



# A Human-Centered Understanding of Substance Misuse and Substance Use Disorders

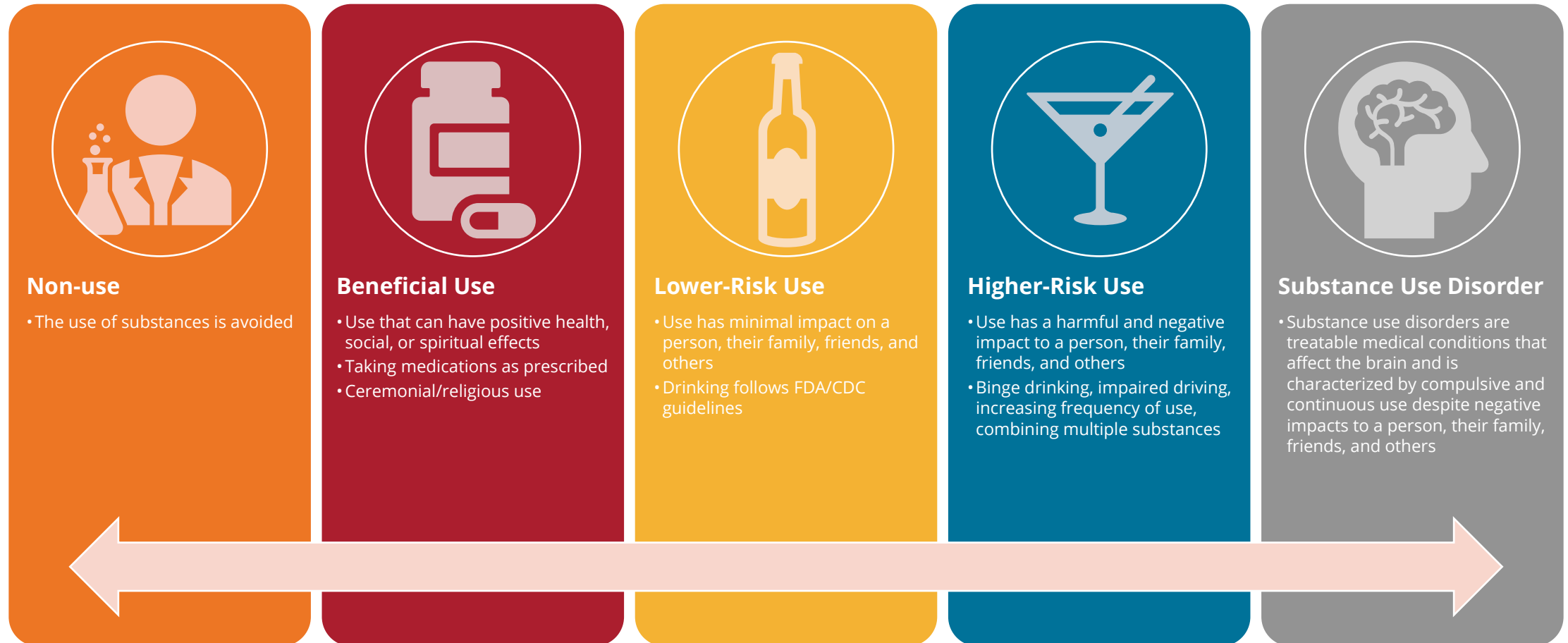
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# Agenda

- **A Brain Centered Look at Substance Use**
- The Role of Risk Factors
- The Importance of SBIRT

# Continuum of Substance Use



# DSM-5 Criteria for SUD

- Control
  - Using more of a substance or using more often than intended
  - Wanting to cut back or stop using and attempts to do so are unsuccessful
- Social Problems
  - Neglecting responsibilities and relationships
  - Spending excessive time obtaining, using, and/or recovering from substances
  - Inability to complete tasks at home, work, or school due to use
  - Continued use despite persistent social and/or interpersonal challenges
- Risky Behaviors
  - Using in risky situations
  - Continued use despite known physical, psychological, and/legal challenges
- Physical Dependence
  - Needing more of a substance to achieve the desired effect
  - Craving or strong desire to use
  - Experiencing withdrawal symptoms when substance isn't used

# The Neurobiology of Substance Use

- Neurological images reveal noticeable differences in brain activity within a patient affected by long-term substance use.
  - This includes diminished activity in the frontal cortex which is responsible for decision-making, judgment, and reasoning.
- Disruptions occur within the brain circuits and chemical systems that govern learning, memory, behavior, judgement, stress, and decision-making.

