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Alcohol Use Disorder and Treatment

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All Rise

Let's Talk Why....

- Alcohol misuse costs the United States about \$249 billion per year.
- Globally, AUD is associated with a substantial burden with premature mortality, disability-adjusted life years, and years lived with disability
- 140,000 people (97,000 men and 43,000 women) die from alcohol-related causes, making it the 4th leading preventable cause of death.
- Approximately 29.5 million people had AUD in 2021.
- AUD often co-occurs with other psychiatric disorders and treatment outcomes can be reduced for both
- 1 in 11 ED visits and 1 in 9 hospitalizations were made by adults with AUD or SUD

Language Matters



Strength-based



Hopeful



Person-first



Free of labels



Non-judgemental



Healing-centered

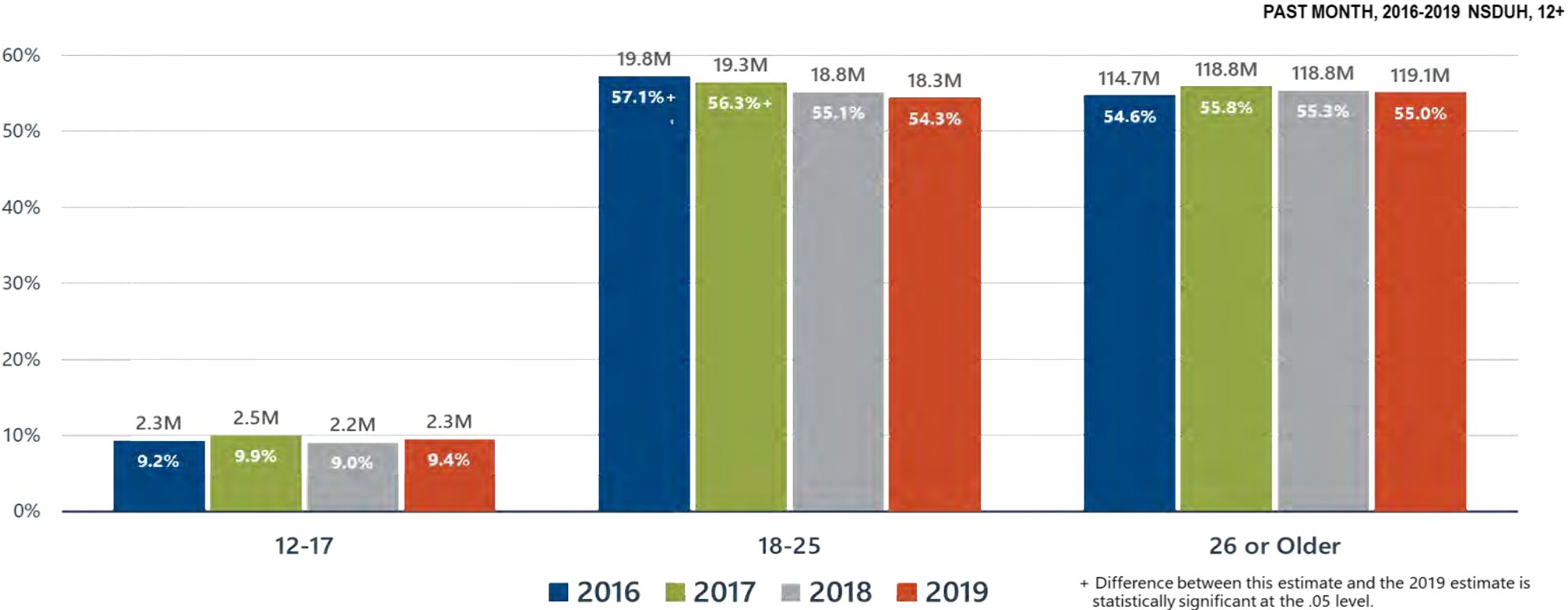


Trauma-responsive

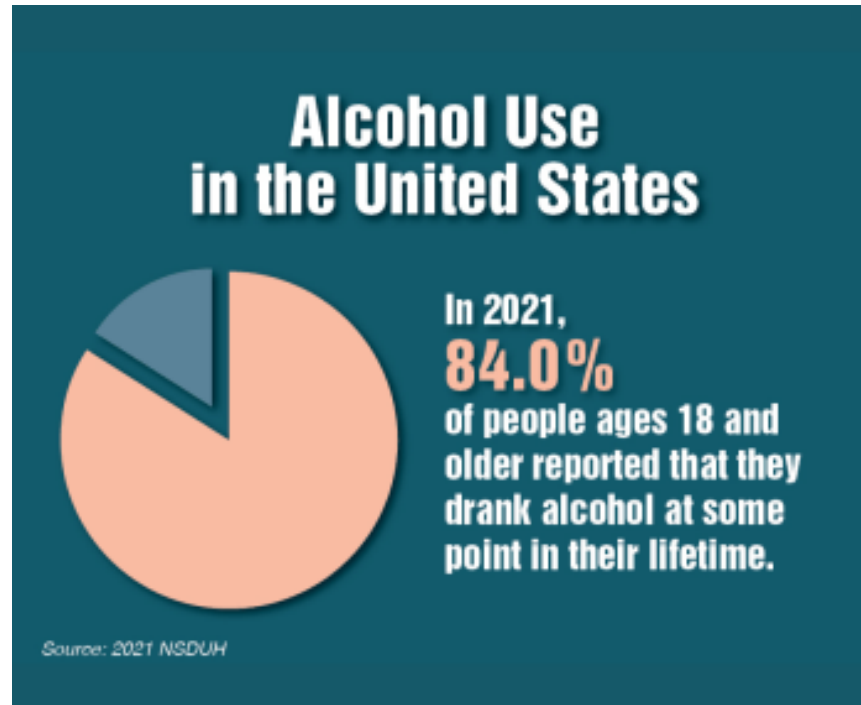
Alcohol

- Most commonly consumed intoxicating substance
- Legal in most parts of the world
- Most popular drug of abuse
- Probably the most physically toxic of drugs
- Damages almost every organ in the body
- Easy access, adults use, advertising, relatively inexpensive.

