

Alcohol Use and Alcohol Use Disorder in Adolescents & Young Adults

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Opioid
Response
Network



treatME

MMA Center for Quality Improvement / Maine Chapter, AAP

A better tomorrow starts **today.**

Working with communities.

- ✦ The SAMHSA-funded *Opioid Response Network (ORN)* assists states, organizations and individuals by providing the resources and technical assistance they need locally to address the opioid crisis and stimulant use.
- ✦ Technical assistance is available to support the evidence-based prevention, treatment and recovery of opioid use disorders and stimulant use disorders.

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Working with communities.

- ✧ The *Opioid Response Network (ORN)* provides local, experienced consultants in prevention, treatment and recovery to communities and organizations to help address this opioid crisis and stimulant use.
- ✧ *ORN* accepts requests for education and training.
- ✧ Each state/territory has a designated team, led by a regional Technology Transfer Specialist (TTS), who is an expert in implementing evidence-based practices.



Contact the Opioid Response Network

- ✦ To ask questions or submit a request for technical assistance:
 - Visit www.OpioidResponseNetwork.org
 - Email orn@aaap.org
 - Call 401-270-5900



Disclosures

- ✦ I have no financial disclosures
- ✦ I will be discussing off-label use of medications



Objectives

- ✦ Understand how preventing, screening for, and treatment of alcohol use disorder in adolescents is along the pathway in the prevention of opioid use disorder
- ✦ Utilize validated screening tools in the primary care setting to screen for alcohol use disorder in adolescents
- ✦ List treatment strategies for alcohol use disorder in adolescents in the primary care setting, including use of medications



Why Are We Talking About Alcohol Today?

- ✦ Preventing, screening for, and/or treating risky alcohol use or alcohol use disorder in adolescents and young adults *is* apart of preventing opioid misuse and opioid use disorder



Illustrative Case

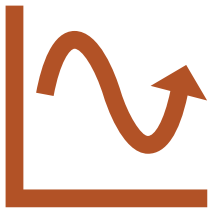


- ✧ 16 y/o M admitted to PICU s/p overdose
- Found unresponsive at home by sibling
- Substance use history started with alcohol at 12yo
- Has tried multiple substances, most often alcohol (binging), vaping and marijuana. Experimented with “pills” in past year.
- Hx of depression and suicidal ideation
- Narcan x 1 given by EMS, however, only slightly improved mental status
- Utox: +fentanyl
- Required naloxone drip