# Let's Talk About Dopamine

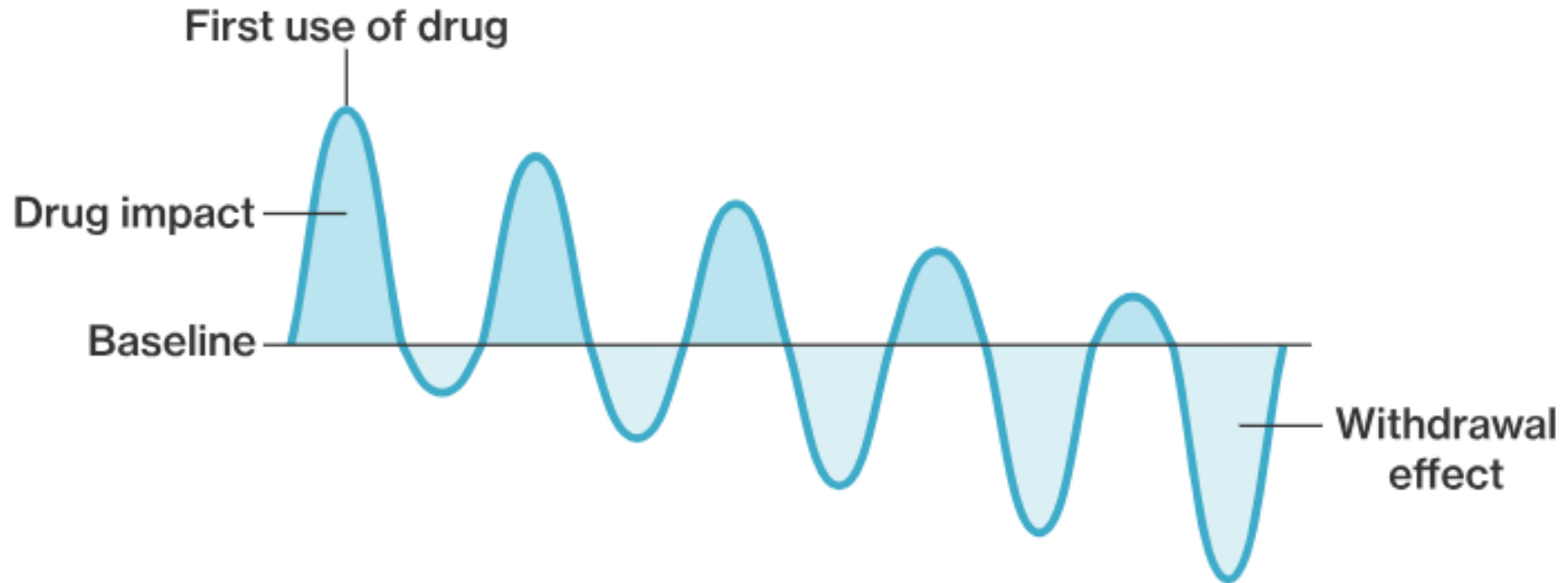
- Pleasurable activities release Dopamine which makes us feel good.
  - Dopamine response is different person to person.
- Research shows that some individuals have increased sensitivity to reward and pleasure stimuli within the Dopamine system.