Alcohol Use in the United States






Alcohol Use in the United States 2021



US Rates of AUD



	Prevalence	AUD
Never exceed the daily or weekly limits (2 out of 3 people in this group abstain or drink fewer than 12 drinks a year)	 72%	fewer than 1 in 100
Exceed only the daily limit (More than 8 out of 10 in this group exceed the daily limit <i>less than once a week</i>)	 16%	1 in 5
Exceed both daily and weekly limits (8 out of 10 in this group exceed the daily limit <i>once a week or more</i>)	 10%	almost 1 in 2

Drug Classification

CENTRAL NERVOUS SYSTEM DEPRESSANTS

Slows brain activity

Short-term effects

Drowsiness, slurred speech, poor concentration, confusion, dizziness, problems with movement and memory, lowered blood pressure, slowed breathing

Long-term effects

Chronic fatigue, hypersomnia, weight gain, breathing and sleeping difficulties



Risks of Harmful Alcohol Use

Alcohol Complicates Health Conditions

CAN LEAD TO OTHER HEALTH CONCERNS

- Heart and liver disease
- Stomach ulcers
- Seizures
- Stroke
- Psychiatric disorders

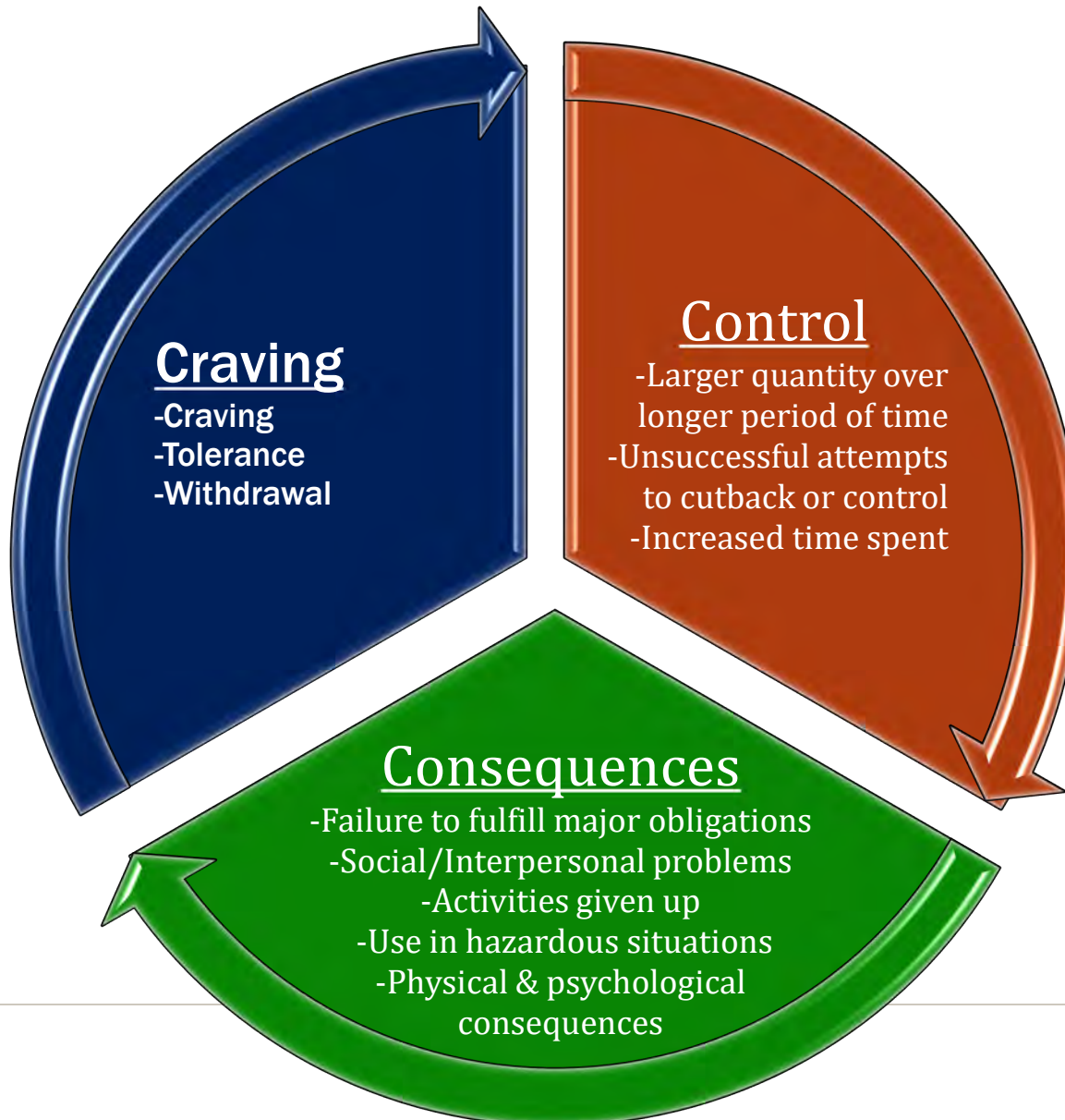
PRENATAL CONSEQUENCES

- Fetal alcohol syndrome
- Fetal alcohol spectrum disorders
- Stillbirth
- Preterm labor
- Maternal health complications

Alcohol Use Disorder Definition

- Alcohol Use Disorder (AUD) is a medical condition. It is a chronic relapsing brain disease characterized by compulsive alcohol use. It is an impaired ability to stop or control alcohol use despite adverse social, occupational, or health consequences.
- AUD can be mild, moderate, or severe.
- AUD causes a negative emotional state when not using.
- Adolescents and adults can be diagnosed with AUD.