Note: This is a representative case only, not a real patient

Alcohol Use by Adolescents



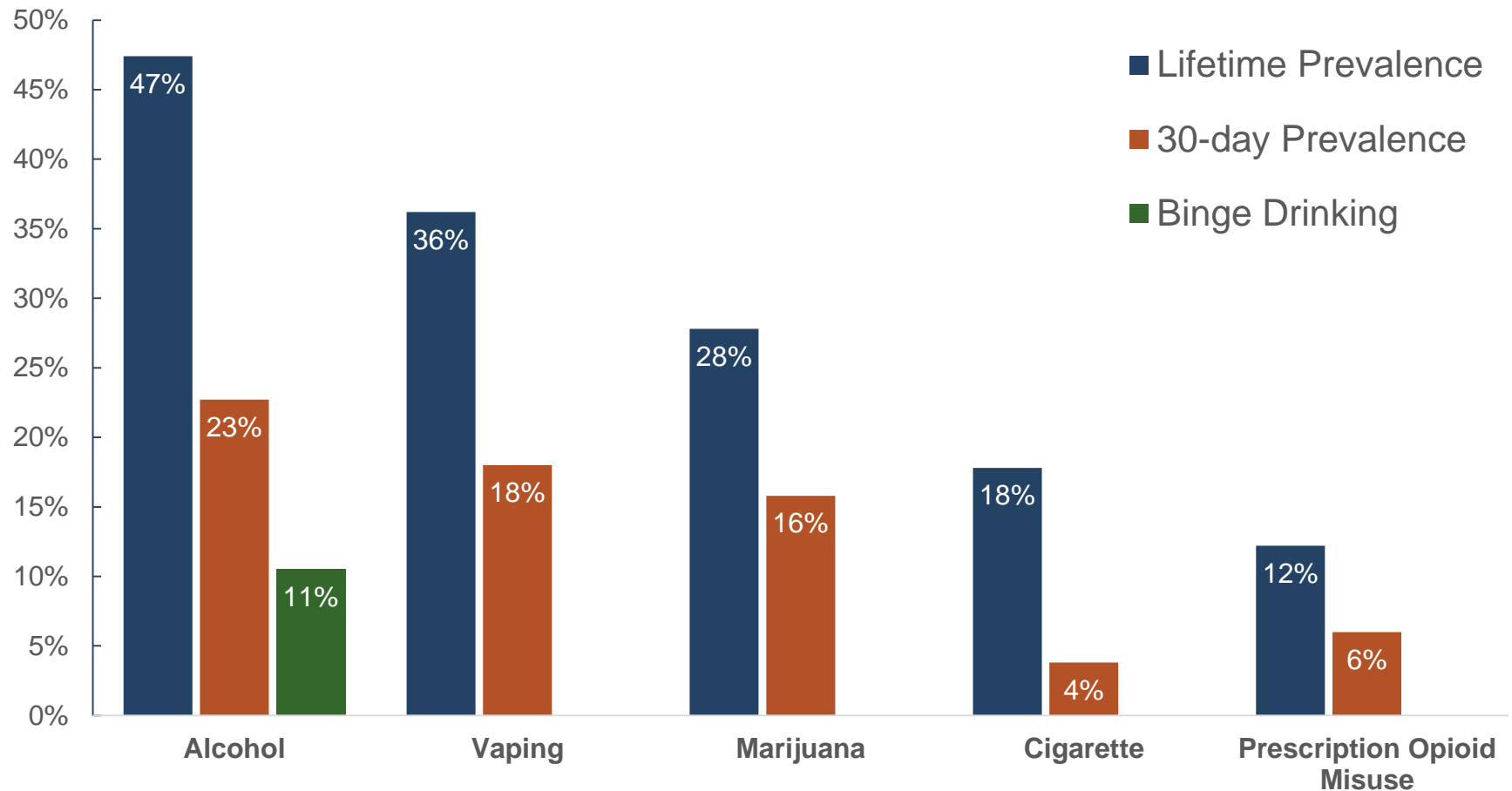
Case



- ✦ 15y/o F presenting with mother for well adolescent care.
- Today's concerns: sleep issues, mood changes