# Let's Talk About Dopamine

- Consider this-
  - On average, eating chocolate causes a 50% surge in Dopamine
  - Sex causes a 100% spike
  - Amphetamines can trigger a 1000% increase in Dopamine release
- Dopamine release reinforces the connection between drug use and feeling immense pleasure



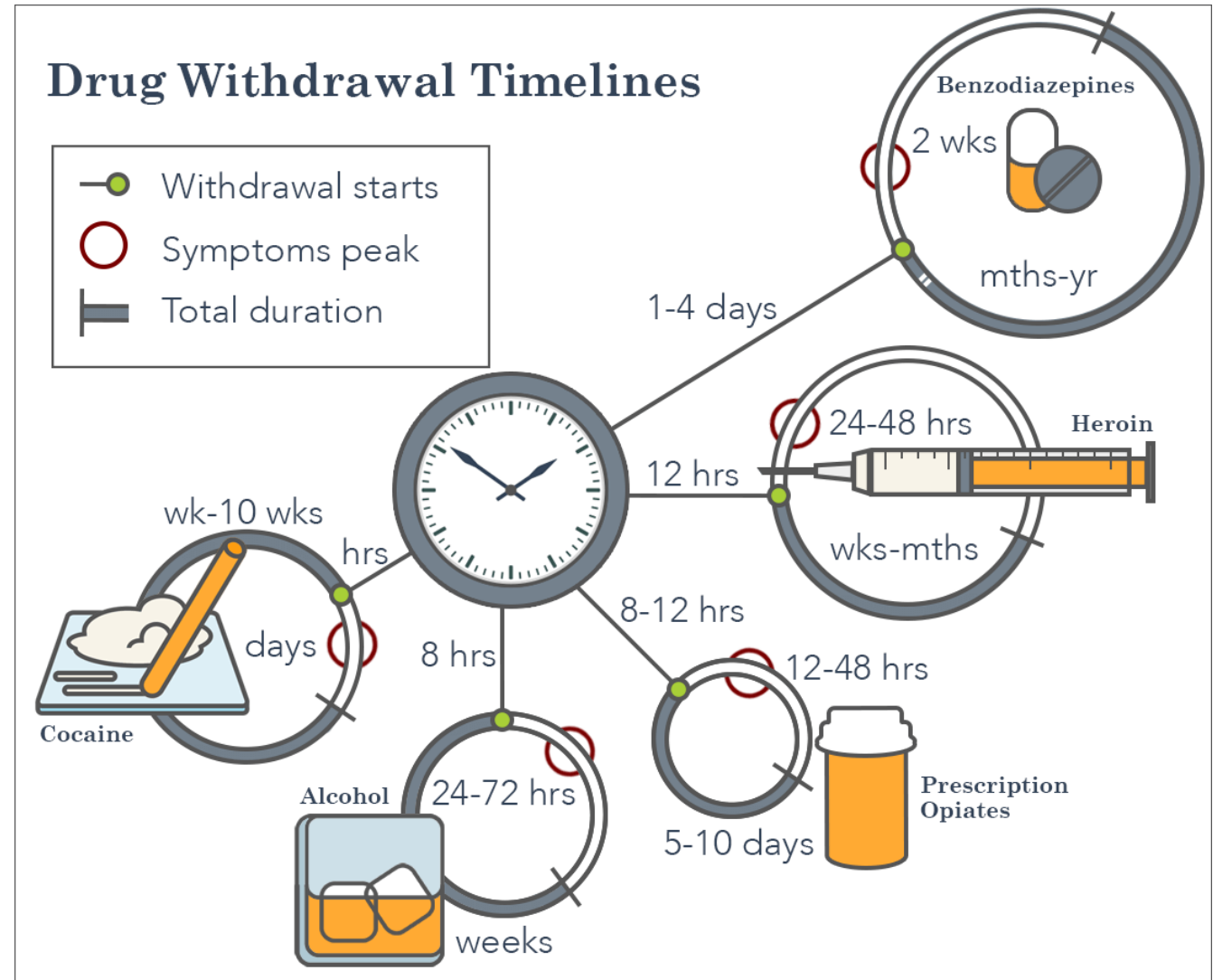
# The Tolerance Cycle





# Drug Withdrawal

- Drug withdrawal is a physiological response to the sudden quitting or slowing of use of a substance to which the body has grown dependent.
- The symptoms, severity, and timeline of withdrawal is dependent on the substance, length of time utilizing the substance, and the dosage.