Substance use disorder from DSM-5



The Three C's

Diagnosis:

- 2 or more in the prior 12 months

Characterization:

- 2-3 = mild
- 4-5 = moderate
- 6 or more = severe

DSM-5 Diagnostic Criteria

Signs of alcohol
use disorder in
the last 12 months

- Recurrent use results in failure to fulfill major role obligations
- Recurrent use in hazardous situations
- Continued use despite recurrent social or interpersonal problems exacerbated by alcohol
- Tolerance
- Withdrawal
- Drinking alcohol in larger amounts or over longer periods than intended
- Having a persistent desire or unsuccessful effort to cut down or control use
- Spending a great deal of time obtaining or recovering from alcohol
- Giving up important social, occupational, or recreational activities
- Continued alcohol use despite knowledge of persistent physical or psychological problems caused by alcohol
- Craving

Protective and Risk Factors for AUD

PROTECTIVE FACTORS

- Positive self-image
- Early screening
- Social competence
- Strong social support

RISK FACTORS

- Biological
- Family
- High-stress levels
- Mental health problems or trauma
- Social and cultural factors
- Early age onset

Alcohol Withdrawal

- Occurs when an individual discontinues or reduces alcohol intake after a prolonged period of use.
- Can appear in several ways in multiple settings
medical, justice systems
- Requires medical/clinical evaluation and intervention
- Can be managed safely in both outpatient and inpatient settings
- Falls on a spectrum
mild, moderate, severe and complicated

Alcohol Withdrawal Symptoms

Nausea and vomiting

Headache

Auditory/visual disturbances

Agitation

Sweating

Tremor

Anxiety



Why We Do Not Incarcerate for Use

Among women incarcerated in local jails, the average annual mortality rate due to drug/alcohol intoxication was nearly twice that of their male counterparts.

The median length of stay in jail before death from alcohol or drug intoxication was just 1 day.

BUREAU OF JUSTICE ASSISTANCE

MANAGING SUBSTANCE WITHDRAWAL IN JAILS: A LEGAL BRIEF

A disproportionate number of people in jails have substance use disorders (SUDs).¹ Incarceration provides a valuable opportunity for identifying SUD and addressing withdrawal.² Within the first few hours and days of detainment, individuals who have suddenly stopped using alcohol, opioids, or other drugs may experience withdrawal symptoms, particularly when they have used the substances heavily or long-term. Without its identification and timely subsequent medical attention, withdrawal can lead to serious injury or death.

Deaths from withdrawal are preventable, and jail administrators have a pressing responsibility to establish and implement withdrawal policy and protocols that will save lives and ensure legal compliance. This brief describes the scope of the challenge, provides an overview of constitutional rights and key legislation related to substance use withdrawal, and outlines steps for creating a comprehensive response to SUD.

Scope of the Challenge

Among sentenced individuals in jail, 63 percent have an SUD, compared to 5 percent of adults who are not incarcerated.³ From 2000 to 2019, the number of local jail inmates who died from all causes increased 33 percent; the number who died from drug/alcohol intoxication during the same period increased 397 percent.⁴ Among women

When Kelly Coltrain was booked for unpaid traffic violations in 2017, she told jail staff that she was drug dependent and had a history of seizures. Her request to go to the hospital for help with withdrawal symptoms was denied. She was placed in a cell that required 30-minute checks, but these checks rarely occurred. For the next 3 days, she was observed (by video camera) vomiting, sleeping often, and eating little. On her third night in jail, she started convulsing; then, all movement ceased. For at least the next 4 hours, no deputies or medical staff came to the cell to determine why she was still. Kelly's family filed a wrongful death suit, which was settled in 2019 for \$2 million plus 4 years of federal district court monitoring of the jail during implementation of new policies and procedures to ensure proper care of inmates at risk of withdrawal.⁵

incarcerated in local jails, the average annual mortality rate due to drug/alcohol intoxication was nearly twice that of their male counterparts.⁶ The median length of stay in jail before death from alcohol or drug intoxication was just 1 day,⁶ indicating that individuals on short stays, including those who are detained in pretrial status, are equally at risk. It is not uncommon for individuals to experience substance withdrawal at the time of entry into jail, when access to their drug of choice is abruptly stopped. Estimates within specific regions vary widely, from 17 percent of people entering New York City jails being in acute opioid withdrawal⁷ to a record 81 percent of people entering a Pennsylvania county jail needing detoxification services—half of them for opioid use disorders.⁸

¹ As noted in the Substance Abuse and Mental Health Services Administration's *Use of Medication-Assisted Treatment for Opioid Use Disorder in Criminal Justice Settings* (2019), medication-assisted withdrawal (also referred to as medical detoxification) is "designed to alleviate acute physiological effects of opioids or other substances while minimizing withdrawal discomfort, cravings, and other symptoms."

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<https://bja.ojp.gov>

No Level of Safe Alcohol Consumption



- World Health Organization: there is no safe amount that does not affect health
- Alcohol is toxic
- Group 1 carcinogen – most recent data suggest 50% of all alcohol-attributable cancers are caused by “light” and “moderate” consumption

What is At-Risk Alcohol Use?



	DRINKS / DAY	DRINKS / WEEK
Men	>4	>14
Women	>3	>7
All Age > 65	>3	>7

Resource: NIAAA

Canada's Guidance on Alcohol and Health

- January 2023: updated their guidance on alcohol and health
- 3-6 standard drinks a week represent a moderate risk to your health
- More than 6 drinks a week increases your risk of seven types of cancer, most types of cardiovascular disease, liver disease and violence
- Recommends no more than 2 drinks a day (per occasion)
- Less is BETTER

Canada's Guidance on Alcohol and Health



- 2 standard drinks a week is low risk
- 3-6 standard drinks per week is a moderate risk
- 7 or more standard drinks per week is increasingly high risk

Women and Alcohol Use



- Increased susceptibility to liver disease, cardiovascular disease, neurotoxicity and alcohol-related memory blackouts compared to men.
 - Women have less water in their bodies pound for pound (higher BAC as a result)
 - Women face alcohol-related problems sooner than men
 - Women who drink are at greater risk for developing breast cancer than women who do not consume alcohol,

Adolescent Alcohol Use



Because NO amount of alcohol use in adolescence is acceptable, any drinking is considered unhealthy drinking.



