

# Making Sense of Addiction and Recovery

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# Disclosures/Conflict of Interest



- I have no actual or potential conflicts of interest in relation to this program and no disclosures.

# Objectives:

- Define brief theoretical, public health, and clinical context for substance use disorders , their etiology and epidemiology
- Describe goals and challenges of behavior change related to addiction treatment
- List core elements and support for current evidence-based behavioral and medication treatments
- Implement interventions in practice to improve the likelihood of long-term recovery for patients with SUDs

# This talk will have been helpful for me if we covered...

- ?
- ?
- ?
- ?
- ?



# Definition of Addiction

Addiction is a treatable, chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences. People with addiction use substances or engage in behaviors that become compulsive and often continue despite harmful consequences.

Prevention efforts and treatment approaches for addiction are generally as successful as those for other chronic diseases.

# How can we make sense of addiction?

- How and why do people use drugs?
- What do we know about the process of addiction and why do we call it a “disease”?
- How and why do some progress from non-problematic use to SUD and some don't?
- What are the core elements of treatment?

# Pivotal Developments in the Approach to Substance Use Disorders

- Public Health “Continuum” Model
- Evidence Based Behavioral Therapies
- Neurophysiologic Research and Pharmacotherapy (Medication Assisted Therapy)
- Telehealth and COVID-19

# Health Inequities in Substance Use

## Tobacco

- Industry expanded using enslaved individuals
- Black/Latinx people who use tobacco less likely to...
  - Be asked about tobacco use
  - Advised to quit
  - Receive tobacco-cessation interventions

## Alcohol

During COVID-19...

Largest differences in the proportion exceeding drinking limits, with greater increases for:

-> Women compared to men

-> Black respondents compared to white respondents.

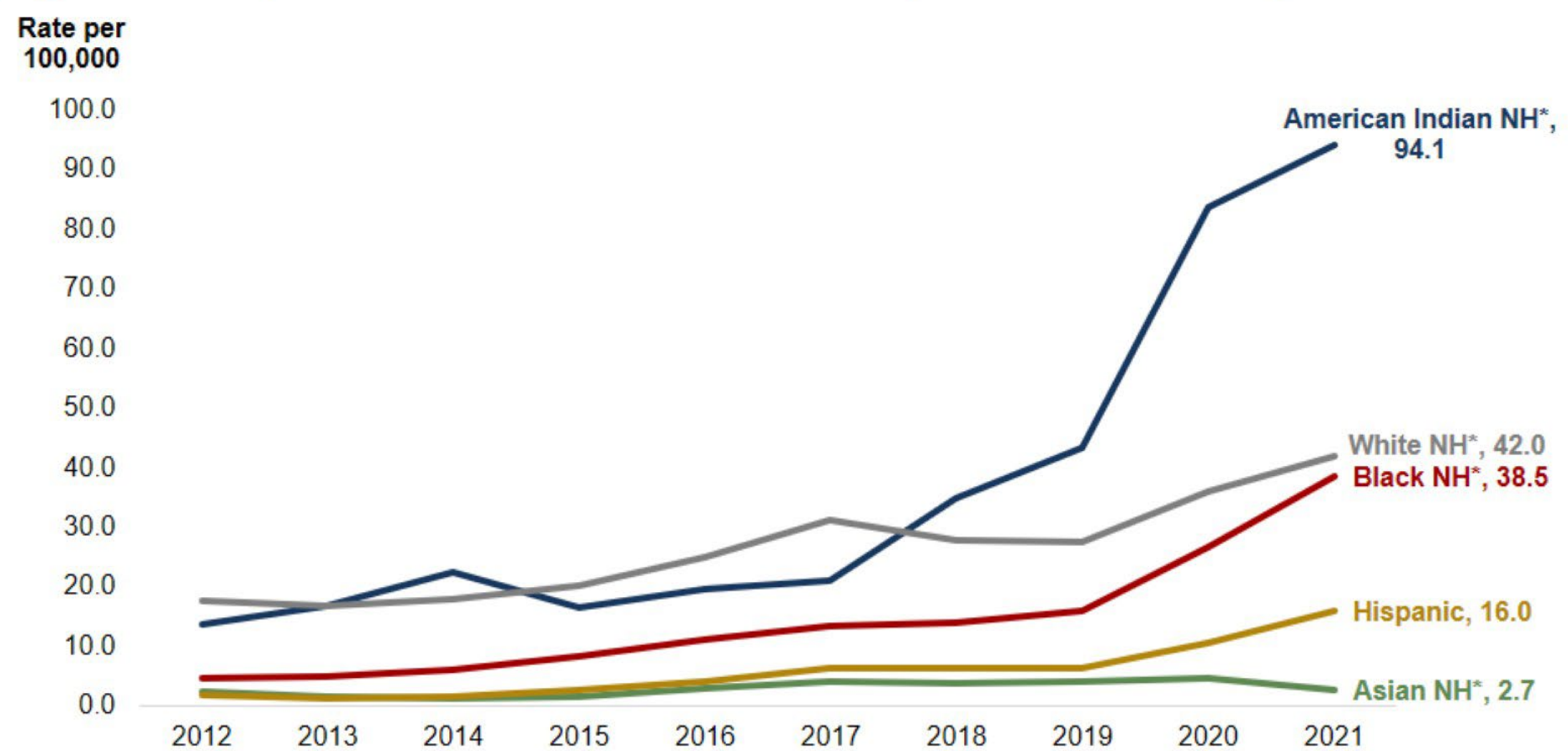
## **Existing Disparities**

Black, Hispanic, or Native American communities are more likely to have a higher density of alcohol retailers than white communities (Gruenewald, 2011). In most North Carolina counties, Black and Hispanic neighborhoods are exposed to greater alcohol outlet density than White non-Hispanic neighborhoods. Increases in density may hit communities of color the hardest (Cox, et. al., 2017).



# Equity and Lived Experience:

Overdose rates are increasing in historically marginalized populations, these were exacerbated by the COVID-10 pandemic



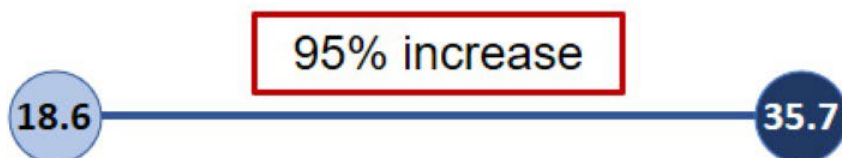
\*NH = Non-Hispanic

**Technical Notes:** Rates are per 100,000 NC residents; All intent medication and drug overdose: X40-X44, X60-X64, Y10-Y14, X85  
**Source:** Deaths-NC State Center for Health Statistics, Vital Statistics, 2012-2021; Population-NCHS, 2012-2020 (2020 as proxy for 2021)  
**Analysis by** Injury Epidemiology and Surveillance Unit

# Rural counties have seen largest increase in opioid-involved overdose death rates over the last five years (2017 to 2021)

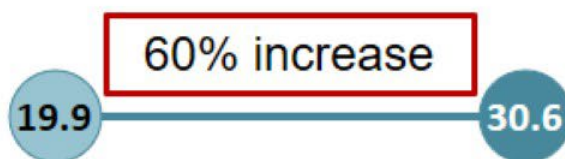
## Rural

530 deaths in 2017  
1,036 deaths in 2021



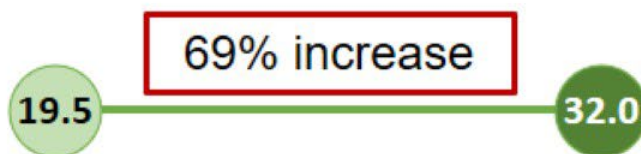
## Urban

1,476 deaths in 2017  
2,359 deaths in 2021



## State

2,006 deaths in 2017  
3,395 deaths in 2021



**Technical Notes:** Rates are per 100,000 residents; All intent: X40-X44, X60-X64, Y10-Y14, X85 X40-X44 and any mention of T40.0 (opium), T40.1 (Heroin) T40.2 (Other Opioids), T40.3 (Methadone), T40.4 (Other synthetic opioid) and/or T40.6 (Other/unspecified narcotics)  
**Source:** Deaths-NC State Center for Health Statistics, Vital Statistics, 2017-2021; Population-NCHS, 2017-2020 (2020 as proxy for 2021); Primary Urban/Rural Designation definition consistent with NC Office of Rural Health  
Analysis by Injury Epidemiology and Surveillance Unit

# War on Drugs...



# Why start using alcohol and/or drugs? (*“volitional use”*)

- To feel good:
- To relax or deal with stress:
- To treat physical or emotional pain:
- To perform better, activate, enhance:
- To be part of a group, socialize, conform:
- To disinhibit or enhance intimacy or sexuality:

# A Long Cultural Tradition of Seeking Pain and Emotional Relief...

“to lull all pain and anger and bring forgetfulness of sorrow...”

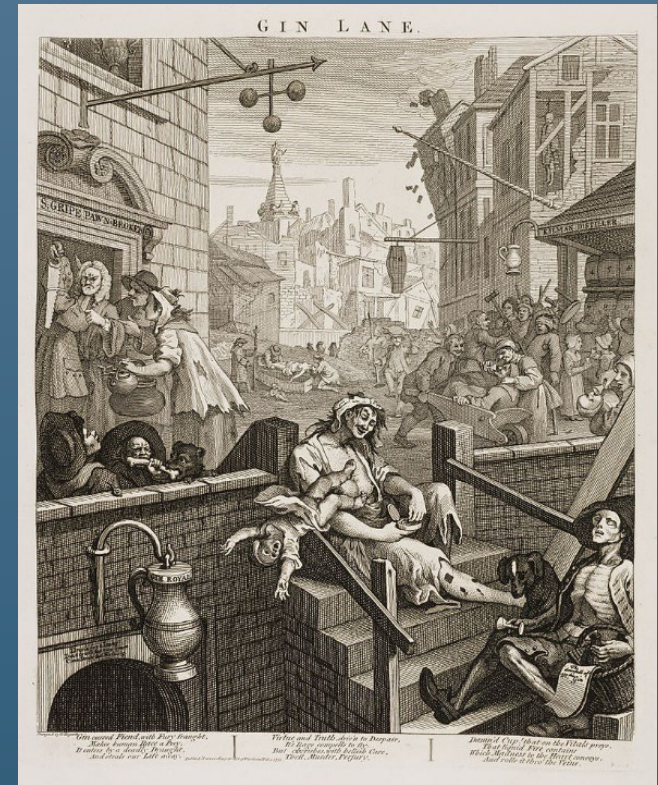
Homer: The Odyssey



“Poppy Goddess” ~1000 BC



JWF: The Vintage Image Gallery



William Hogarth's Gin Lane 1751

# Why do people keep using or escalate their use? (still *volitional*..?)



- Narrowing of behavioral alternatives/increased reliance on drug
- Ignoring risk or minimizing problems as they develop
- Use continues IF:

*What's "good" about using outweighs what's "not so good"*

# Progression to Abuse and Addiction (*volitional...habitual...compulsive*)

- Increased frequency of use and time involved
- Pattern of recurrent problems in multiple domains:  
Emotional/Interpersonal/Social  
Physical/Occupational/Legal
- Continued use of the drug despite these problems
- Increasing guilt/shame/hiding/ignoring/denying problems
- Increasing risk of physical dependence and withdrawal avoidance

# Lack of Insight to Risk/Problems from Use

- **Risks associated with chronicity**

Delayed onset:

- *Alcoholic liver disease*

- *Tobacco/e-cigarette or marijuana associated lung disease*

- **Risks associated with acute toxicity**

Severe/immediate but infrequent:

- *Cocaine and CV events*

- *Alcohol and accidents*

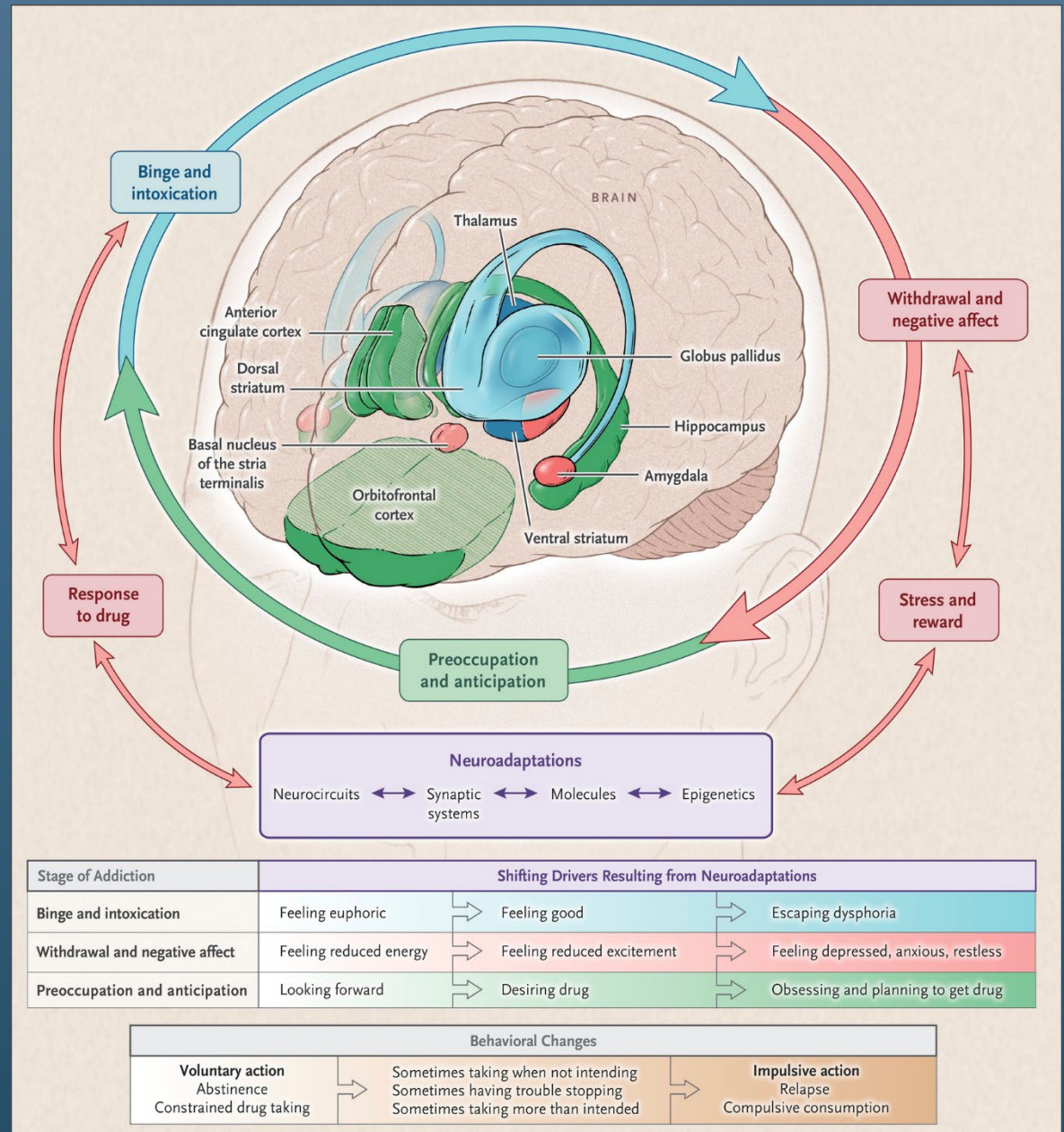
- *Opioids and overdose*

- Exacerbation of medical and psychiatric co-morbidities may be interpreted as the reason for the drug use:

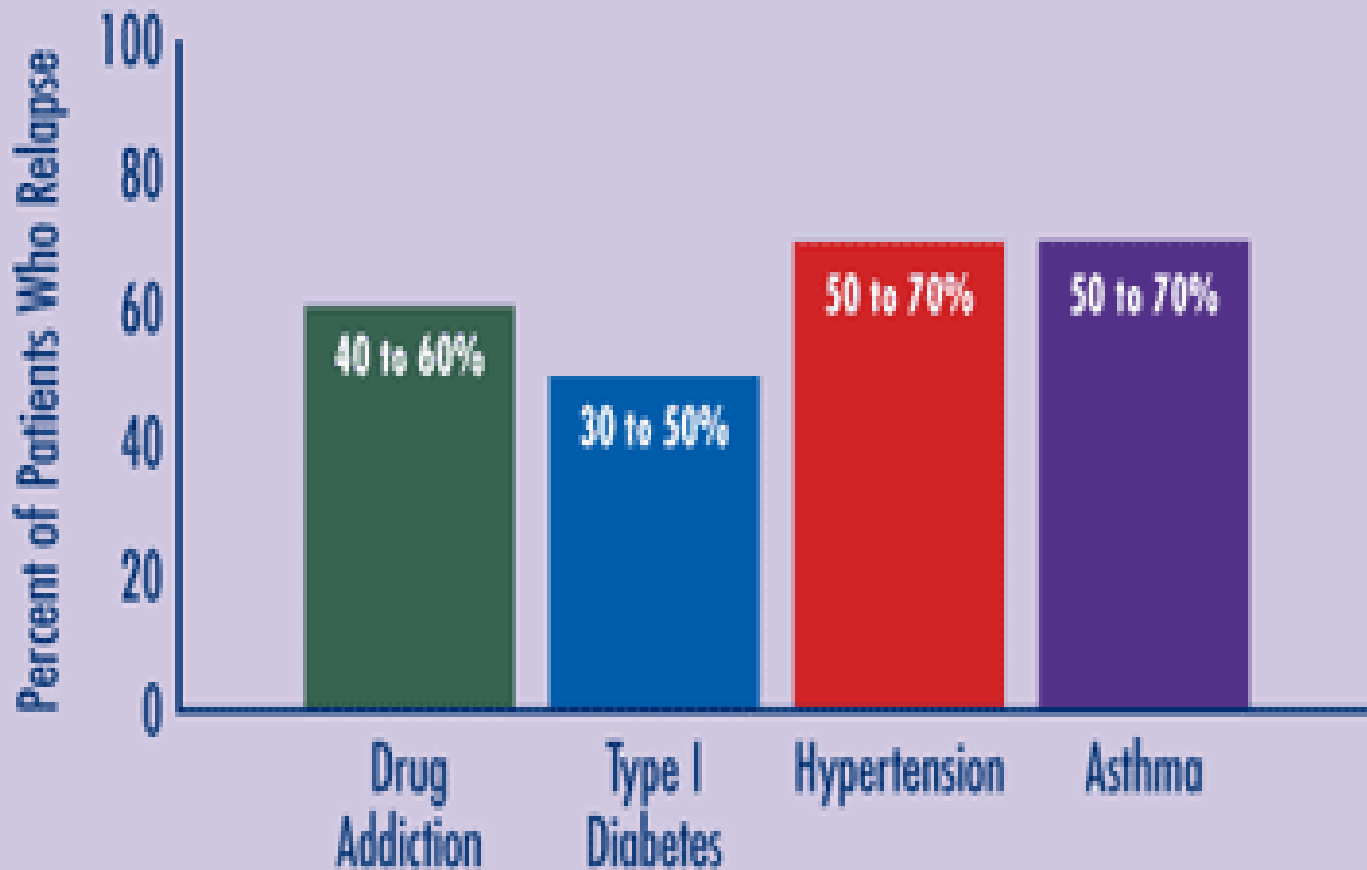
- *Worsening depression, anxiety, pain, fatigue*



# Neurobiology of Addiction



# COMPARISON OF RELAPSE RATES BETWEEN DRUG ADDICTION AND OTHER CHRONIC ILLNESSES



*JAMA, 284:1689-1695, 2000*

# Comparison of Chronic Diseases

	Diabetes Mellitus	Addiction
Relapse Rates	30-50%	40-60%
Medication Adherence	30-50%	40-60%
Screening/Monitoring	A1C	Urine Drug Screens
Access to Treatment	++++	+
Behavioral Interventions	Nutritionist/DM educator	Individual Counseling/Groups
Pharmacotherapy	Multiple formulations	Multiple Formulations
Refractory to Treatment	Endocrinology	Addiction Medicine/Psychiatry
HealthCare Stigma	+	++++

# Adverse Childhood Experiences (ACEs)

<b>33</b> <b>No ACEs</b>	<b>51</b> <b>1-3 ACEs</b>	<b>16</b> <b>4-8 ACEs</b>
<u>WITH 0 ACEs</u>	<u>WITH 3 ACES</u>	<u>WITH 7+ ACEs</u>
1 in 16 smokes	1 in 9 smokes	1 in 6 smokes
1 in 69 have alcohol use disorder	1 in 9 has alcohol use disorder	1 in 6 has alcohol use disorder
1 in 480 uses IV drugs	1 in 43 uses IV drugs	1 in 30 uses IV drugs
1 in 14 has heart disease	1 in 7 has heart disease	1 in 6 has heart disease
1 in 96 attempts suicide	1 in 10 attempts suicide	1 in 5 attempts suicide

# Positive Childhood Experiences (PCEs)

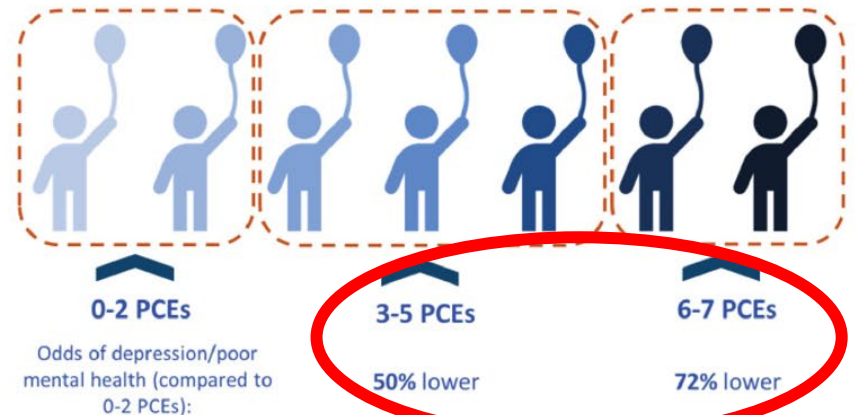
## Mitigate the effect of ACEs with PCEs

Positive Childhood Experiences questions asked how often the respondent:

1. Felt able to talk to their family about feelings
2. Felt their family stood by them during difficult times
3. Enjoyed participating in community traditions
4. Felt a sense of belonging in high school
5. Felt supported by friends
6. Had at least two non-parent adults who took genuine interest in them
7. Felt safe and protected by an adult in their home

### PCEs protect adult mental health

The study found that positive childhood experiences (PCEs) show a dose-response relationship with adult mental and relational health—in other words, for those with exposure to ACEs, those with more PCEs showed better lifelong mental and relational health than those with fewer PCEs.



# Common Substances

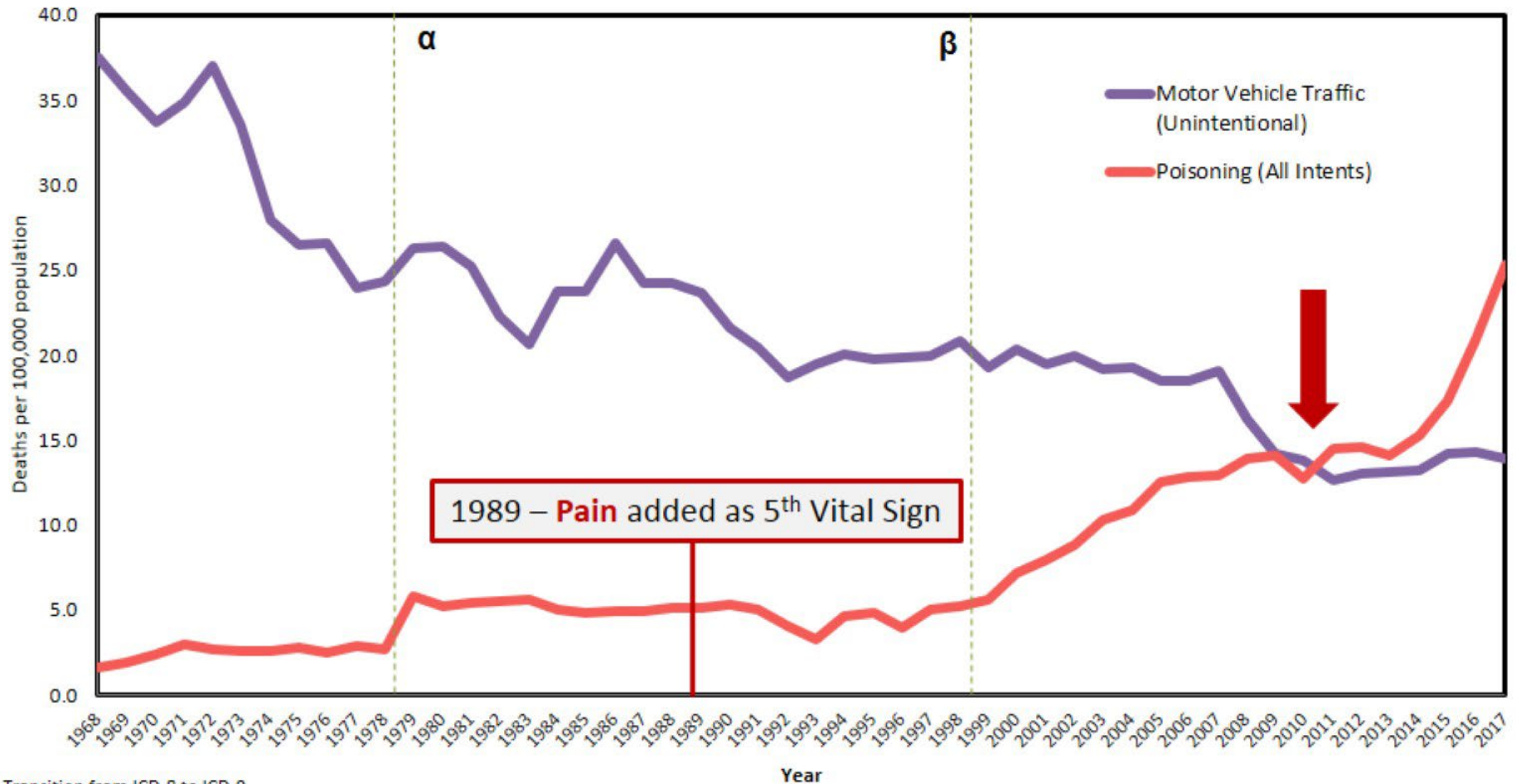
- Nicotine: cigarettes, smokeless tobacco, e-cigarettes, heated
- Alcohol
- Caffeine
- Gabapentinoids: Gabapentin, Pregabalin, Phenibut
- OTC Meds: Diphenhydramine, DXM, loperamide
- Cannabinoids: Marijuana, hashish, oil, synthetics, CBD products
- Cocaine: powder, “crack”
- Amphetamines, Meth, MDMA (“ecstasy”, “molly”)
- Opioids: Heroin, Fentanyl, opioid analgesics (pain pills)
- Sedatives: Benzodiazepines, barbiturates, muscle relaxants
- Inhalants: glue, solvents, gases, nitrous
- Hallucinogens: LSD, mescaline, psilocybin, ayahuasca
- Other: PCP/Ketamine/Anabolic Steroids/Kratom/Krokodil/Salvia...
- NEXT?

