



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

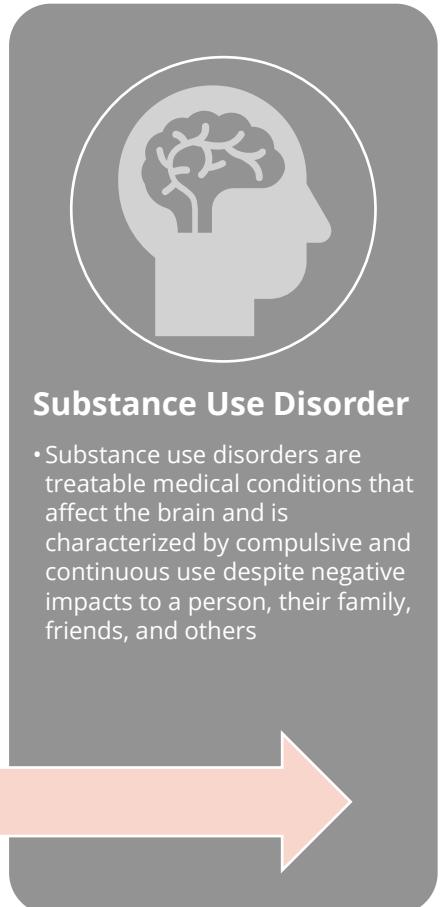
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Agenda

- **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

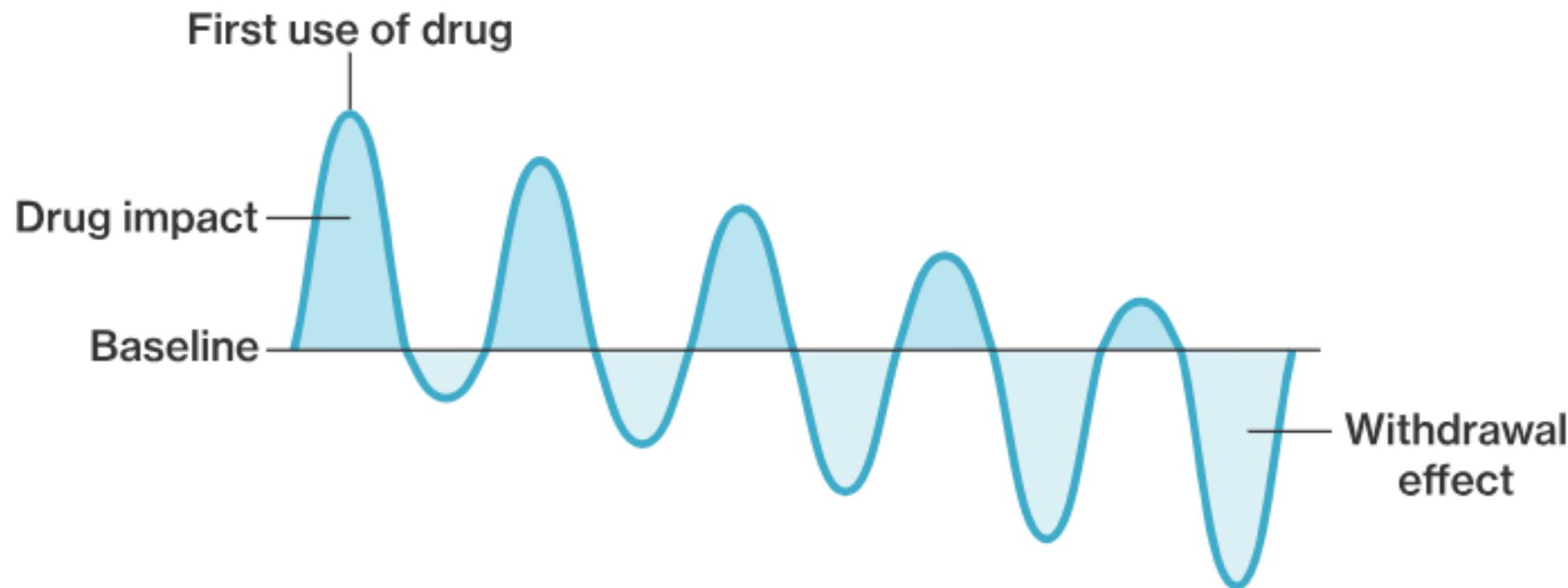
- Pleasurable activities release Dopamine which makes us feel good.
 - Dopamine response is different person to person.
- Research shows that some individuals have increased sensitivity to reward and pleasure stimuli within the Dopamine system.