# Questions?

# Agenda

- A Brain Centered Look at Substance Use
- **The Role of Risk Factors**
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# Risk Factors

- Genetic Predisposition
- Early Use
- Social Networks
- Mental health diagnoses
- Adverse Childhood Experiences

# Genetic Epidemiology

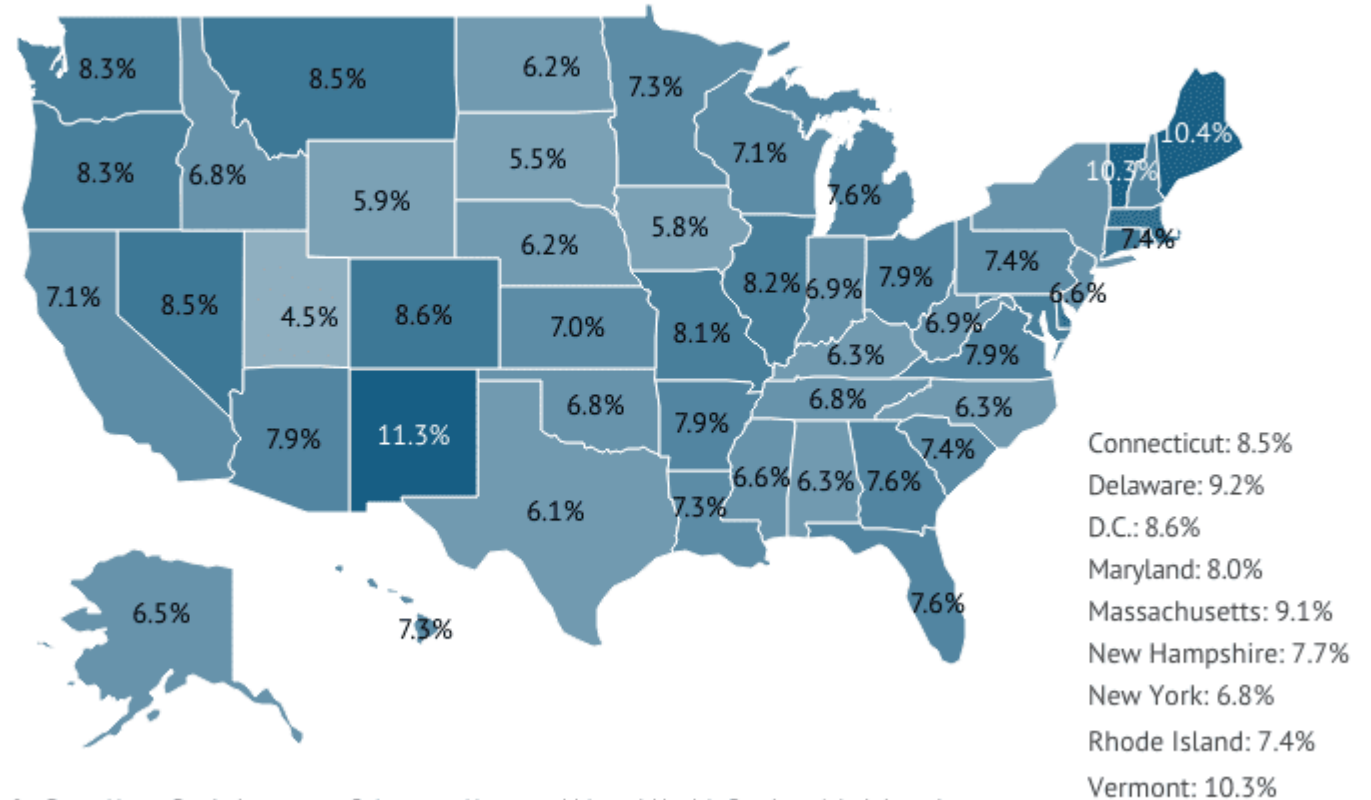
- Twin and family studies have demonstrated strong familial inheritance patterns for substance use disorders.
  - Genetic influence accounts for approximately 50% of the risk.
  - Research shows that heritability varies based on substance.