# Common Prescription Medications

- **Opioid analgesics** (e.g. hydrocodone, oxycodone, methadone)
- **Benzodiazepines** (e.g. alprazolam, clonazepam, diazepam)
- **Stimulants** (e.g. amphetamine, methylphenidate)
- **Other:** Muscle relaxants, Gabapentinoids, Z-drugs



# Poisoning death rates are higher than traffic crash death rates in N.C.



α - Transition from ICD-8 to ICD-9

β - Transition from ICD-9 to ICD-10

**Technical Notes:** Rates are per 100,000 residents, age-adjusted to the 2000 U.S. Standard Population

**Source:** Death files, 1968-2016, CDC WONDER

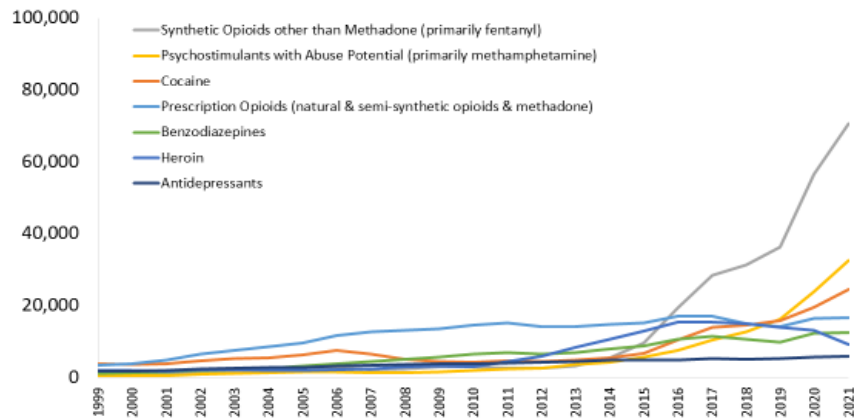
**Analysis by** Injury Epidemiology and Surveillance Unit



# Deaths/year in US Related to Drug Use

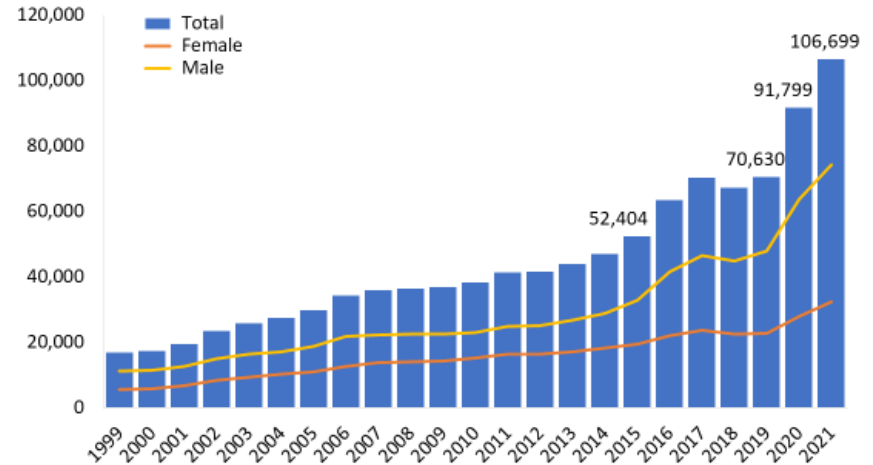
- Tobacco >480,000
- Alcohol ~140,000

Figure 2. National Drug-Involved Overdose Deaths\*, Number Among All Ages, 1999-2021



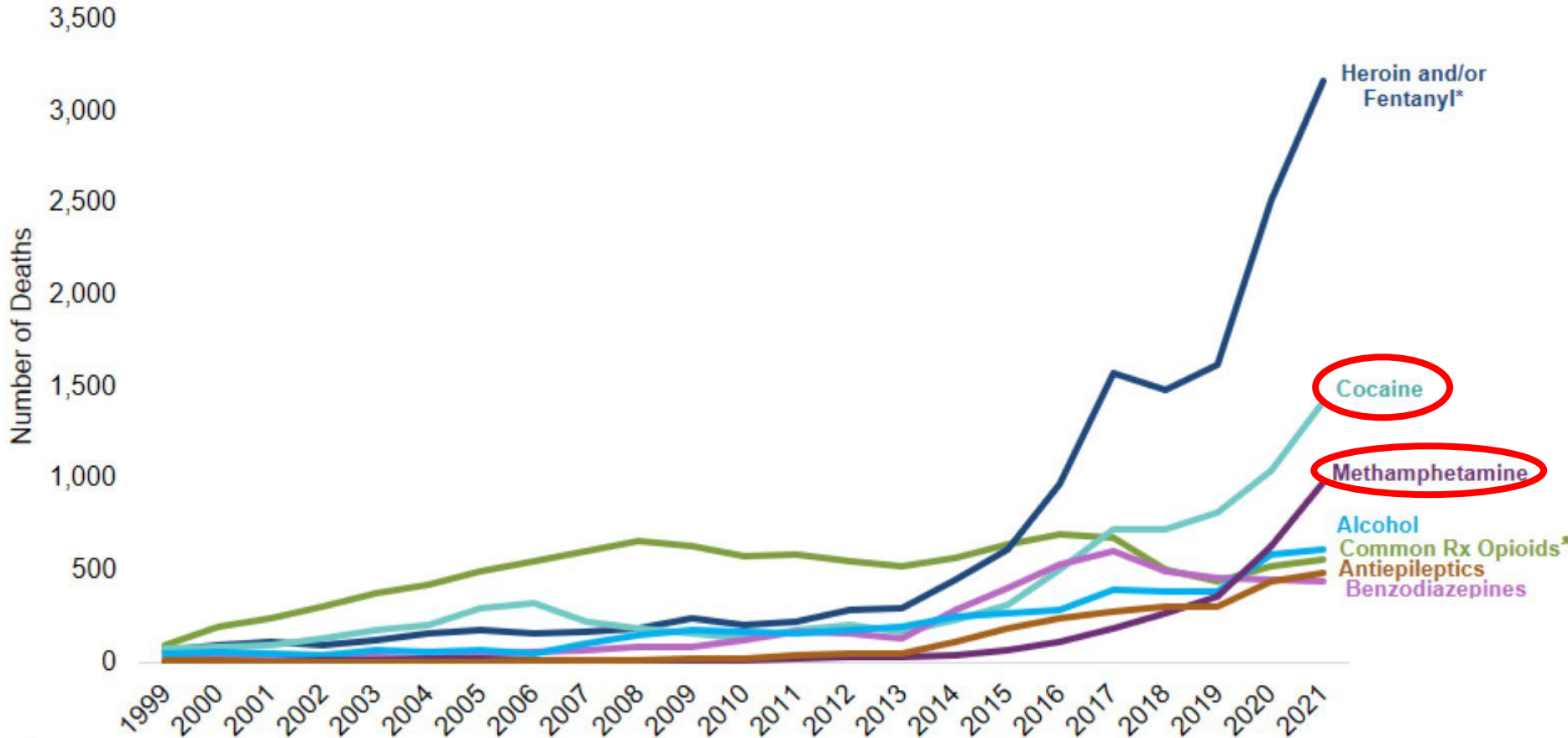
\*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2021 on CDC WONDER Online Database, released 1/2023.

Figure 1. National Drug-Involved Overdose Deaths\*, Number Among All Ages, by Gender, 1999-2021



\*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2021 on CDC WONDER Online Database, released 1/2023.

# Overdose deaths involving illicit opioids\* and stimulants, such as cocaine and methamphetamine, continue to increase



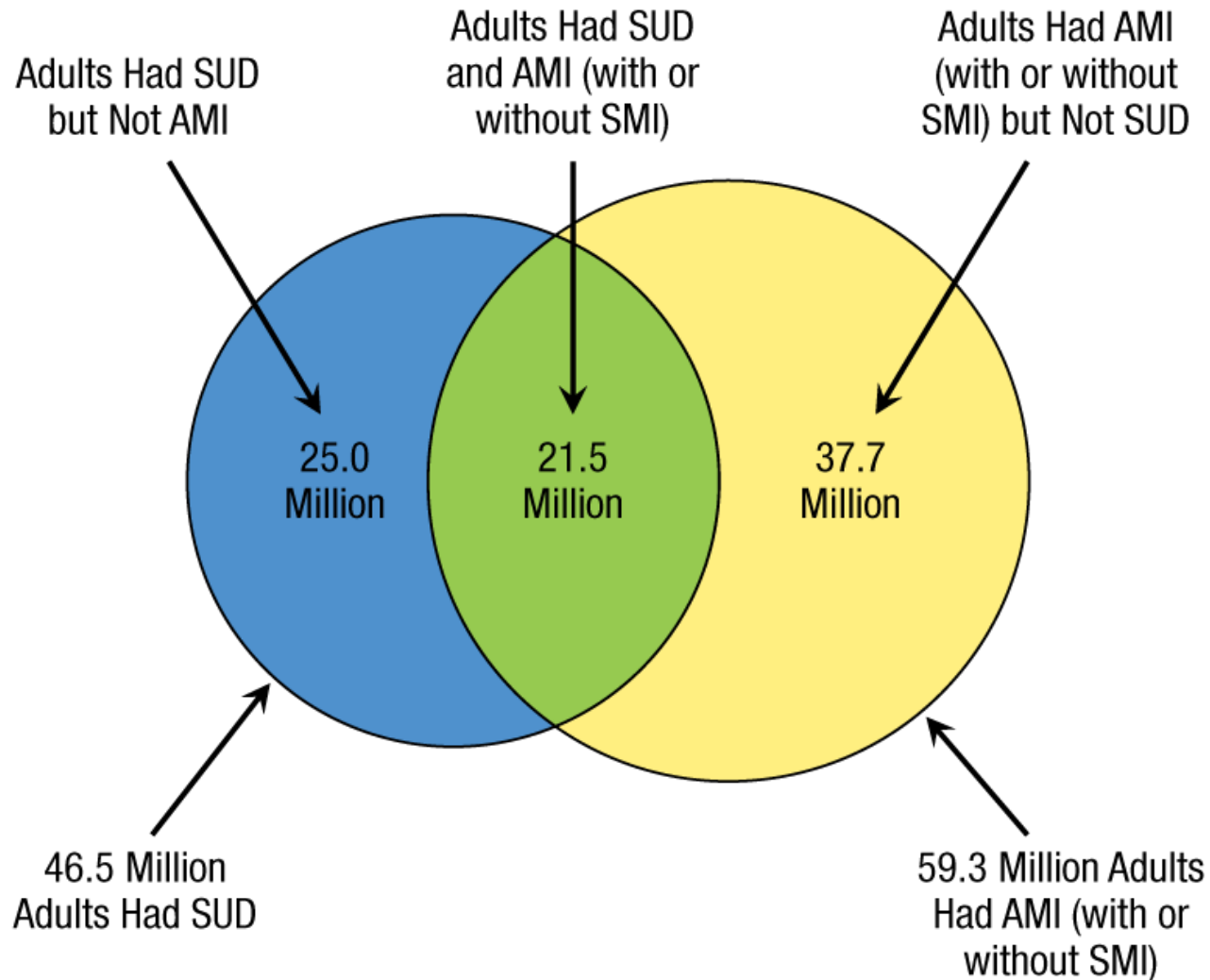
\*Heroin and/or Other Synthetic Narcotics (mainly illicitly manufactured fentanyl and fentanyl analogues); \*Commonly Prescribed Opioid Medications