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

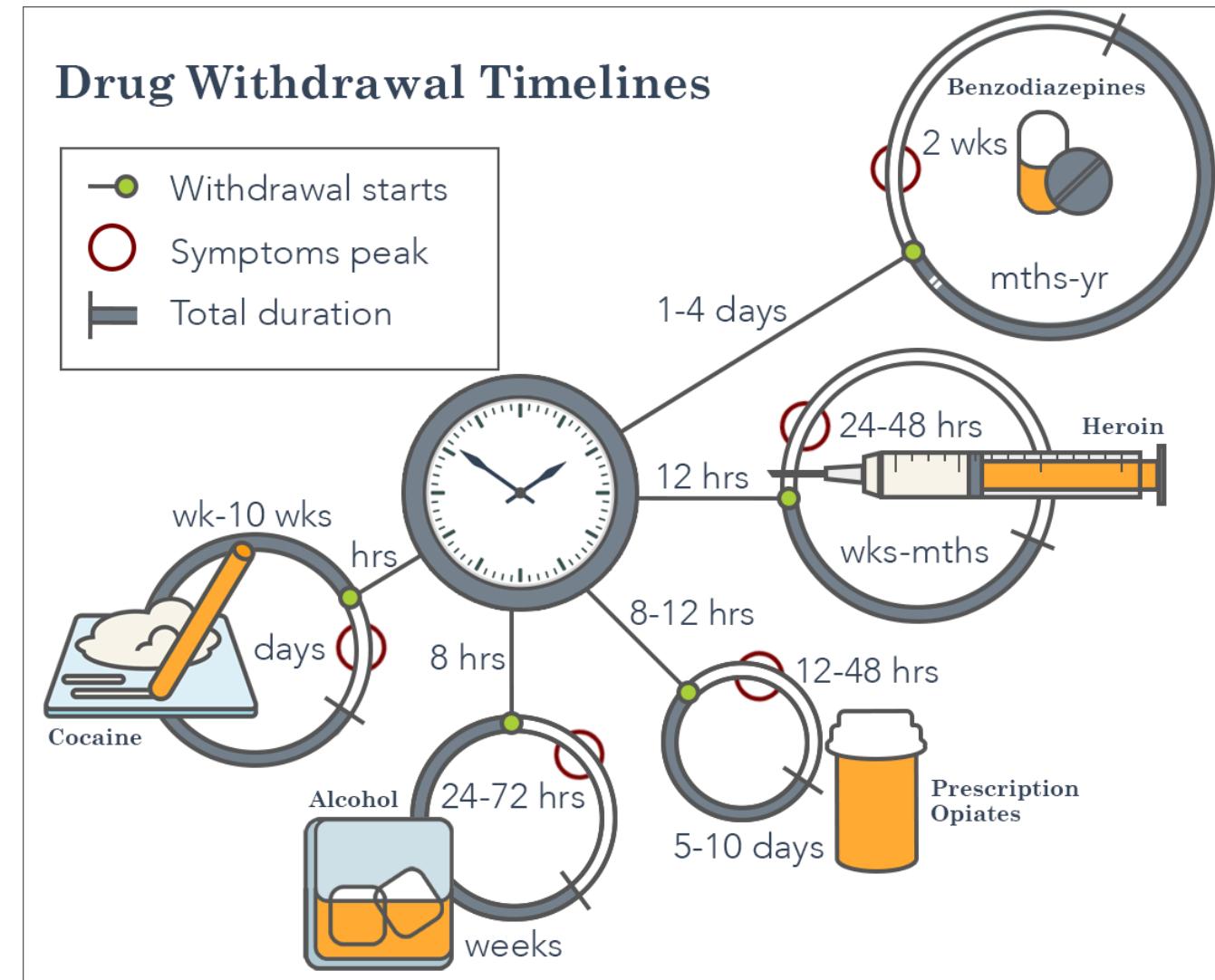


The Tolerance Cycle



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?

