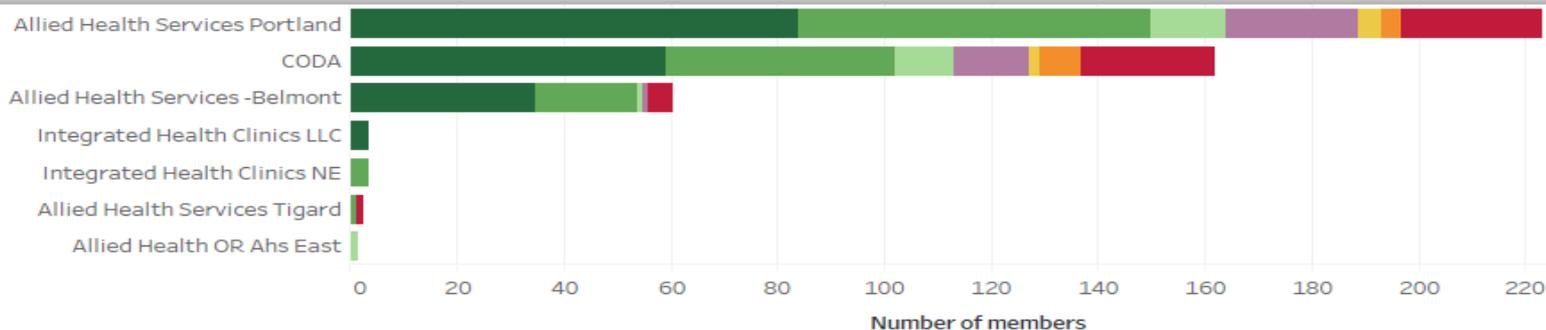
MAT Drop	15.7%	100
MAT Initiation only	1.3%	8
MAT Early Engagement	3.6%	23
MAT Low Engagement	1.7%	11
MAT Moderate Engagement	8.3%	53
MAT High Engagement-< 6 months	9.7%	62
MAT High- 6-10 mos	25.4%	162
MAT High- 11+ mos	34.2%	218

### MAT by Payer among members who receive MAT services

Behavioral Health Plans	72.8%	464
CareOregon	27.2%	173



### OTP Providers



## Central City Concern CEP Cohort Analysis

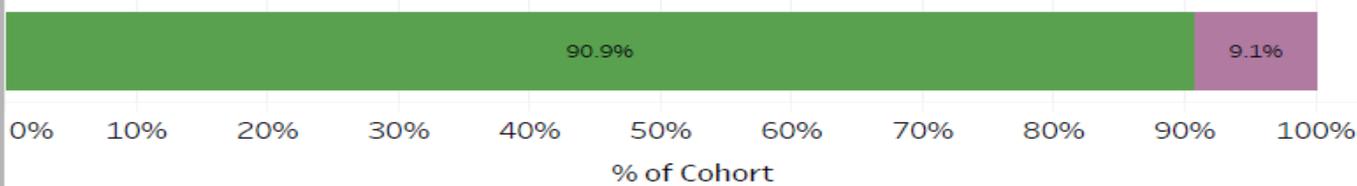
Total n= 45

All data are for February 2018-January 2019 and are current as of 2/19/19.



### CEP Cohort MAT Initiation

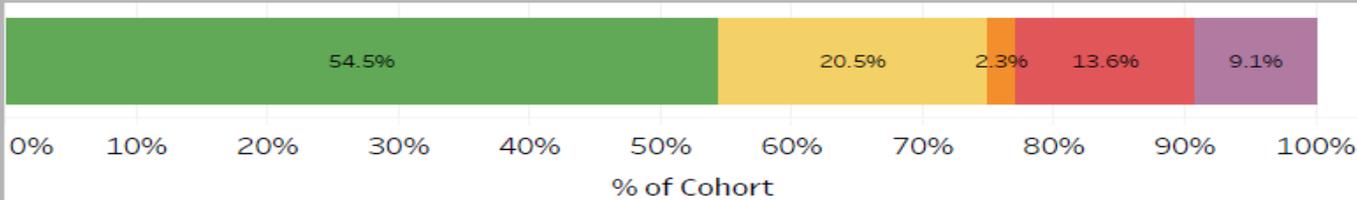
MAT Initiation: 91% (Health Share average is 58%)