# Early Use

- In the United States, roughly 9 out of 10 people who meet criteria for SUD, began smoking, drinking, or using drugs before the age of 18.
- Those whose first use is before age 15 are 6.5 times as likely to develop a substance use program vs those who delay use until 21+.

## Illicit Drug Use in the Last Month Among 12- to 17-year-olds



National Center for Drug Abuse Statistics source: Substance Abuse and Mental Health Services Administration



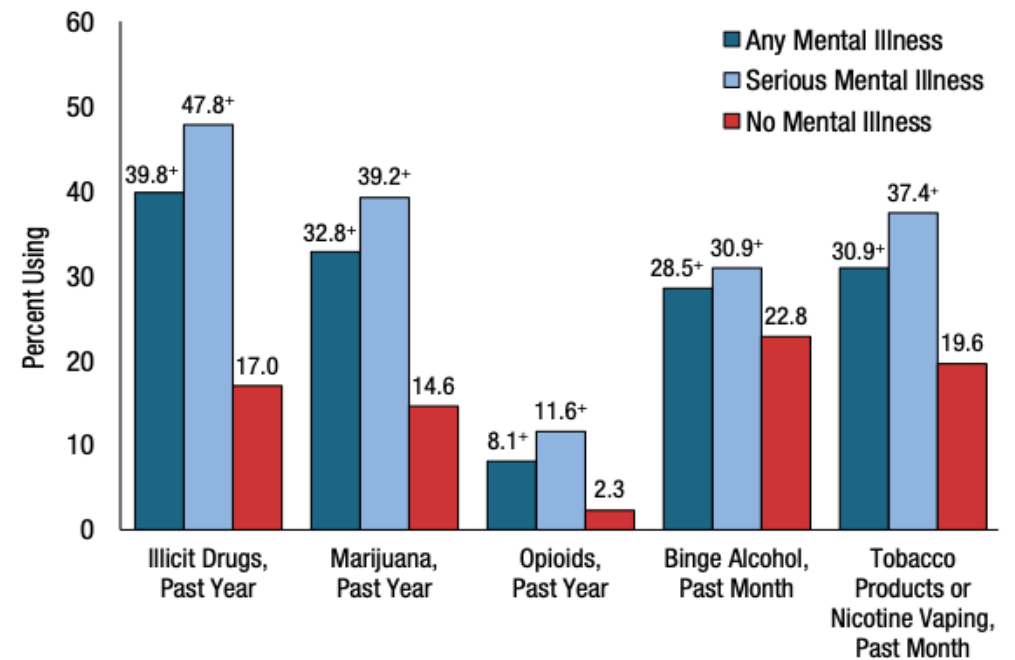
# Social Network

- Qualitative and quantitative research shows that interpersonal relationships are a key driver of substance use, misuse, and relapse.
  - Family
  - Intimate partnerships
  - Peer groups

# Co-Occurring Disorders

- According to SAMHSA's 2022 National Survey on Drug Use and Health, approximately 21.5 million adults have a co-occurring disorder.
  - Anxiety and mood disorders
  - Schizophrenia
  - Bipolar Disorder
  - Post-traumatic Stress Disorder
  - Attention Deficit Hyperactivity Disorder

**Figure 37. Substance Use: Among Adults Aged 18 or Older; by Mental Illness Status, 2020**



<sup>+</sup> Difference between this estimate and the estimate for adults without mental illness is statistically significant at the .05 level.



# Adverse Childhood Experiences

- Adverse childhood experiences, or ACEs, are potentially traumatic events that occur in childhood (0-17)
  - Experiencing physical, emotional, or sexual abuse
  - Physical or emotional neglect
  - Household dysfunction i.e. divorce, incarcerated relative



# Prevalence of ACEs



Approximately 3 in 5 (64%) adults in the United States report at least one type of ACE before age 18.