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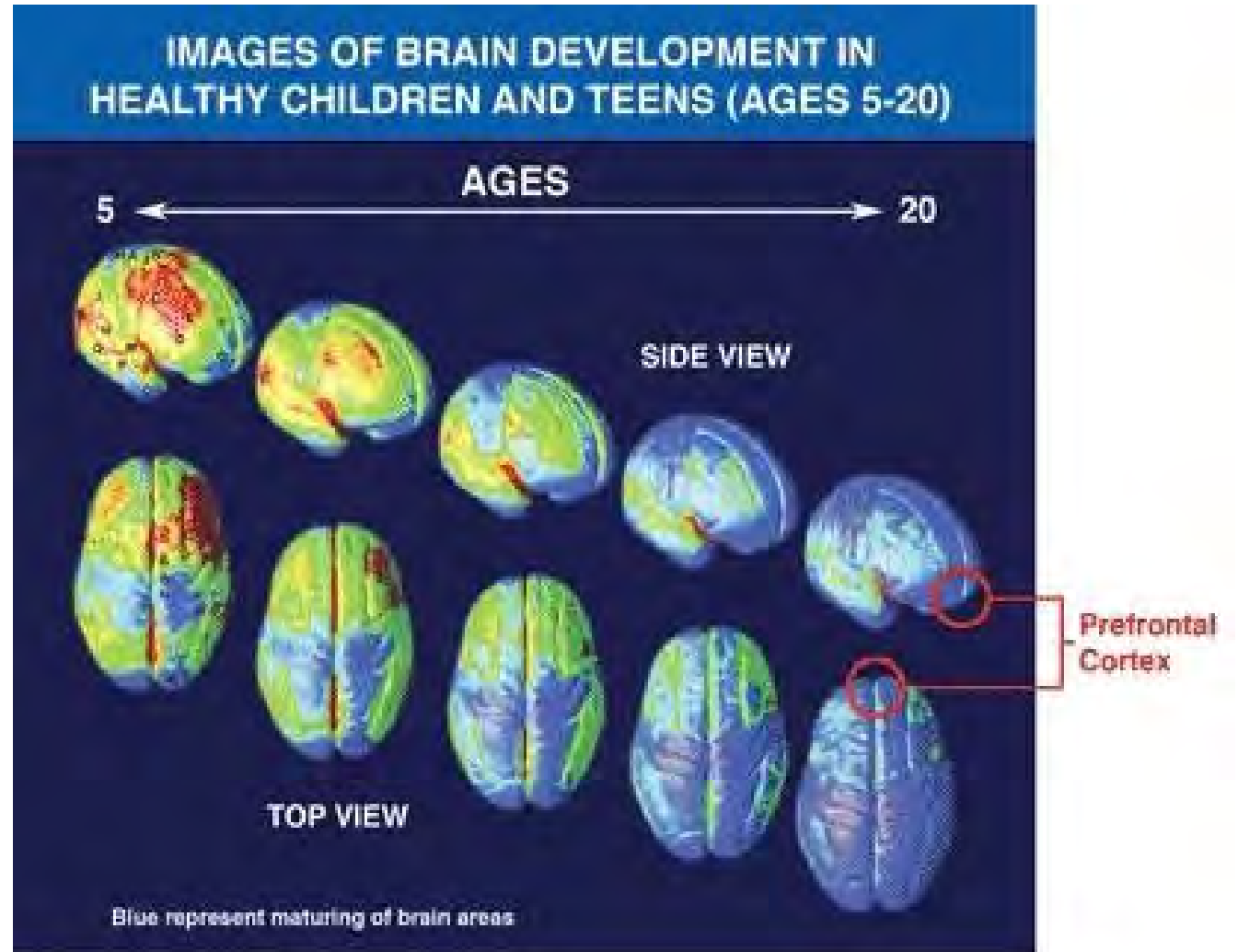
Andrew Huberman, Ph.D.

Huberman Lab Podcast



Understanding Brain Development

The brain continues to develop into adulthood and undergoes significant changes during adolescence.



Source: Copyright PNAS: 101(21);6174-9 2004

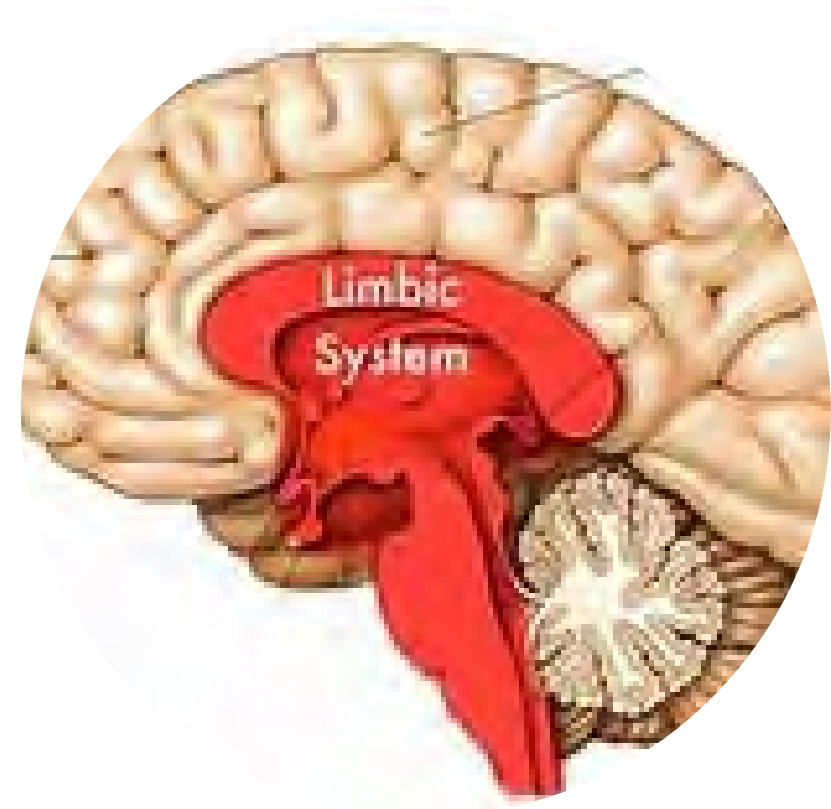
Prefrontal Cortex

- Enables us to assess situations
- Make sound decisions
- Stops us from taking risks/impulse control
- Prefrontal Cortex is not fully developed, still maturing well into adulthood.