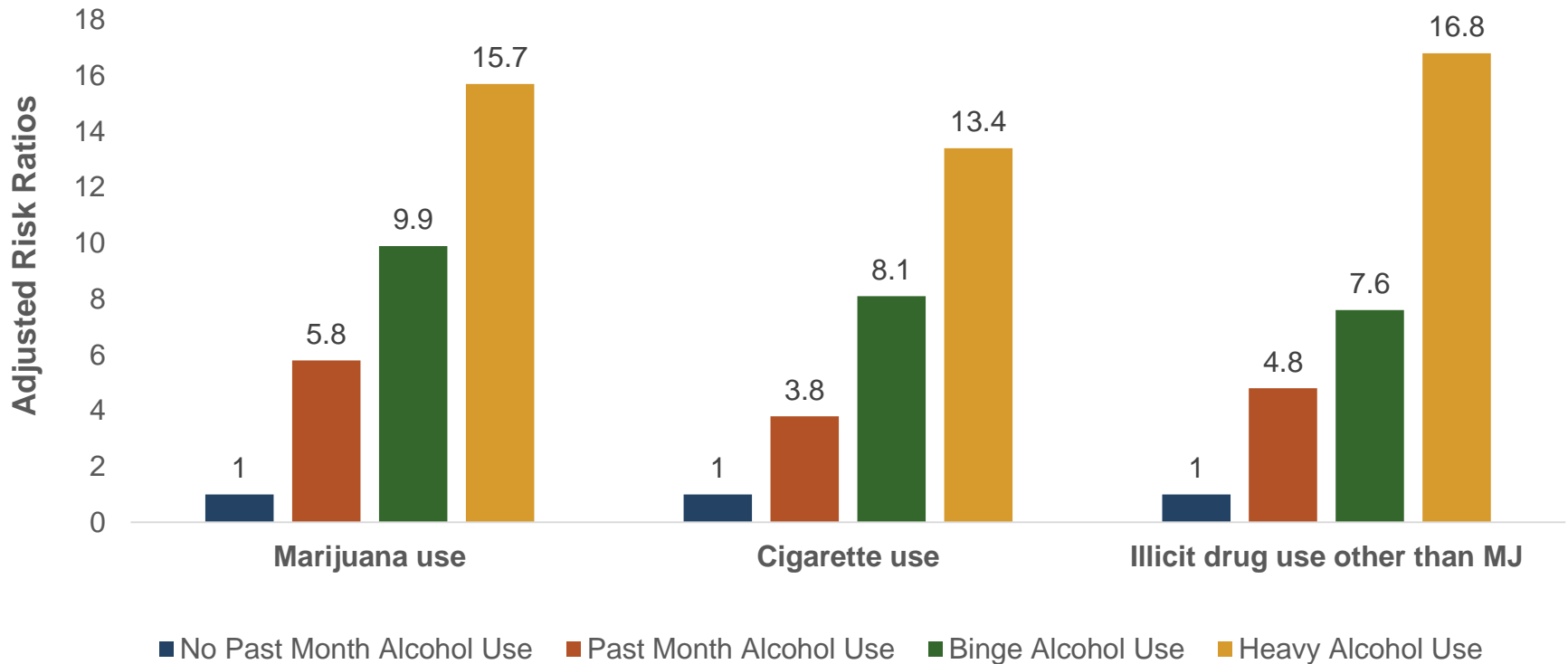


Substance Use among 9-12th Graders in the U.S. (2021)