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Risk Factors

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

Genetic Epidemiology

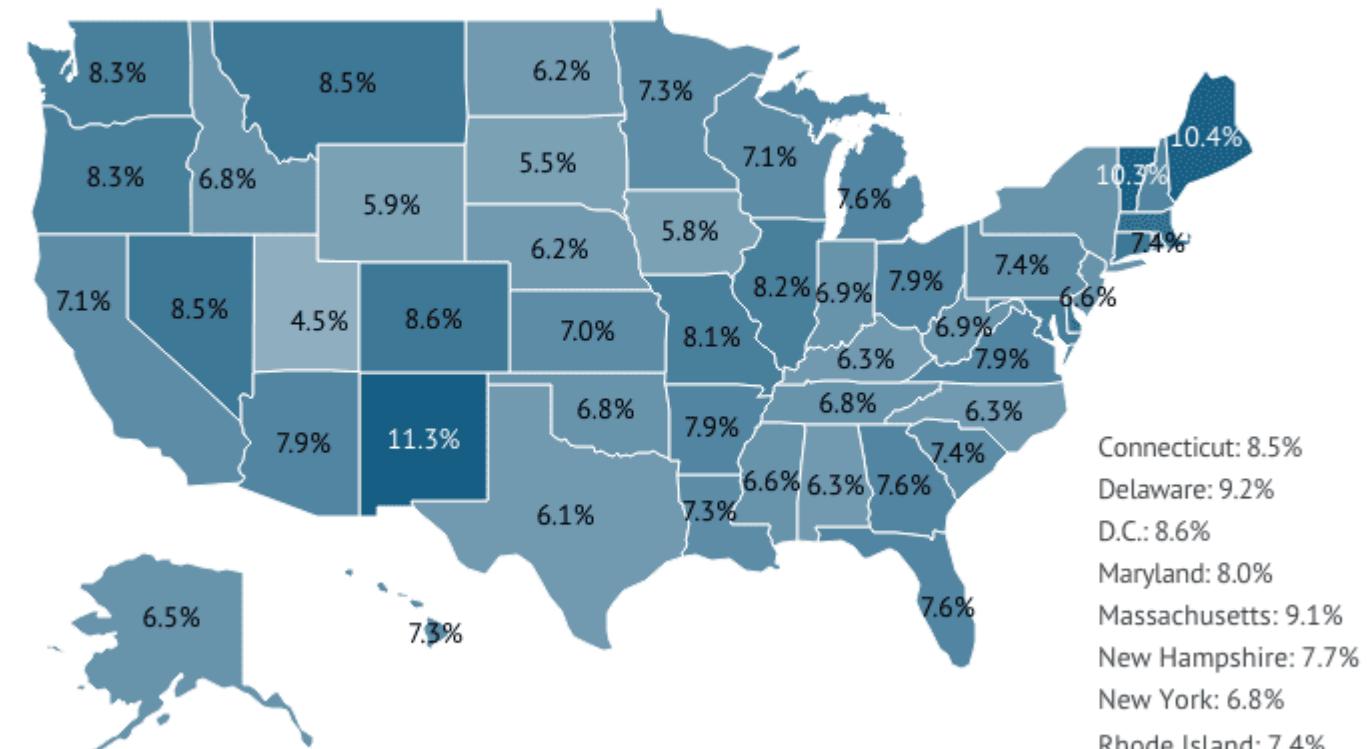
- Twin and family studies have demonstrated strong familial inheritance patterns for substance use disorders.
 - Genetic influence accounts for approximately 50% of the risk.
 - Research shows that heritability varies based on substance.



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

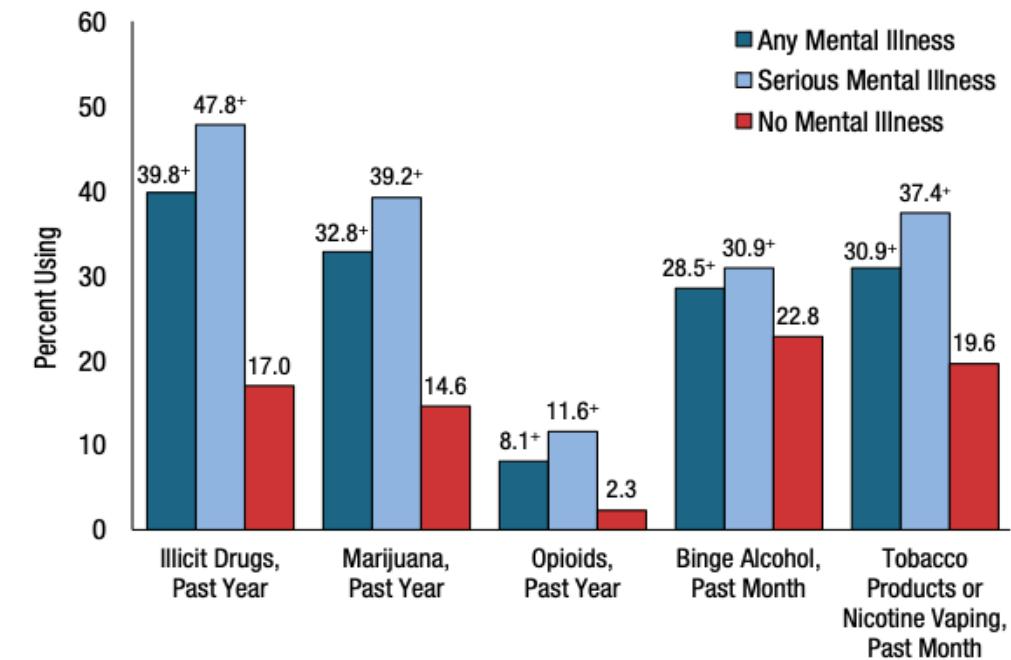
Social Network

- 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



⁺ 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 ≥ 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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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.go)



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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