Limbic System

- Develops years ahead of the prefrontal cortex
- Hypersensitive to the rewarding feeling: risk-taking and taking more risks, particularly with friends
- Processing emotional experiences and social information



Impact on the Brain

A NUMBER OF FACTORS INFLUENCE HOW AND TO WHAT EXTENT ALCOHOL AFFECTS THE BRAIN INCLUDING:

- How much and how often a person drinks;
- The age at which they or she first began drinking, and how long they have been drinking;
- The person's age, level of education, gender, genetic background, and family history;
- Whether they are at risk as a result of prenatal alcohol exposure; and
- General health status.

Brain Image Studies



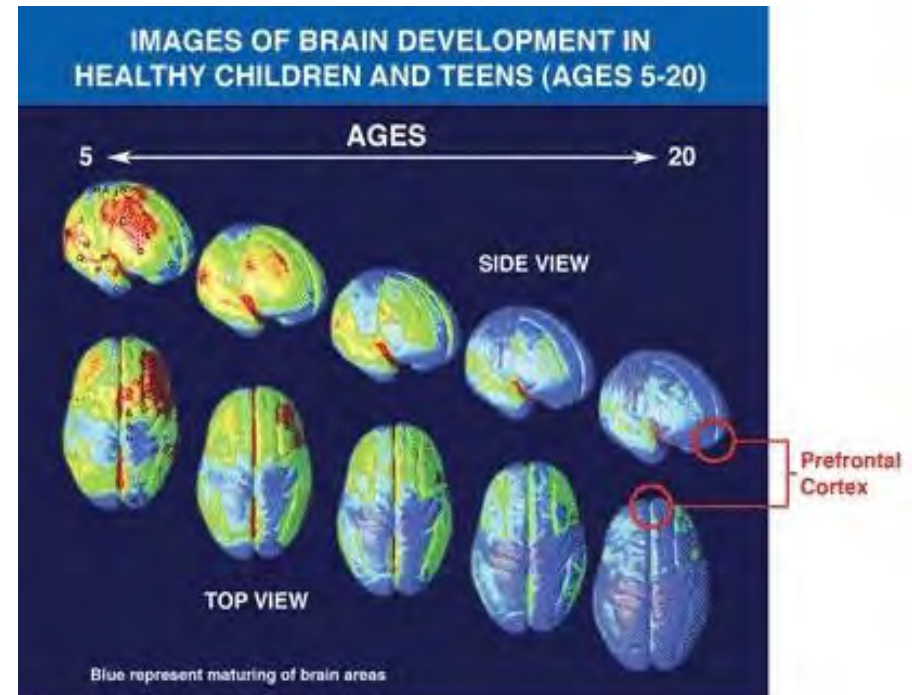
Introducing chemicals while the brain is still developing may have profound and long-lasting consequences



Physical changes in areas of the brain that are critical to judgement, decision making, learning and memory, and behavior control.



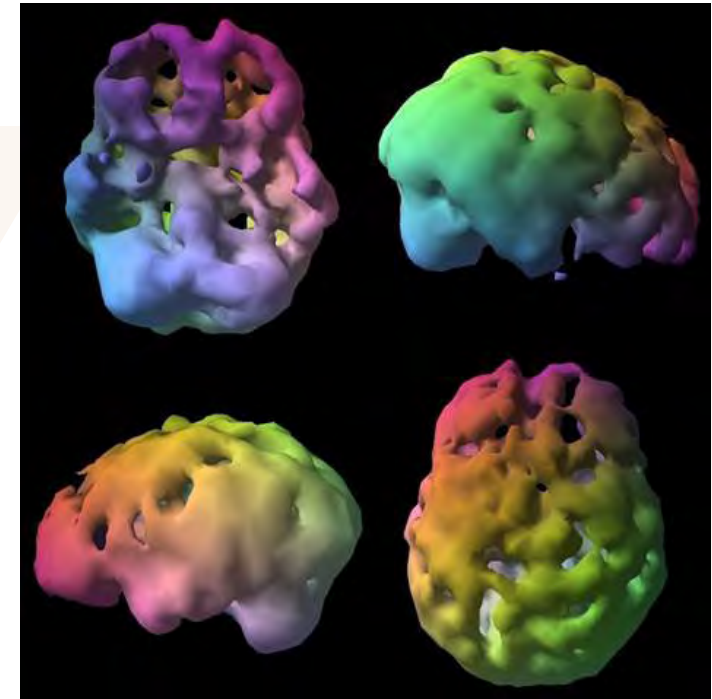
These changes may help explain the compulsive and destructive behaviors of addiction.