**Technical Notes:** These counts are not mutually exclusive; if the death involved multiple substances, it can be counted on multiple lines; Toxicology data is unable to distinguish whether the presence of multiple substances indicate intentional polysubstance use or if one substance was tainted with other drugs (e.g. cocaine laced with fentanyl); All intent medication, drug, alcohol poisoning: X40-X45, X60-64, Y10-Y14, X85 with any mention of specific T-codes by drug type; limited to NC residents See <https://injuryfreenc.dph.ncdhhs.gov/DataSurveillance/poisoning/SummaryTableforPoisoningDefinitions-13Nov18-FINAL.pdf> for additional case definition details

Source: Deaths-NC State Center for Health Statistics, Vital Statistics, 1999-2021

Analysis by Injury Epidemiology and Surveillance Unit

# Any Mental Illness (AMI), or Substance Use Disorder (SUD) in the Past Year: Among Adults Aged 18 or Older; 2022



84.2 Million Adults Had Either SUD or AMI (with or without SMI)

# Diagnostic Statistical Manual (DSM) of Mental Health Disorders

## DSM 3 and 4: *Abuse*>>>*Dependence*

Defined by specific selected criteria

Recognized as a continuum

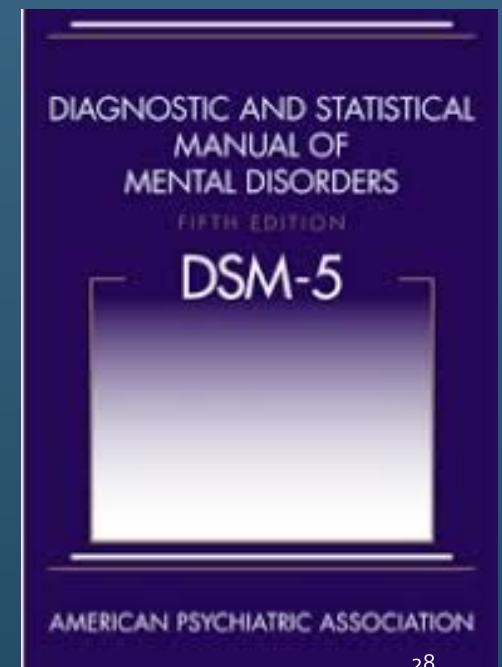
Recognized variability in presentation and progression

“*Dependence*” confusing in pain setting

## DSM 5: Substance Use Disorders

Mild/Moderate/Severe

Essentially same criteria applied differently



# DSM-5 Criteria for SUD

Substance use disorders are defined as a pattern of use that results in marked distress and/or impairment, with two or more of the following symptoms over the course of a 12-month period:

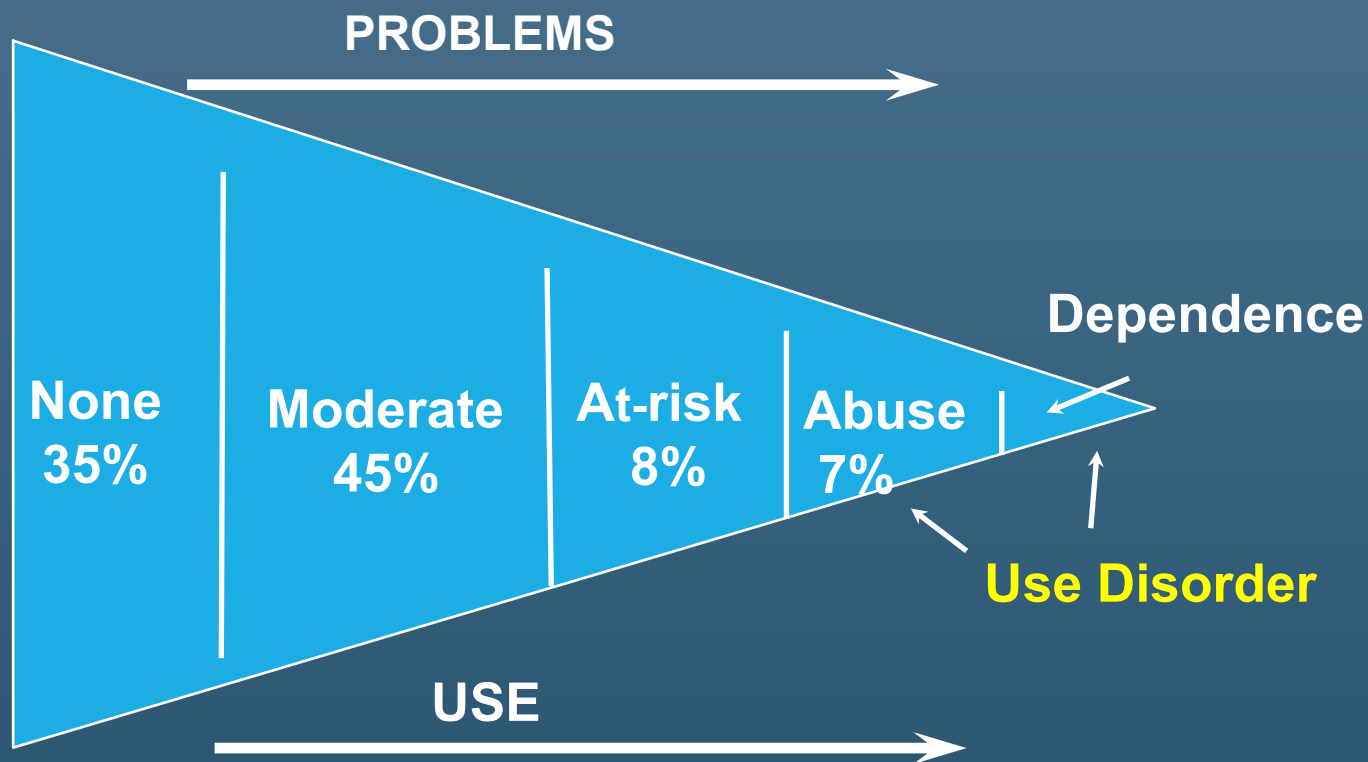
**Loss of Control**  
**Use Despite Neg Consequences**  
**Physiologic Changes**

**Mild = 2-3**  
**Moderate = 4-5**  
**Severe  $\geq 6$**

**The higher the score, the more treatment (structure) will likely be required!**

1. Using the substance in larger amounts or over a longer period of time than intended
2. Unsuccessful attempts or persistent desire to reduce use
3. Too much time spent on obtaining, using, and/or recovering from the effects of the substance
4. A strong craving for the substance
5. Significant interference with roles at work, school, or home
6. Continued use despite recurrent social or interpersonal consequences
7. Reducing or giving up important social, occupational, or recreational activities because of the substance use
8. Substance use in situations in which it may be physically hazardous
9. Substance use despite recurrent or persistent physical or psychological consequences
10. Tolerance of the substance
11. Withdrawal from the substance

# Drug Use Extends Along a Continuum from Low Risk Use to Abuse and Dependence



**Alcohol use in primary care patients  $\geq$  18 years old**

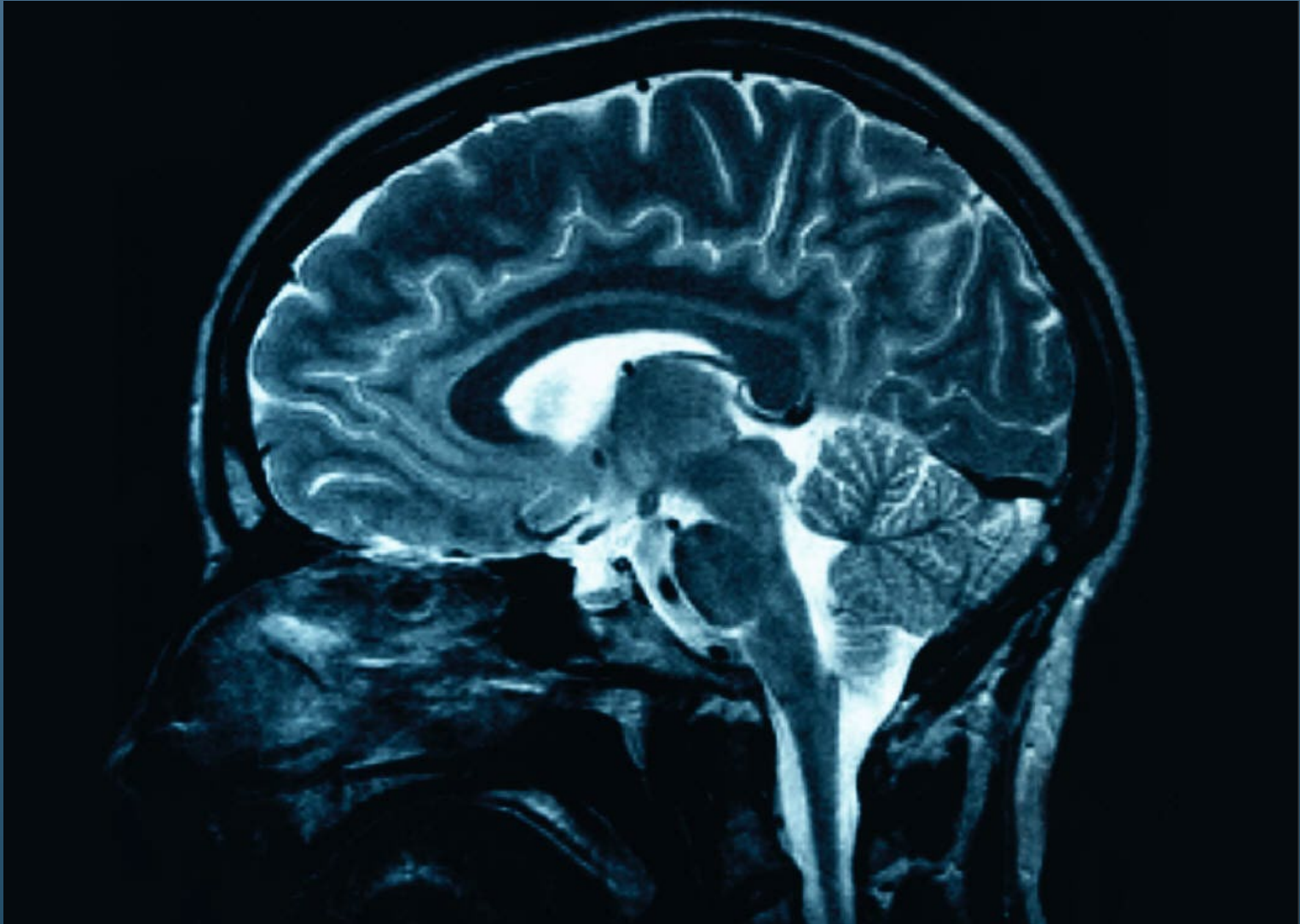
A Guide to SA Services for Primary Care Clinicians, SAMHSA, 1997

# Progression Along the Continuum

Use->>Misuse>>Abuse>>Substance Use Disorder (Addiction)

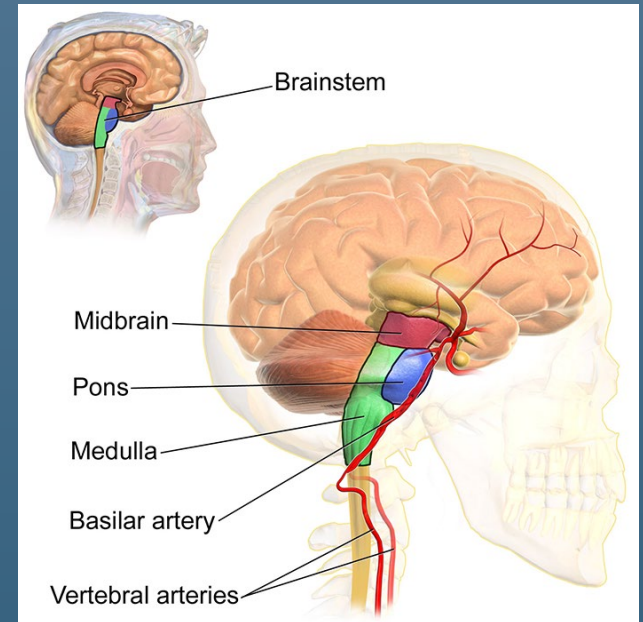
- How does someone get from use to abuse?
- Why some and not others?
- Why them and not me?
  