- MAT Initiation**
- MAT Initiation
  - Treatment without MAT

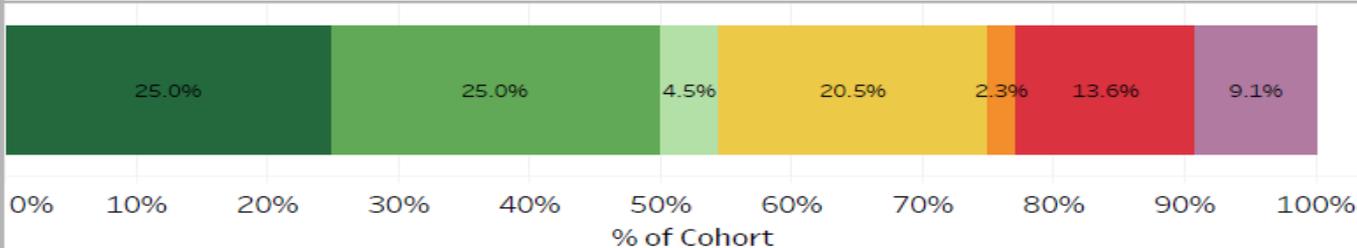
### CEP Cohort MAT Engagement

MAT High Engagement: 55% (Health Share average is 37%)



- MAT High Engagement**
- MAT High Engagement
  - MAT Moderate Engagement
  - MAT Early Engagement
  - MAT Drop
  - Treatment without MAT

### CEP Cohort: All MAT Categories



- MAT All Categories**
- MAT High- 11+ mos
  - MAT High- 6-10 mos
  - MAT High Engagement < 6 months
  - MAT Moderate Engagement
  - MAT Early Engagement
  - MAT Drop
  - Treatment without MAT

# The Treatment of Population Segments

- Recovery Expectancy
  - Variance between that of an Anesthesiologist with IVDA and a Combat Veteran with TBI, PTSD, Homelessness and IVDA.
  - Variance between an attorney with severe alcohol use disorder and a pregnant teenager with ACE of >9+ and bipolar disorder.
- How does each agency, jurisdiction, home group provide access or set up barriers for patients to have the greatest opportunity to achieve engagement and sustained recovery?
  - What are the barriers?
  - What does it take to remove the barriers?

# 21<sup>st</sup> Century Recovery Modalities?

- Looking into the future → Revisiting our past...?
- MDMA
  - FDA Cleared for the treatment of refractory PTSD
  - MAPS Phase 4 Trials for Trauma Treatment-in process
- Psilocybin
  - Clinically proven to reduce fear of death in terminally ill patients
  - Additional research is underway in working with the terminally ill and patients with emotional trauma.
- Ayahuasca
  - Extensive anecdotal reporting related to trauma and addiction treatment
  - Dr. Gabor Mate speaks extensively on this tool as a pathway for trauma healing.
- Iboga (Ibogaine)
  - “Clinics” offering spin-dry services to full-service resort experiences

## 21<sup>st</sup> Century Recovery Modalities?

- The primary mechanism of action of psychedelic substances is to re-program the Default Mode Network of the brain.
- The same DMN that is dramatically different in high-ACE score individuals.
- The DMN is also involved in salience-related programming and may be implicated in the reduction in craving and perseveration about substance use anecdotally reported by people seeking recovery from substance use disorders.

## Goals for Today's Talk

- 1. Learn about the disease of addiction.
  - ACES/Trauma
- 2. Learn about population-health and how systems of healthcare delivery (includes addiction treatment) approach the epidemic of addiction in our region.
  - Population segments
  - Evidence-based clinical practice
- 3. Talk about Recovery Culture and Introduce the concept of Recovery Diversity.
- 4. Lots of Q&A throughout the talk

## 21<sup>st</sup> Century Recovery Culture

- Fights against stigma both external and internal to the Recovery Community.
- Always acknowledge a history that began in 1935.
- Inclusion vs. Exclusion.
- Strengths-Based.
- Values personal autonomy and choice.
- Free of the fear that medication is a barrier to spiritual transformation.
- Openness to learning from both old and new treatment modalities.
- Learning from diversity.
- Seeks to provide no “wrong door” to entering and re-entering recovery.

•Thank You!

## Important Reference Links

- <https://www.chcf.org/.../12/PDF-WebinarSHOUT11292017Buprenorphine.pdf>
- <https://www.chcf.org/.../2017/12/PDF-WebinarSHOUT11292017Methadone.pdf>
- <http://annals.org/aim/article-abstract/719514/acute-pain-management-patients-receiving-maintenance-methadone-buprenorphine-therapy?volume=144&issue=2&page=127>

## Important Reference Links

- <https://pcssnow.org/education-training/training-courses/7b-managing-pain-patient-opioid-use-disorder-inpatient-management/>
- [\*https://store.samhsa.gov/product/TIP-63-Medications-for-Opioid-Use...\*](https://store.samhsa.gov/product/TIP-63-Medications-for-Opioid-Use...)