Source: Copyright PNAS: 101(21);6174-9 2004

Ways Alcohol Damages the Brain

- Shrinks brain volume
- Lowers blood flow to the brain
- Causes atrophy of the hippocampus
- Reduces the number of new brain cells
- Increases the risk of dementia



SPECT Scan – heavy alcohol use

Long-Term Use Rewires Brain Circuits

- Trigger adaptation in habit or non-conscious memory systems
- Conditioning: environmental cues become associated with the use experience and can trigger uncontrollable cravings
- This learned "reflex" is extremely robust and can emerge even after many years of abstinence



Voluntary or Involuntary

The initial decision to use is mostly voluntary

When alcohol use disorder takes over, the ability to exert self-control can become seriously impaired

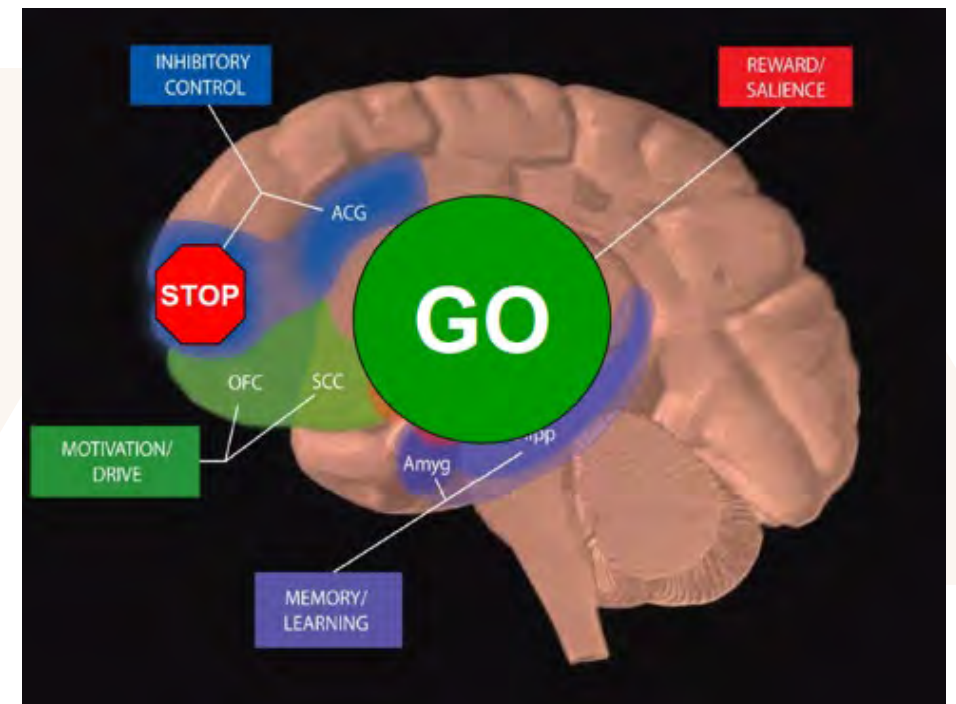
Brain Circuitry Involved in Substance Use

Inhibitory Control – the “**Stop**” – Frontal Lobe

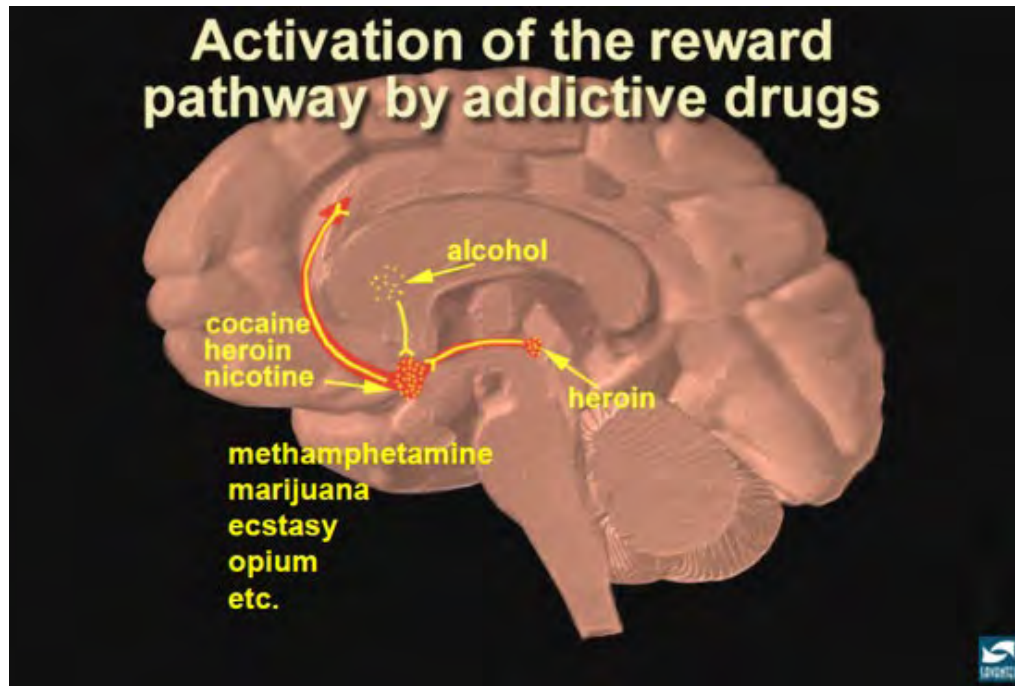
Drive Center – the **GO** – Amygdala

PET scans show frontal lobes and limbic systems do not work well in persons with substance use disorder

Dopamine produced while consuming alcohol is concentrated in the brains reward pathways.