- How do you go back?
- How do you prevent or intervene with the progression?
- How do you treat it once it's an *addiction*?

Addiction is a brain disease!

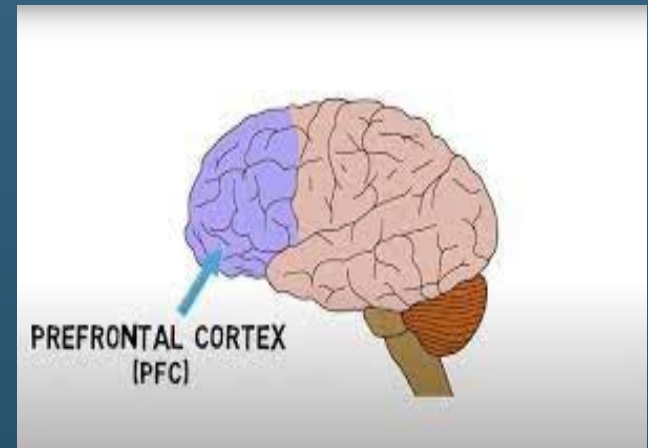


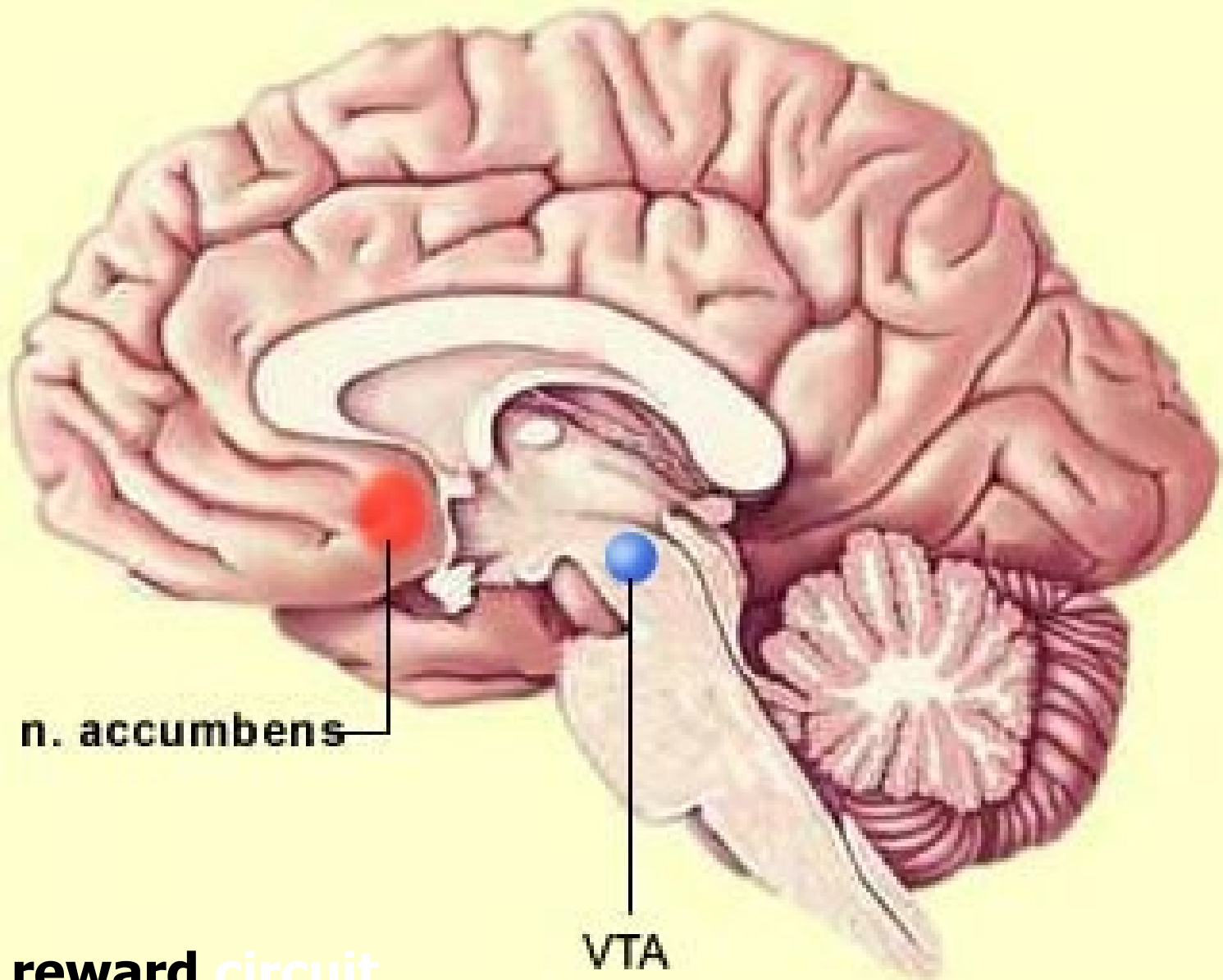


■ Midbrain keeps us alive moment to moment – when to eat, sleep, run, fight, have sex, nurture



■ Prefrontal Cortex imparts value, judgement, priorities to our activities – serves as a brake to Midbrain





n. accumbens

VTA

**reward circuit**

# So What's the Problem of a little Down-Regulation?

- The midbrain does not “hear” the dopamine (its receptors are deaf)
- The midbrain perceives the organism as dying
- When a drug of abuse is taken, a huge flood of dopamine occurs which the midbrain can hear



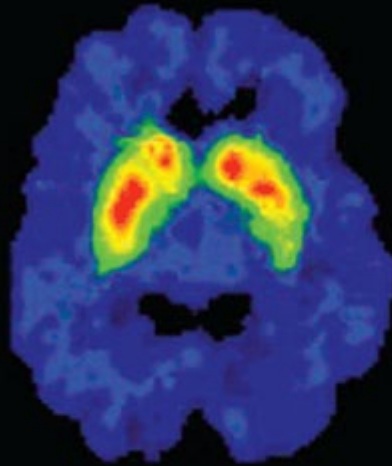
The Midbrain Misinterprets  
the Dopamine Surge as a good thing  
that will promote survival

# Drugs of Abuse Takeover the Reward Center

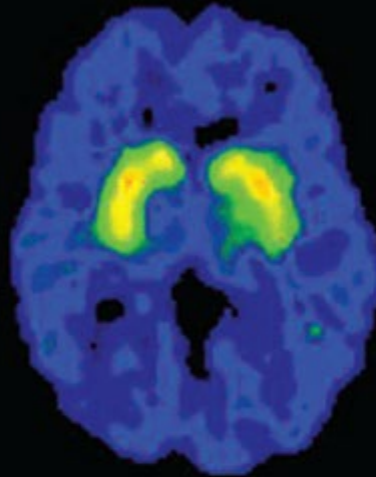
- **The midbrain becomes the dominant decision maker**
- **The rational influence of the forebrain is shut down**
- **The drug becomes tagged as the essential means to survival**

# Methamphetamine use disorder

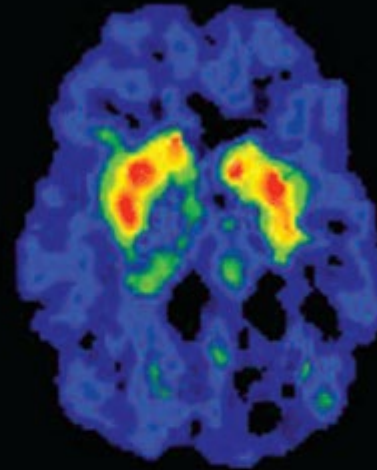
BRAIN RECOVERY WITH PROLONGED ABSTINENCE



HEALTHY  
CONTROL



1 MONTH OF  
ABSTINENCE



14 MONTHS OF  
ABSTINENCE

# BREAK/QUESTIONS



# Models for Addiction: Past and Present

- **Moral:**

- The individual is weak or bad.

- The drug itself is evil.

- **Psychological/Sociological:**

- “Addictive personality”

- Learned behavior: Reward theory

- Family and cultural norms

- **Medical disease:**

- Genetic predisposition

- Neuro-chemical “imbalance” or adaptation



# Public Health GOALS for Drug Related Problems

Public Health goals are:

1. Prevent or delay the onset of use and/or prevent the progression of high-risk or problematic use.
2. Reduce high-risk or problematic use to lower-risk levels.
3. Promote abstinence in persons with substance use disorders.
4. Harm reduction (April 2022)

# Harm Reduction

- “Policies, programs, and practices that aim primarily to reduce the adverse health, social, and economic consequences of the use of legal and illegal psychoactive drugs without necessarily reducing drug consumption. Harm reduction benefits people who use drugs, their families and the community.”



# Words Matter!

What we say and how we say it makes a difference to our patients with substance use disorder(s).

<b>Stigmatizing Language</b>	<b>Non- Stigmatizing Language</b>
Addict, drunk, junkie	
Drug habit Abuse Drug problem	
Clean	
Clean or dirty drug screen	

# Public Health Model of Disease Applied to Addiction

## HOST

Genetic predisposition  
Impulsivity/Self-control  
Social Skills/Relationships  
Age of first use  
Mental disorders

## ENVIRONMENT

Availability/ease of access to drug  
Poverty/Opportunity  
Family cohesion/monitoring  
Peer attitudes/use  
Response to problem behaviors

## AGENT

Positive Effect: psychotropic/physical  
Speed of onset/Duration of action  
Perceived safety or risk  
Side effects/Cost

# Maslow (1943) – “A Theory of Human Motivation”



# Cultural Ambivalence About Alcohol and Other Drugs

- Source of serious morbidity and mortality

**BUT**

- Often socially acceptable
- Readily available
- Heavily promoted and advertised
- Consequences tolerated by society









# Agents: Characteristics of Drugs and Medications

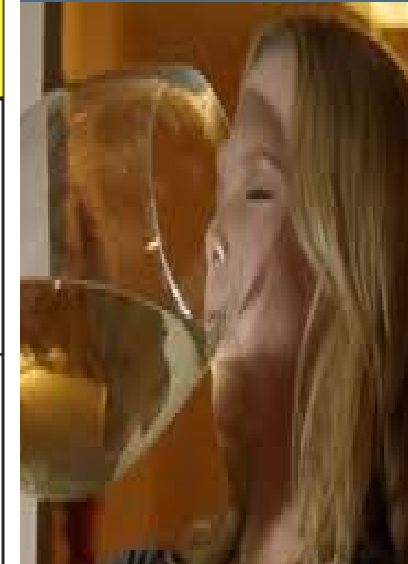
- How do characteristics of certain drugs enhance or disguise their abuse potential?
- How do these characteristics interact with host and environment?
- How can characteristics of certain opioids even make them useful as treatments?