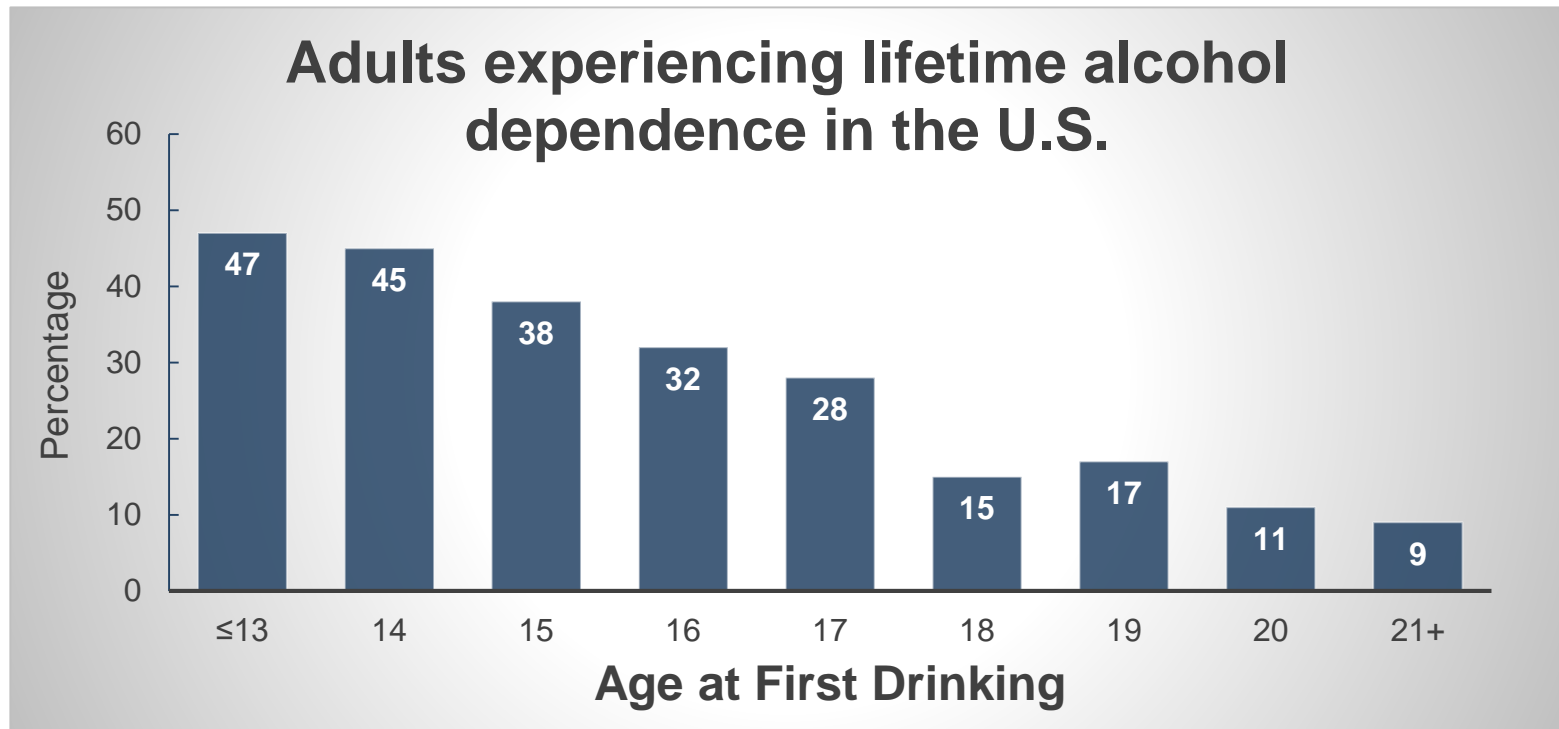
Youth Drinking Increases Risk of Using Other Drugs