Having one ACE increases a child's likelihood of experiencing at least one other by 87%



Nearly 1 in 6 (17.3%) adults report having 4 or more ACEs

# How ACEs Impact Health

- Adults with ACEs are at greater risk for diseases such as alcoholism, stroke, diabetes, and coronary heart disease
- Those with an ACE score of  $\geq 5$  are:
  - 2-4x more likely to begin substance use at a younger age
  - 3x higher risk for misusing prescription pain medications
  - 4x more likely to develop depression
  - 7-10x more likely to use illicit substances
  - 7-10x greater risk for developing alcohol and/or substance use disorder
  - 12x more likely to die by suicide

# Positive Childhood Experiences

- PCEs drive healthy development and mitigate the long-term effects of ACEs.
- A 2015 adult population study conducted in Wisconsin show the following PCEs provide resilience in the face in ACEs:
  - Able to talk with family about their feelings
  - Felt family stood by them during difficult times
  - Enjoyed participating in community traditions
  - Felt a sense of belonging in high school
  - Felt supported by friends
  - Had at least two non-parent adults who took genuine interest in them
  - Felt safe and protected by an adult in their home

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- **The Importance of SBIRT**



# SBIRT

- Screening, Brief Intervention, and Referral to Treatment is a comprehensive and evidence-based approach to early intervention and treatment of substance use, misuse, and substance use disorders.



# Why is SBIRT important?



- Unhealthy and unsafe substance use are major preventable health complications that result in more than 100,000 deaths each year. Drug related deaths have more than tripled since 2000.
- Effects of unhealthy and unsafe alcohol and drug use have far-reaching implications for the individual, their family, their workplace, the community and the healthcare system

# Screening

- Universal screening is used to quickly assess the use of alcohol and drugs, licit and illicit, as well as the severity of potential misuse.
- Screening determines if brief intervention or referral to treatment occur.
- Consider partnerships within and without the organization that can support further screening for patients.

# Screening Tools

- Screening to Brief Intervention (S2BI)
- Brief Screener for Alcohol, Tobacco, and other Drugs
- Tobacco, Alcohol, Prescription Medication, and other Substance use (TAPS)
- Alcohol Screening and Brief Intervention for Youth
- Opioid Risk Tool
- Clinical Opiate Withdrawal Scale
- Patient Health Questionnaire-9

More information can be found through the National Institute on Drug Abuse ([NIDA.NIH.gov](https://www.nida.nih.gov))



# Brief Intervention

- Results from the screening tool utilized will determine if brief intervention is needed.
- Client is being seen for X, Y or Z but is having crisis type behaviors for another other reason. Try to find out immediate needs and address those first.
- For patients identified as having risky or problematic substance use, brief, motivational, and awareness-raising interventions are used.

# What is Motivational Interviewing?

- Motivational Interviewing is a clinical approach to engaging patients in a wide range of behavioral changes.
  - Provider mindset is foundational to a successful MI practice



# Spirit of Motivational Interviewing

- Partnership
- Acceptance
- Compassion
- Empowerment

**"No one knows more about your patient than they do."**



# Four Tasks of MI

## Engaging

- Can we take a drive together?

## Focusing

- Where are we going?

## Evoking

- Why do you want to go there?

## Planning

- How will you get there?

# Engaging

- Engaging is the process during which the provider builds rapport with a patient using empathic listening
- This task in MI has multiple benefits:
  - Patients are more involved in their treatment
  - Acts as an antidote for burnout and provider boredom
  - Improves communication across cultural and other barriers
  - Connect and assess



# Focusing

- Guidelines for focusing
  - Maintain bird's eye view while responding moment to moment
  - Reassure you are not there to lecture
  - Ask permission
  - Use open questions to clarify direction
  - Avoid changing the subject too quickly
  - Utilize agenda mapping

# Planning

- During this step, a jointly constructed plan of action is created
- Jumping ahead of a patient's readiness for change is unhelpful and may cause patient disengagement
- Clarify what the person needs
- Dig into the why, what, and how?
- Provide quality advice



# Key Skills in MI



- Open Ended Questions
  - Affirmations
  - Reflections
  - Summaries
- 
- Offer advice and information

# Referral to Treatment

- Refer patients to specialty care when needed.
- Make referrals before the patient leaves the building.
- If able, follow up with patients to ensure the referrals were successful and no additional needs have arisen.
- Make multiple referrals if waitlists for care exist.

# Questions?

Thank you!

Contact Information

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