# A "Standard Drink"

## A "STANDARD DRINK"

(a standard drink contains approximately 12-14 grams or 0.5-0.6 oz of pure alcohol)

Beer (3-5%) (Budweiser, Miller, Coors, Michelob, Heineken, Corona)	Malt Liqueur (7-10%) (Steele Reserve, Colt 45, King Cobra, Camo 40, Black Bull, Hurricane, Mickey's, Private Stock)	Table Wine (12-13%) (Chardonnay, Merlot, Pinot Grigio, Reisling, Sangria)	Fortified Wine (FW), Port, Sherry (17-20%) (Mad Dog 20/20, Night Train Express, Richard's Wild Irish Rose, Thunderbird)	Brandy (37-40%) (Cognac, Martell, Hennessy, E & J, Courvoisier, Remy Martin)	Liquor/Distilled "Spirits" (40%) (vodka, gin, rum, scotch, whiskey, bourbon, tequila)
					
12 oz.	6-8 oz.	5 oz.	3.5 oz.	1.5 oz.	1.5 oz.
"Double Deuce" = 2 drinks "Quart" = 2 ½ drinks "40" of beer = 3-4 drinks "40" of malt liquor = 6-7 drinks	"Pint" = 2 ½ drinks "Pint" of FW = 4 drinks "Fifth" = 5 drinks "Fifth" of FW = 7 ½ drinks		"Half Pint" = 4 ½ drinks "Pint" = 8 ½ drinks "Fifth" = 17 drinks "Handle" = 40 drinks		



## DRINK LIMITS FOR LOW RISK DRINKING

	Per Week	Per Day
Men	14	4
Women	7	3
All age >65	7	3

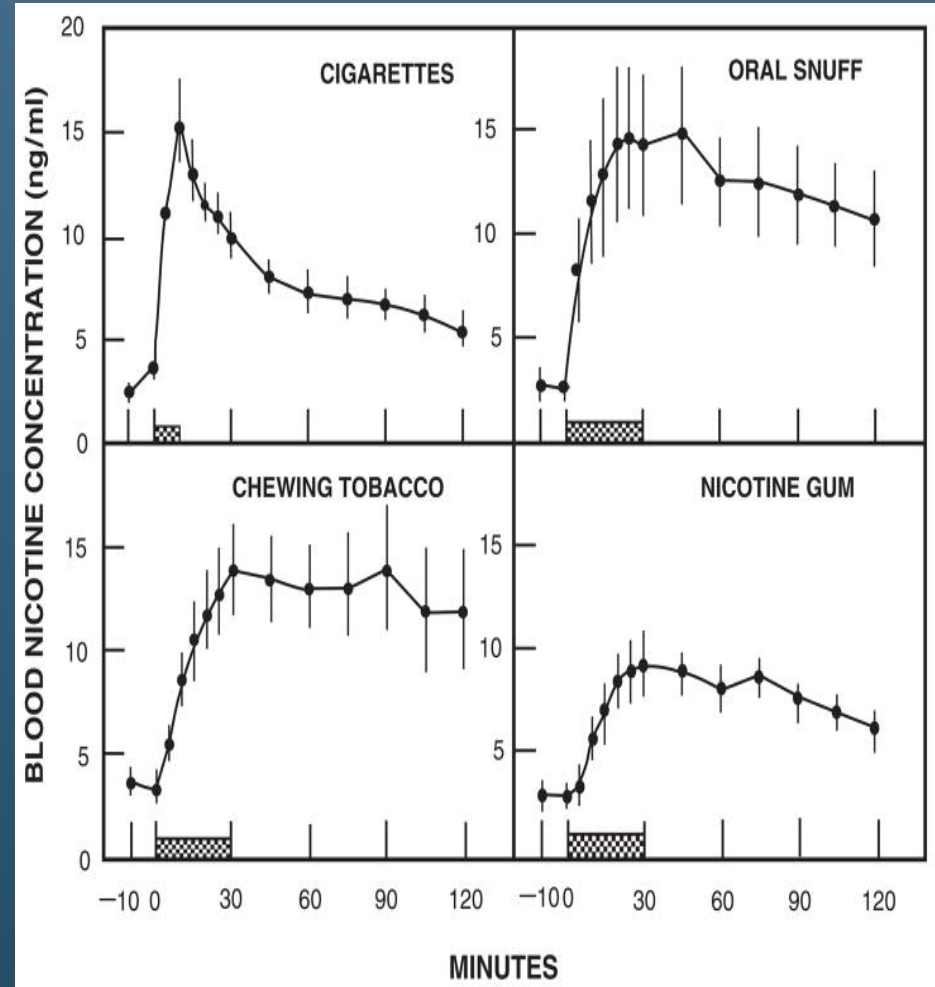


# Nicotine Absorption

## Cigs vs. Snuff vs. Chew vs. Gum

Nicotine concentrations in blood:

- Cigarettes
- Snuff (2.5 g)
- Chewing Tobacco (7.9 g)
- Nicotine Gum (two, 2mg pieces)



# Cocaine: Forms and How Used

Coca leaves (chewed or as tea)

2% cocaine



Cocaine Hydrochloride (snorted or injected)

90% cocaine

traditional powder form



Cocaine Base ("crack": smoked)

95% cocaine

small pebble sized/easily marketable



# Onset and Peak Effects of Cocaine and Other Stimulants by Route of Administration

<u>Route</u>	<u>Onset of Action</u>	<u>Peak Effect</u>
Inhalation	7-8 seconds	1-5 minutes
Intravenous	15-16 seconds	3-5 minutes
Intranasal	3 minutes	15-20 minutes
Oral	10 minutes	45-60 minutes

# Opioid Characteristics

	<b>Methadone Buprenorphine</b>	<b>Short acting opioid</b>
<b>Route</b>	Oral Sublingual	Oral, injected (IV), Intranasal (IN)
<b>Onset</b>	60 min. or more	IV, IN: seconds Oral: 15-20 min.
<b>Duration</b>	8 to 24 hrs.	2 to 4 hours
<b>Euphoria</b>	Absent	Present: moderate to pronounced

# How can we make sense of addiction?

- How and why do people use drugs?
- What do we know about the process of addiction and why do we call it a “disease”?
- **How and why do some progress from non-problematic use to abuse and some don't?**
- **How can this help us understand the core elements of treatment?**

# Potential risk 1: *Works too well*

## **Stressed >>**

Option 1: Time out/exercise/talk....Takes time/practice/patience

Option 2: Couple of drinks/pills....Quick/easy/works fast

## **Anxious >>**

Option 1: Practice mood mgmt skills...Time/practice/patience

Option 2: Couple of drinks/pill...Quick/easy/works fast

## **Pain >>**

Option 1: Stretching/biofeedback/nonopioid....Time/practice/patience

Option 2: Take an extra analgesic dose...Quick/easy/works fast

# Potential risk 2: *Works for more than intended*

**Need:** Pain relief

>>> **Action:** Take med

>>> **Consequence:** Pain relief: Intended benefit

**Other needs:**

Depressed mood

Fear/anxiety

Fatigue

Unhappiness



**Unintended consequences (benefits)**

Emotional relief

Calm

Activation

Euphoria

# Potential risk 3: *Progression to habitual or compulsive use*

Narrowing of behavioral options:

Increasing reliance on meds for pain relief (*"have to have it.."*)

Expansion into other domains (mood, energy, sleep...)

Seen as *"only thing that helps"* vs multi-modal

Complicated by: Lack of other skills or supports or finances

Tolerance (particularly for unintended *"benefits"*)

Collapsing time between thought and impulsive action...more compulsive

Leading to overuse/misuse....abuse...substance use disorder



# Neuroadaptation and Progression to Addiction

- ***Neuro-adaptation*** in response to repeated drug exposure in three critical areas of the brain:
  - Limbic system (reward)
  - Amygdala (emotional memory)
  - Prefrontal cortex (restraint)
- Deterioration in **pre-frontal cortical** control system and transition from volitional control to compulsive, out of control use.
- Transition from pleasurable use to maintenance use and need to avoid **physical withdrawal and maintain hedonic tone.**

## Progression to Addiction (Substance Use Disorders)

# What We See

## ■ Hospital/Court:



“My life is unmanageable, I’ve got to get help, I can’t stop on my own, I’m going to die if I don’t do something, tell me how to fix my addiction...I’ll do anything to get better.”

# Withdrawal begins, Midbrain takes over



- 2<sup>nd</sup> day – “I’ve got to leave to take care of my ...children...significant other...get a job...get back to work....take care of my mother”.... (none of which was being done well when I arrived)
- I’m not leaving to relapse, I can beat this on my own, I don’t need your help, I know what to do.....

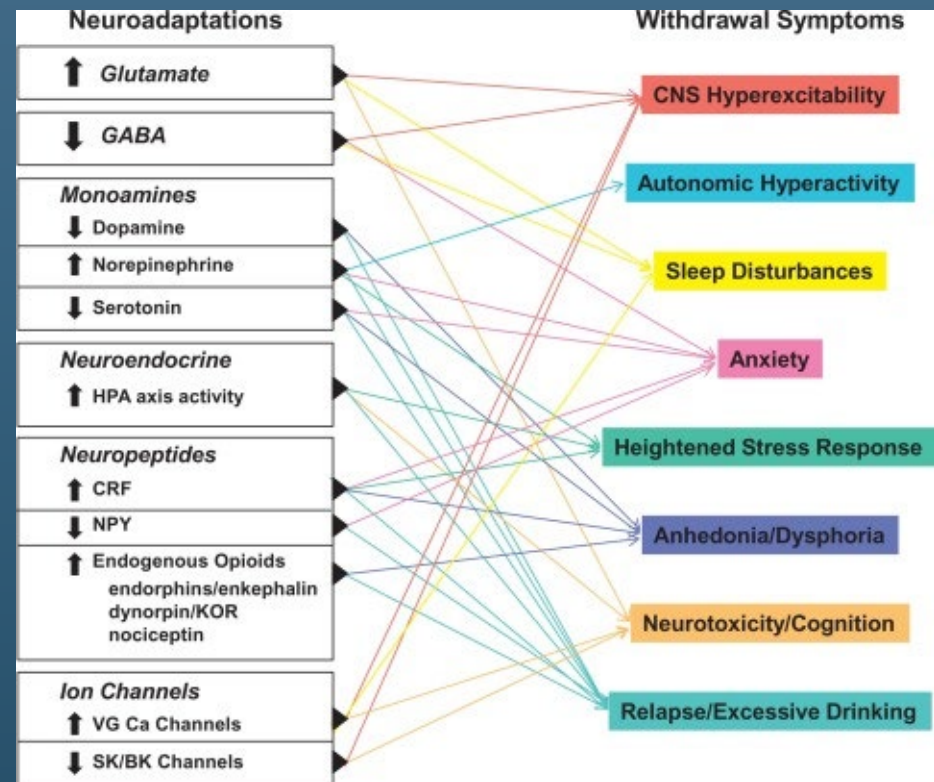


## Then the Midbrain...

- “If I can’t leave, I’ll just escalate my behavior to cause more stress for myself and others around me”
- Victimization begins – “I can’t stand being “locked up”, I came here voluntarily, why can’t I just leave.”
- “I must have been too out of it when I signed that paper agreeing to stay x nights....nobody told me I’d have to stay.”

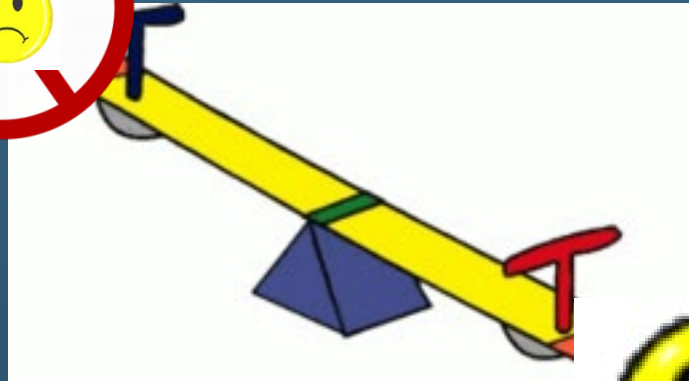
# Neurotransmitters and Alcohol

- **Dopamine**
  - mediates motivation and reinforcement
  - increased release with alcohol
- **Serotonin**
  - modulates mood, motivation, appetite
  - influences rewarding effects of alcohol
- **Endorphins**
  - mediates rewarding effects, relief
  - activates dopamine release
- **GABA (gamma-amino butyric acid)**
  - major inhibitory transmitter
  - enhanced by alcohol
- **Glutamate**
  - major excitatory transmitter
  - suppressed by alcohol

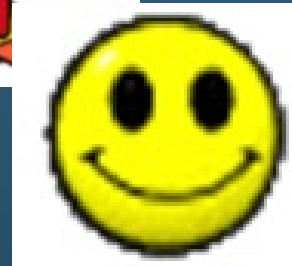


# Balancing Act

Prefrontal  
Cortex



Midbrain



# Why Abstinence or Medications Alone Doesn't Fix things

Neglected  
Finances

Mistrusting  
Spouse

Neglected  
physical/mental  
health



Dysfunctional  
Friendships

Frustrated  
Coworkers

Post-acute  
withdrawal  
symptoms

Poor Coping Skills

*"Just say no..."*

*(just snap out of it...just get over it...)*



In the setting of addiction...

clear *commitment* to behavior change (abstinence)...

*...is necessary ...but seldom sufficient.*

And *ambivalence* toward *sobriety*...

as well as the active steps necessary to maintain it...