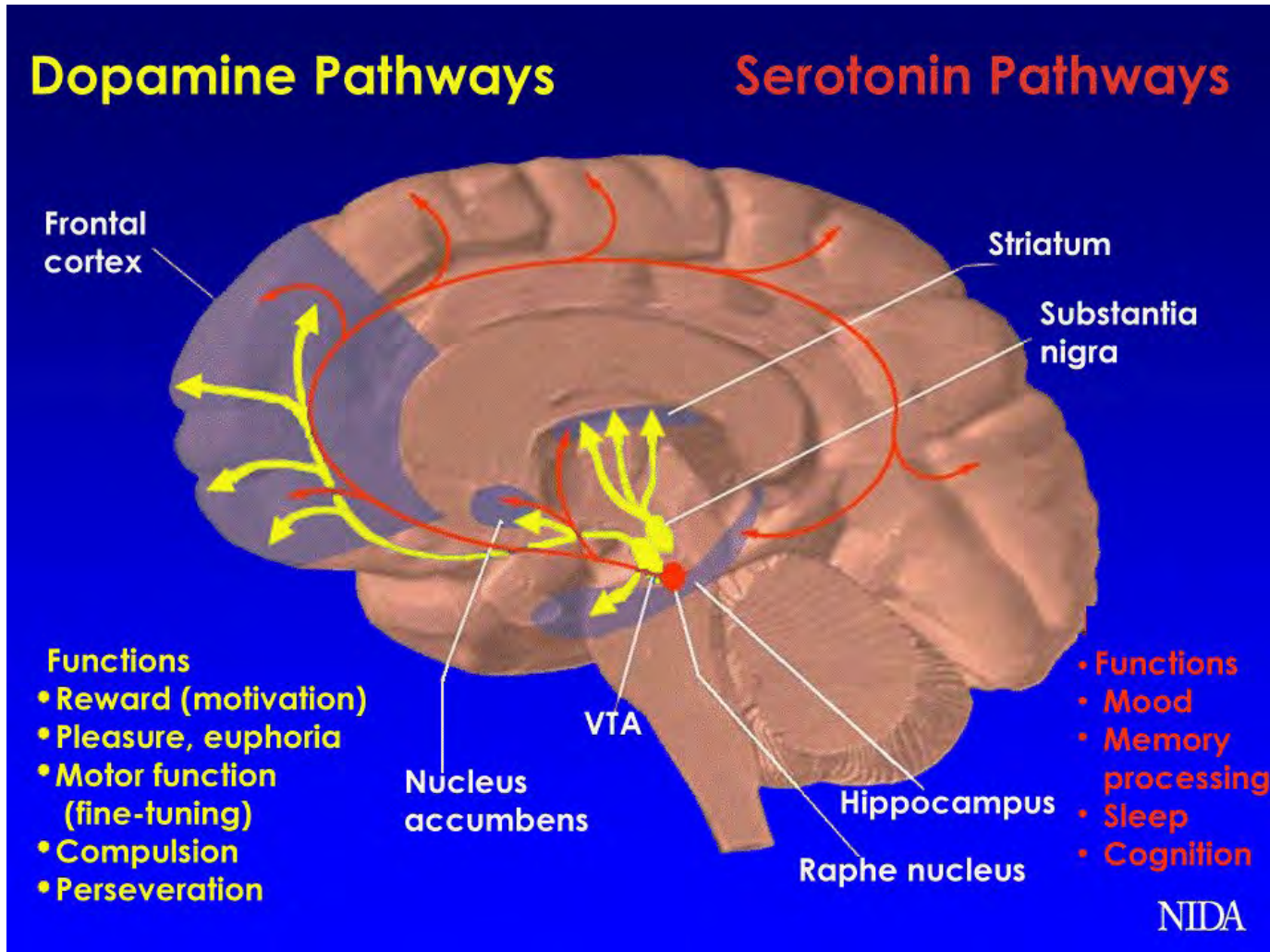


Alcohol interacts with the neurochemistry of the Brain



- Euphoria
- Reduced negative feelings
- This feels “normal”
- Cravings

Lasting Effects on the Brain



Brain adjusts to overwhelming surges in dopamine by producing less dopamine and fewer receptors

As a Result...



- The ability to experience any pleasure is reduced
- Alcohol is now needed in larger amounts for desired effect
- Eventually, this is baseline or “normal” and no longer produces desired effect

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.

[ASAM 2019](#)

Treatment



Principles of Effective Treatment



No single treatment is effective for everyone



Readily available



Multidimensional



Program length



Treatment/services plan continually assessed and adjusted

Evidence-Based Treatment

RIGOROUSLY TESTED, MOST RELIABLE EVIDENCE GAINED
FROM THE RESEARCH TO GUIDE CLINICAL DECISION MAKING.

- CBT
- DBT
- Contingency Management / Motivational Incentives
- Medications for Addiction Treatment
- 12-Step Facilitation Therapy
- Seeking Safety
- Relapse Prevention Therapy

Hundreds of EBP....



Basics of Effective Treatment

- **Goal:** the least restrictive environment that will get the job done
- American Society of Addiction Medicine (ASAM) Placement Criteria
- Treatment model/philosophy
- Medications
- Behavioral counseling
- Therapeutic Alliance

Medications FDA-approved for AUD



Naltrexone

oral and long-term
injectable



Acamprosate

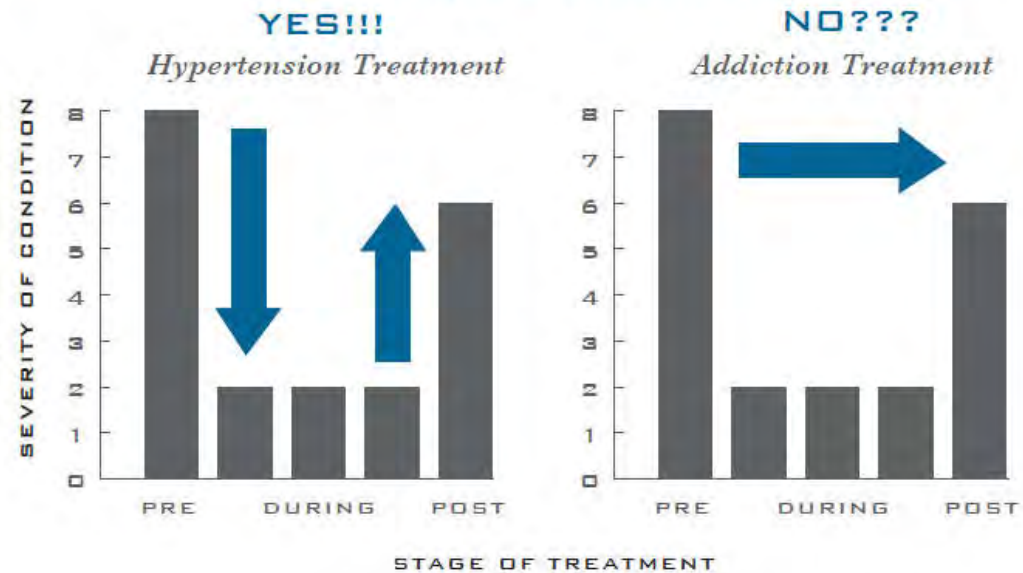


Disulfiram



What About Treatment Outcomes?