*... is an ongoing challenge.*



# Treatment Elements Needed to Reverse Process “Bio-psycho-social-spiritual”

- Increased time abstinent: re-set neuroadaptation/restore cortical function
- Mitigate or diminish craving: MAT and behavioral interventions
- Address initial or ongoing reasons for use
- Identify and learn how to respond to and avoid triggers and cues
- Decrease social risks: situations/settings/associates (“people, places, things”)
- Develop alternate means of coping with craving, distress and dysphoria

## Treatment Elements: continued

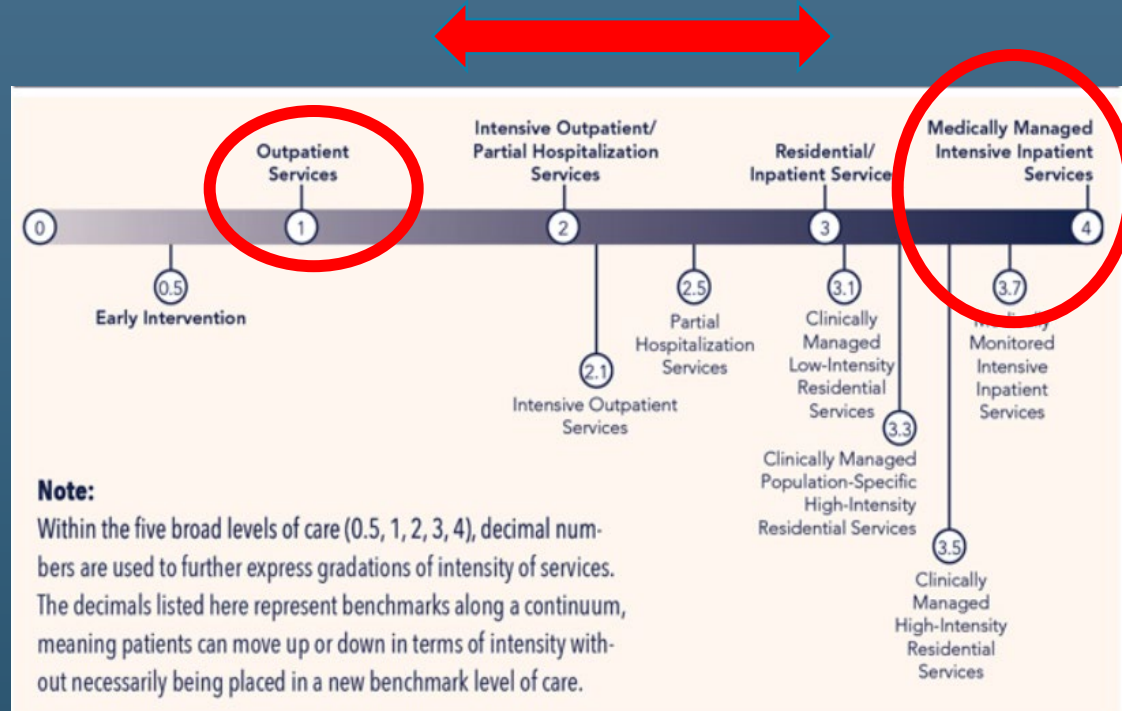
- Increase access and use of non-drug related activities and fun
- Increase social support for sobriety: Connect or reconnect
- Reinforce other sources of reward, pleasure and positive self-image
- Re-establish connection with spiritual or other source of meaning  
(god/family/community/meaningful work)

**Applied and reinforced over time...**

# Treatment of Substance Use: ASAM Criteria

Based on 6 dimensions to identify needed level of care:

- Acute intoxication/withdrawal
- Biomedical conditions
- Emotional/cognitive condition
- Readiness to change
- Relapse, continued problems
- Recovery/Living Environment



# Behavioral Treatment to Facilitate Recovery

*Studies of MAT efficacy all in combination with behavioral treatment;*  
MAT outcomes best when integrated with behavioral interventions

Mutual support/self-help groups

AA, NA, Smart Recovery, Women for Sobriety

Psychosocial and non-pharmacologic treatments

Cognitive Behavioral Therapy

Dialectical Behavioral Therapy

Motivational Enhancement Therapy

Contingency or Incentive Based Therapy

Community Reinforcement and Couples Based Therapies

# What do you know about Mutual/Peer-Based Support Groups?



# Participation in 12-Step or other Peer Support Groups

## "12-step" programs:

- Alcoholics Anonymous / Narcotic Anonymous
- Al Anon / Nar Anon
- ACOA (Adult Children of Alcoholics)

## Other national support groups:

- SMART Recovery
- Women for Sobriety

## Local and/or less formalized programs

- Church groups
- Treatment program groups

# AA/NA Rationale and Core Concepts:

Core concepts:

**Abstinence:** From all drugs of abuse (Tobacco? Caffeine?)

**Acceptance:** Working through "*denial*" and accepting "*powerlessness*"

**Spirituality:** Surrender to "higher power"

**Pragmatism:** Actively working the program

Online meeting updates: <https://www.triangleaahelpline.com/meeting-updates-covid-19-coronavirus/>

All Recovery Meetings: <https://unityrecovery.org/>

Virtual NA.org: <https://virtual-na.org/>

NA: <https://www.livethenasteps.online/>

IN THE ROOMS: <https://www.intherooms.com/home/>

AA: <http://aa-intergroup.org/directory.php>

WOMEN FOR SOBRIETY: <https://wfsonline.org/>

REFUGE RECOVERY MEETINGS: <https://refugerecovery.org/>

SMART RECOVERY: <https://www.smartrecovery.org/>

LIFE RING <https://www.lifering.org/online-meetings>

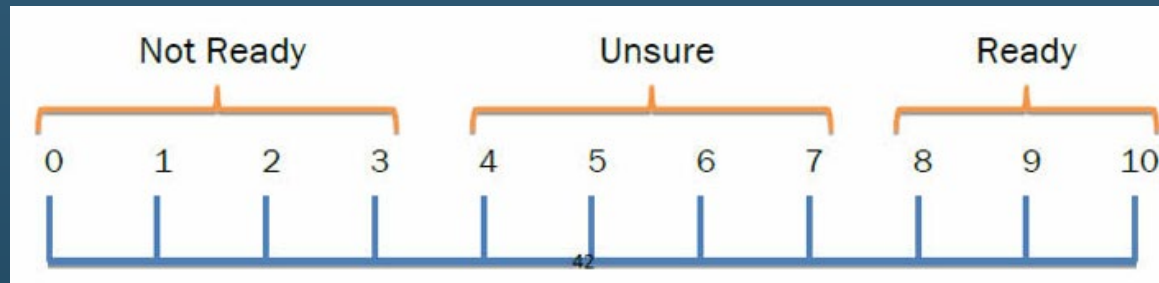
RECOVERY 2.0 <https://r20.com/>

# Behavioral Approaches to Treatment: Motivational Interviewing

A directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence.

Recognizes that people make changes when:

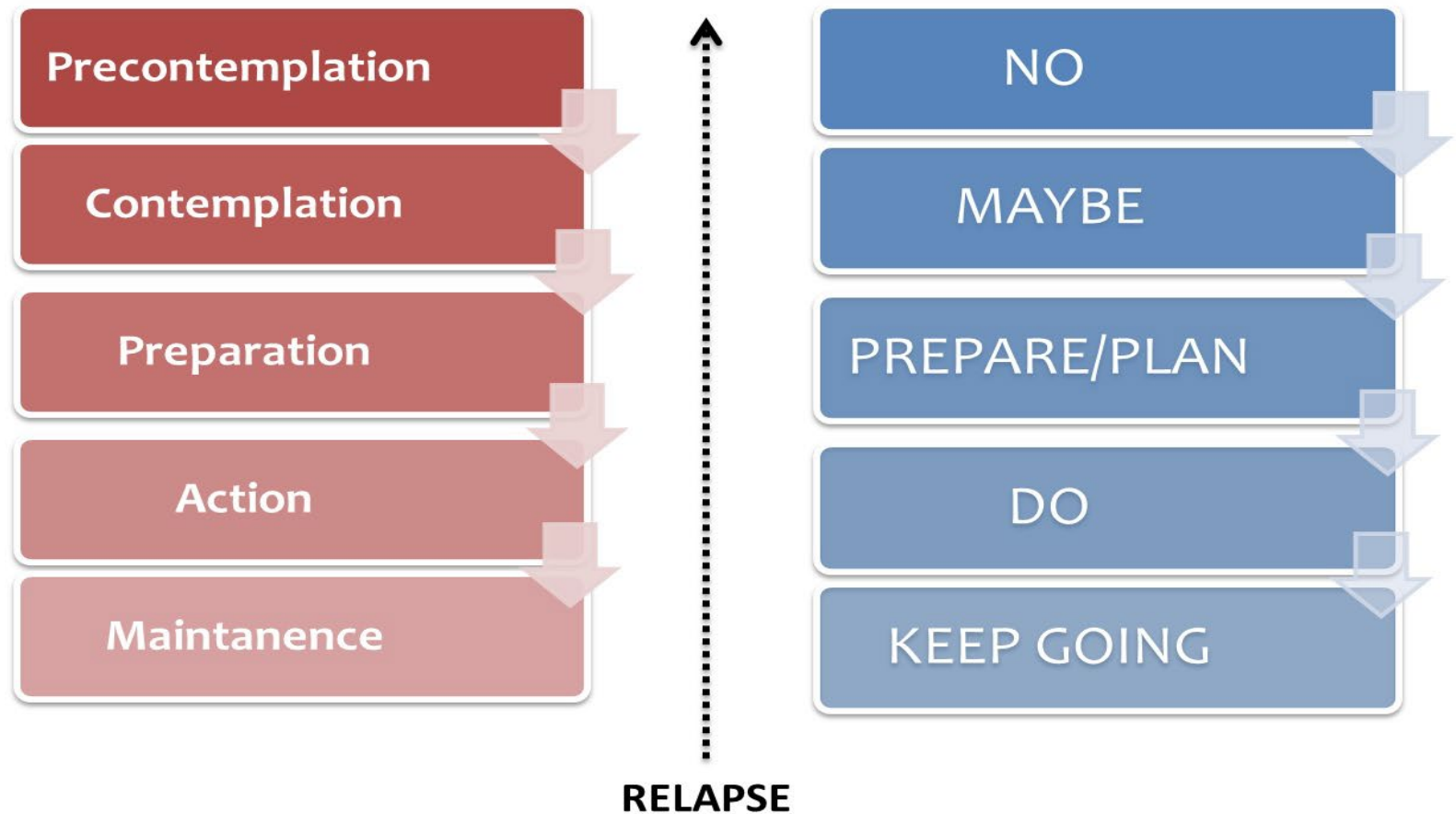
- They see themselves vulnerable to negative consequences and regard them as serious.
- They see the benefits of change outweighing the costs of change.





# Transtheoretical Model

## Stages of change



# Cognitive Behavioral Therapy (CBT)

- Cognitive-Behavioral Treatment (CBT) models are among the most **extensively evaluated** interventions for alcohol- or illicit-drug-use disorders
- In 2009, Butler et al. reviewed 16 meta-analyses of CBT and found **support for the efficacy** of CBT across many disorders
- Based primarily on Marlatt and Gordon's 1985 (Marlatt and Donovan, 2005) model of relapse prevention, these treatments:
  - target cognitive, affective, and situational triggers for substance use
  - provide skills training specific to coping alternatives

# Cognitive Behavior Therapy: Basic Treatment Components

- Identification of **high risk** situations  
“people, places, and things”
- Development of **coping skills**  
To manage risk/triggers as well as negative emotional states
- Development of **new lifestyle behaviors**  
To decrease need for/role of substance use
- Development of sense of **self-efficacy**  
Build on small successes **in coping**

# Cognitive Behavior Therapy: Basic Treatment Components

- Communication skills

  - Substance refusal skills

  - Asking for help

- Preparation for lapses

  - Process to be learned from “lapses”

  - Prevent lapse from becoming relapse

  - Identify and manage patterns of thinking that increase risk

- Dealing with relapse

  - “Lapse” or “Slip Up”