WHY IS ADDICTION TREATMENT EVALUATED DIFFERENTLY?
BOTH REQUIRE ONGOING CARE



Percentage of Patients Who Relapse



Research on Outcomes



- The average treated person is better off than 80% of those who have not been treated
- Treatment is cost-effective
- Therapeutic factors contribute to the efficacy of treatment



Therapeutic Alliance

The therapeutic alliance was consistently a predictor of outcome for all the measures of treatment outcome.

Client-Centered Matters



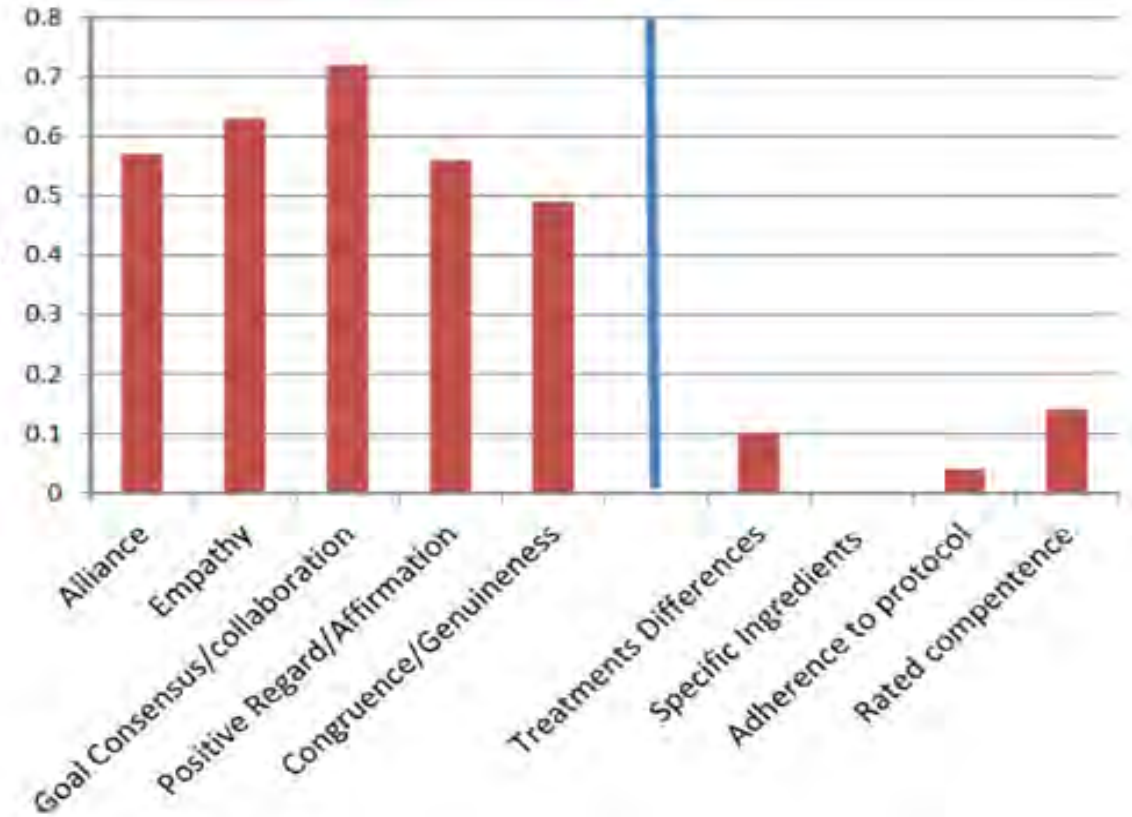
The risks, needs or strengths, skills and resources, identified by a practitioner in a multidimensional assessment should not determine the service planning alone.

The more that priority dimensions can be matched to or interpreted through the patient's personal goals, the more patient-centered the plan can be.



How Change Happens

Effect Size



Change Happens When...



Compassion



Empathy



Acceptance



NADCP

National Association of
Drug Court Professionals

Questions?

National Resources

#TOGETHERWEFARM



Understanding Alcohol Use Disorder, a brief overview of AUD. National Institute on Alcohol Abuse and Alcoholism.

<https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/alcohol-use-disorders>

A Practitioner's Guide

Alcohol Screening and Brief Intervention for youth: National Institute on Alcohol Abuse and Alcoholism (NIAA).

<https://www.niaaa.nih.gov/sites/default/files/publications/YouthGuide.pdf>

A Public Health-Based Approach / Toolkit for Addressing Substance Use Disorders in Rural Communities. Rural Health Info.

<https://www.ruralhealthinfo.org/toolkits/substance-abuse/1/public-health-based-approach>

The Alcoholic Beverage

An Elixir, and Yet a Poison? Rural Monitor news article.

<https://www.ruralhealthinfo.org/rural-monitor/alcohol-elixir-poison/>

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Addressing Stigma and Treatment Access in Rural America. Rural Monitor news article.

<https://www.ruralhealthinfo.org/rural-monitor/alcohol-use-disorder/>

NCHS Data Brief. Rates of Alcohol-induced Deaths Among Adults Aged 25 and Over in Urban and Rural Areas

United States, 2000-2018. Centers for Disease Control and Prevention.

<https://www.cdc.gov/nchs/data/databriefs/db383-H.pdf>