  - Relapse is not a catastrophe

  - Minimize consequences

# Wellness – Lifestyle Changes

## *Attention to basics:*

*Sleep-diet-exercise-having fun*

## *Skills to relax/deal with stress:*

*“What’s a different option next time you’re upset?”*

*“Who can you call...who can you talk to?”*

## *Mindfulness:*

*Simple exercises to be in the moment*

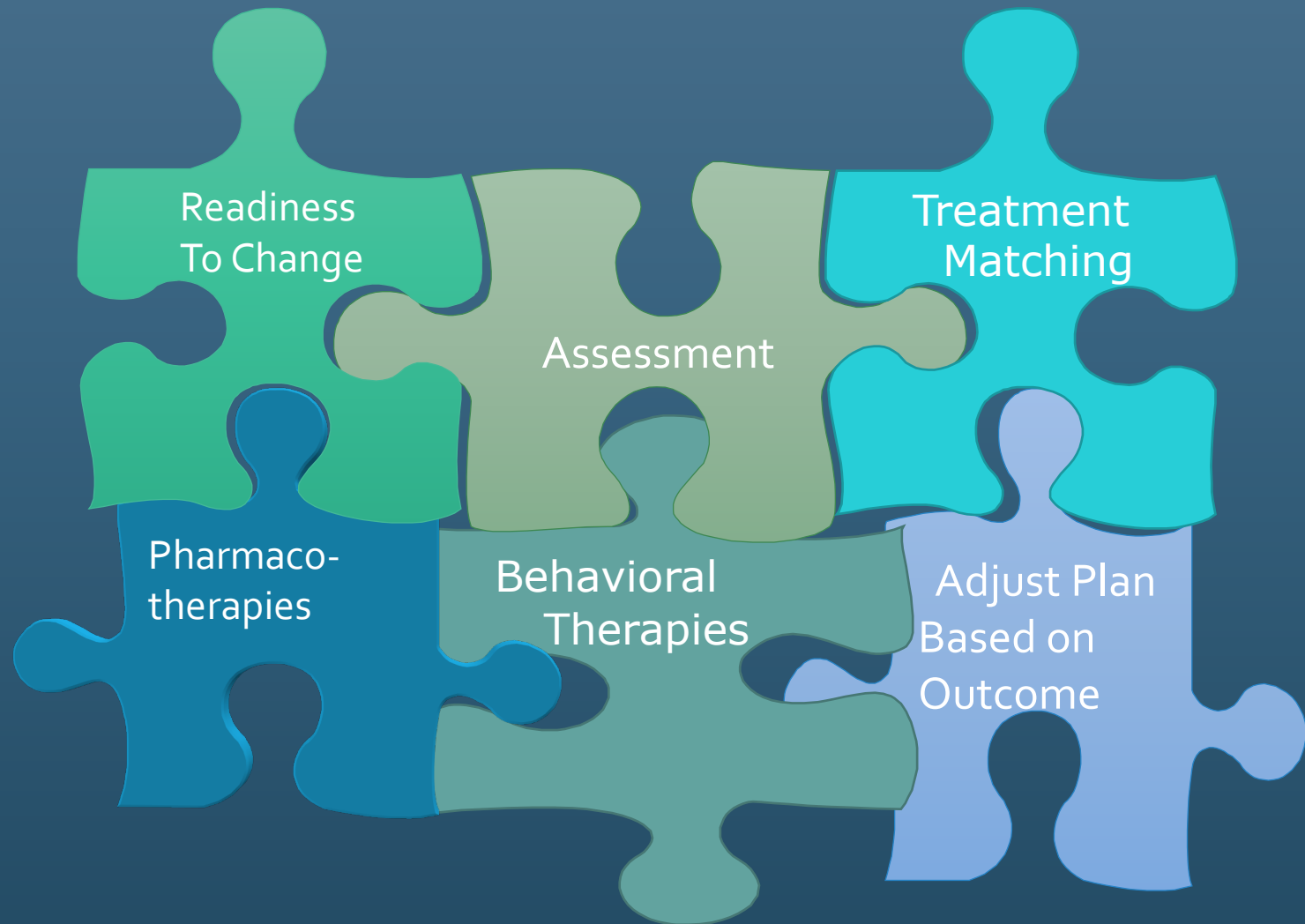
*To turn off the wheels*

*To put space between feeling and acting*

# Contingency Management

- A strategy used in SUD to encourage positive behavior change by:
  - providing reinforcing consequences when patients meet treatment goals
  - withholding those consequences as a punitive measure when patients engage in the undesired behavior.
- Clinicians may initiate CM procedures with written agreements:
  - the desired behavior change
  - duration of the intervention
  - frequency of monitoring
  - the potential consequences of the patient's success or failure.

# Assessment and Treatment: Active, Iterative Process



# FDA Approved Pharmacotherapy for SUD

## Alcohol:

- Disulfiram – Aversive
- Naltrexone (PO and IM) – Reduces endorphin
- Acamprosate – A glutamate antagonist

**Benzodiazepines:** No FDA approved medications

**Cannabis, Cocaine, Methamphetamines:** No FDA approved medications



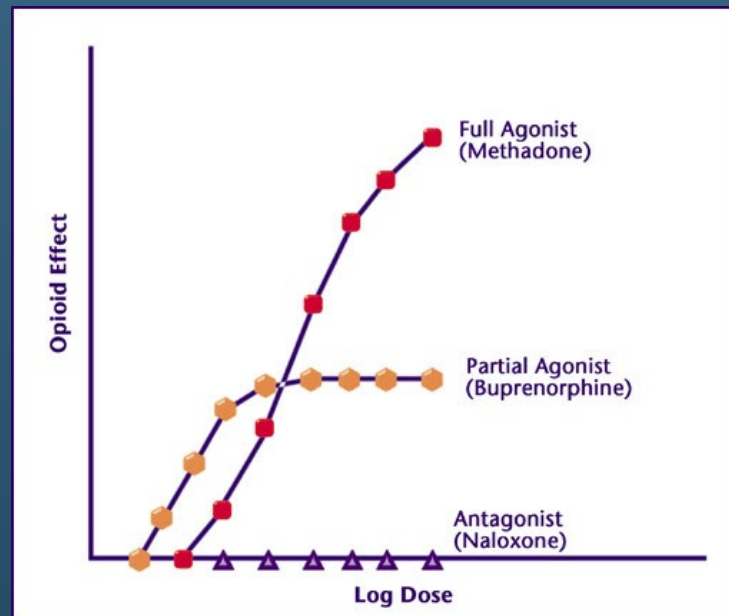
# FDA Approved Pharmacotherapy for SUD

## Nicotine:

- nicotine replacement therapy (gum, patch, inhaler, etc)
- bupropion, varenicline

## Opioids:

- Agonist treatments: methadone, buprenorphine (SL, SC)
- Antagonist treatment: naltrexone (PO, IM)



# What Does a Clinic Visit Look Like?

- Enhancing likelihood of long-term recovery
- Check PMP-Aware
- Introduce UDS if not done previously
- Collaborative Care: Integrated BH care (IMPACT model)
- Infectious disease evaluation (PrEP)
- Assess for IPV/housing/sexual health
- Harm reduction (needle exchange, etc)
- Safe storage of medications

# Monitor for Effectiveness/Outcome

- Not just in terms of sobriety/abstinence...
- In terms of functional improvement:
  - emotional
  - interpersonal
  - medical
  - occupational
  - legal
- Is there progress toward patient's identified goals?
- Is there **active** participation/engagement in treatment?

# Screening vs Definitive



# NC Resources

## Additional Resources

### **N.C. Department of Social Services**

[www.ncdhhs.gov/divisions/dss](http://www.ncdhhs.gov/divisions/dss)

### **N.C. Governor's Institute**

[www.governorsinstitute.org](http://www.governorsinstitute.org)

### **N.C. Women's Health Branch**

[www.whb.ncpublichealth.com](http://www.whb.ncpublichealth.com)

### **N.C. Harm Reduction Coalition**

[www.nchrc.org](http://www.nchrc.org)

### **N.C. Department of Mental Health, Developmental Disabilities, and Substance Abuse Services**

[www.ncdhhs.gov/divisions/mhddsas](http://www.ncdhhs.gov/divisions/mhddsas)



### **N.C. Recovery Courts**

[www.nccourts.gov/courts/recovery-courts](http://www.nccourts.gov/courts/recovery-courts)

### **N.C. Attorney General's Office**

[www.ncdoj.gov](http://www.ncdoj.gov)

### **N.C. Department of Public Instruction**

[www.ncpublicschools.org](http://www.ncpublicschools.org)

### **N.C. Opioid Action Plan (OAP)**

Information on the OAP can be found [here](#)

### **For additional substance use data visit:**

[www.injuryfreenc.ncdhhs.gov](http://www.injuryfreenc.ncdhhs.gov)



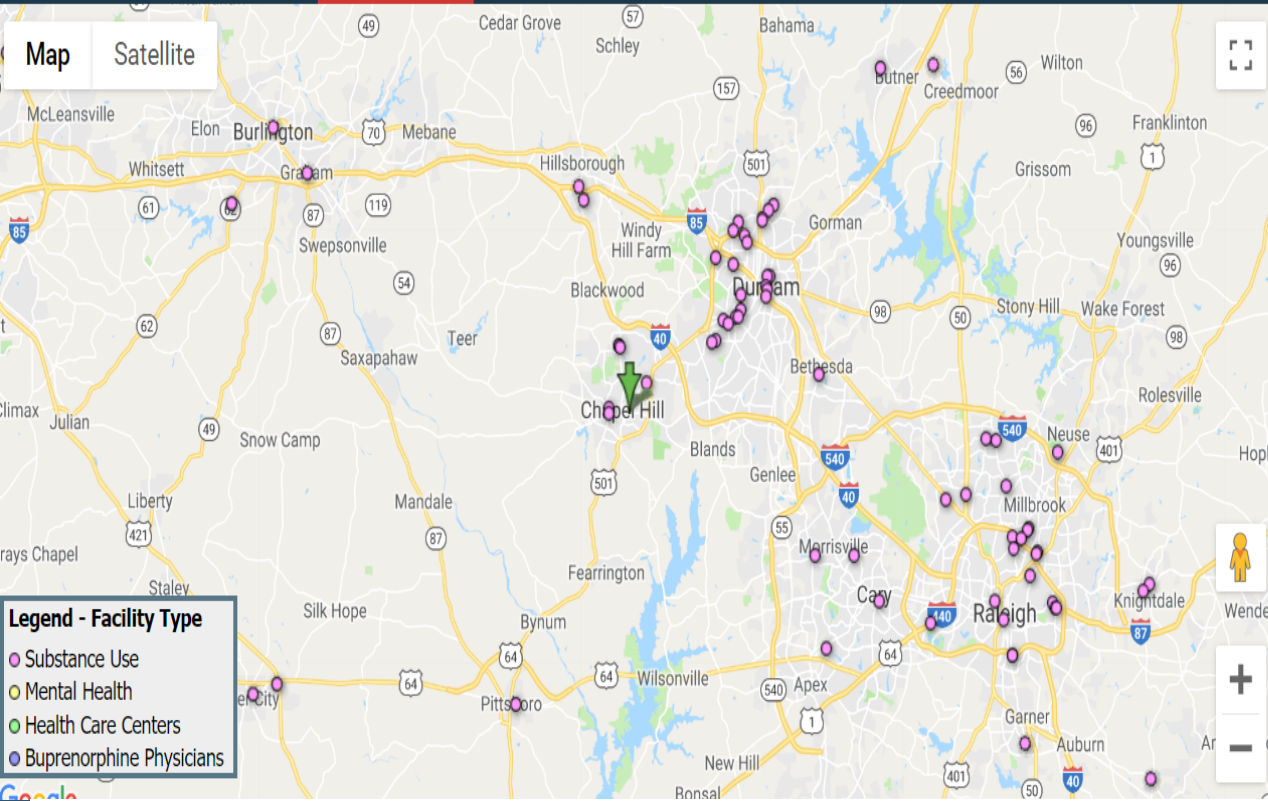
400 South Rd, Chapel Hill, NC 27514, USA

Search Facilities

State  County  Distance  miles

Service:  Substance Use (SU)  Mental Health (MH)  SU & MH

Health Care Centers  Buprenorphine Physicians  Veterans Affairs



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1 of 135 Show 100

<b>UNC at Chapel Hill Faculty Physicians</b>	1.62 miles
1 200 North Greensboro Street, Suite C-6, Carrboro, NC 27510 Main Tel: 984-974-6320	
Directions  More Information	
<b>Sunrise Casaworks Residence Sunrise Perinatal Residence</b>	1.64 miles
2 209-17 Connor Drive, Chapel Hill, NC 27515 Main Tel: 919-960-3775	
Directions  Website  More Information	
<b>UNC Horizons Program</b>	1.67 miles
3 410 North Greensboro Street, Suite 220, Carrboro, NC 27510 Main Tel: 919-966-9803	

**Find treatment facilities confidentially and anonymously.**

Enter an Address, City, or ZIP code

Search Facilities

**Get Help**

**Substance prevention lifeline**  
**1-800-273-TALK (8255)**

Free and confidential support for people in distress, 24/7.

**National Helpline**  
**1-800-662-HELP (4357)**

Treatment referral and information, 24/7.

**Disaster Distress Helpline**  
**1-800-985-5990**

Immediate crisis counseling related to disasters, 24/7.

# How Can We Do Better?

## Pay attention to motivation and readiness:

- Attention to ambivalence (language and action) regarding sobriety and active engagement in specific steps
- Adapt intervention to stage of change (contemplation...action...maintenance)

## Take advantage of what we know:

- Utilize pharmacologic and non-pharmacologic treatment approaches that research shows are most effective
- Adapt treatments dependent on outcome/progress

## Take advantage of opportunities to:

- Screen ALL patients and become aware of history of racial inequity in substance use treatment
- Encourage self-efficacy: Look for and build on positive change or behavior!

# Summary Points

- Drug use and progression to addiction is variable but has common elements: *No substitution for being curious and a good assessment*
- Core processes: Increased reliance on drug or drugs, other behavioral alternatives and neuro-adaptions: *Becomes necessary for hedonic tone: "Only friend /life preserver"*
- Behavioral modalities: Combine well with pharmacotherapy  
*Should be evidence-based and address skills as well as insight*  
*Best in setting of engagement / therapeutic alliance / peer support*
- *Treatment:* Strongly evidence-based, particularly for OUD



# Thank you! Questions?

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