Past month use of substances among youth aged 12-17 by level of alcohol use



Prevention: Delay Early Drinking

- ✦ 15% of high school students in 2021 had their first drink of alcohol before age 13 years



Hingson et al., 2006; Centers for Disease Control and Prevention (CDC). 1991-2021 High School Youth Risk Behavior Survey Data. Available at <http://yrbs-explorer.services.cdc.gov/>. Accessed on 7/15/2023.

Alcohol Use in Mainstream



Celebrities &
Music



Family Use



Marketing



Social Media



The Science of Alcohol



Pharmacology of Alcohol

- Interacts with numerous CNS neurotransmitters
- Mainly acts at two receptors regulating the excitability of neurons

Neurotransmitter	Acute Use		Chronic Use	
	Effect on Receptors	Effects	Effect on Receptors	Effects
GABA_A	Enhanced inhibitory function	Sedation and anxiolysis	Reduced function	Withdrawal symptoms and increased anxiety
Glutamate (NMDA)	Antagonizes excitatory function	Intoxication, sedation, and anxiolysis	Increased density → increased neuronal excitability	Tolerance, withdrawal excitability, seizures, craving, relapse



Activation of the reward pathway by addictive drugs

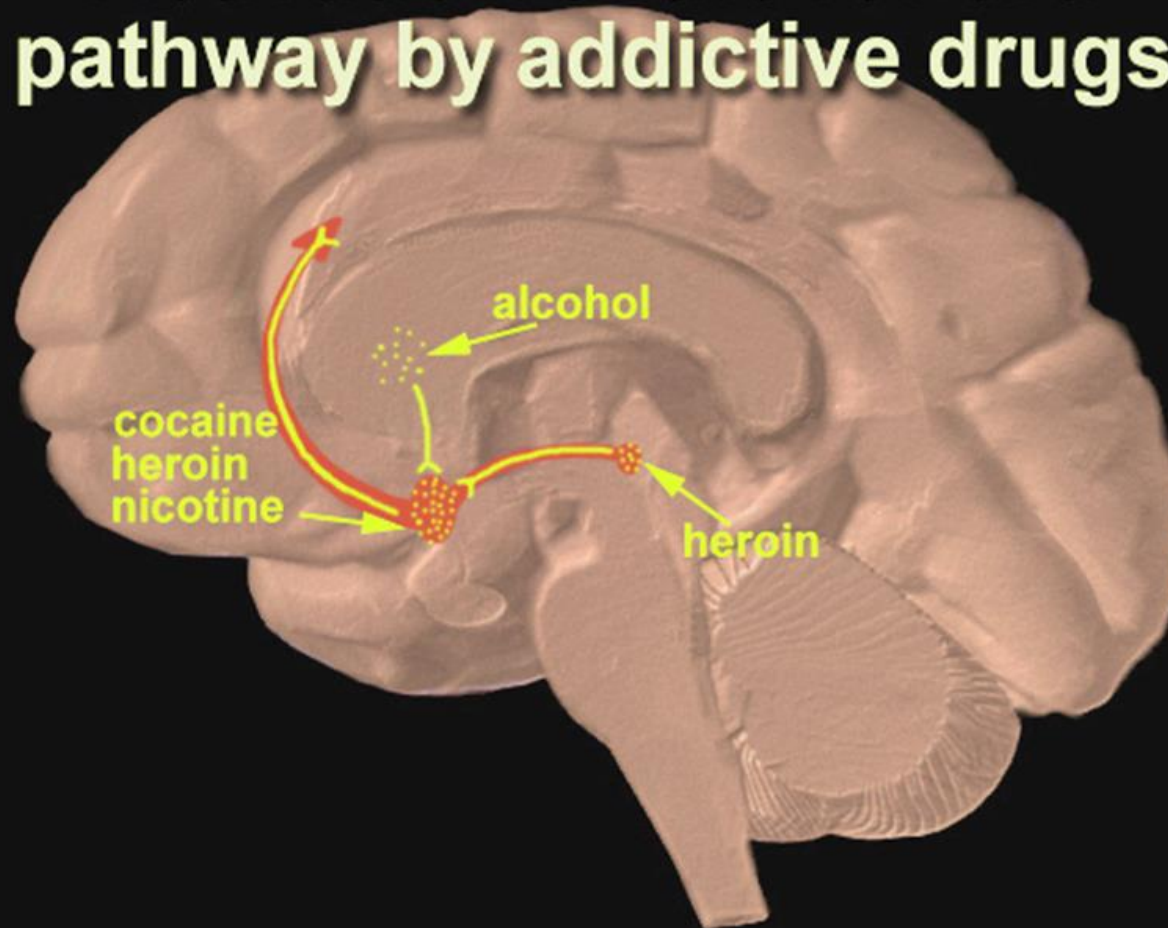
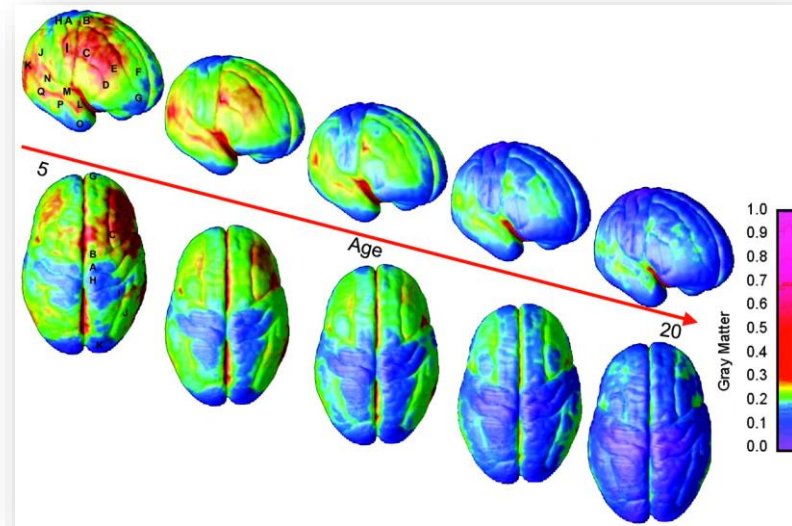


Image retrieved from <http://www.drugabuse.gov/publications/teaching-packets/neurobiology-drug-addiction/section-iv-action-cocaine/7-summary-addictive-drugs-activate-reward>

Adolescence is a Particularly Vulnerable Period for Substance Use

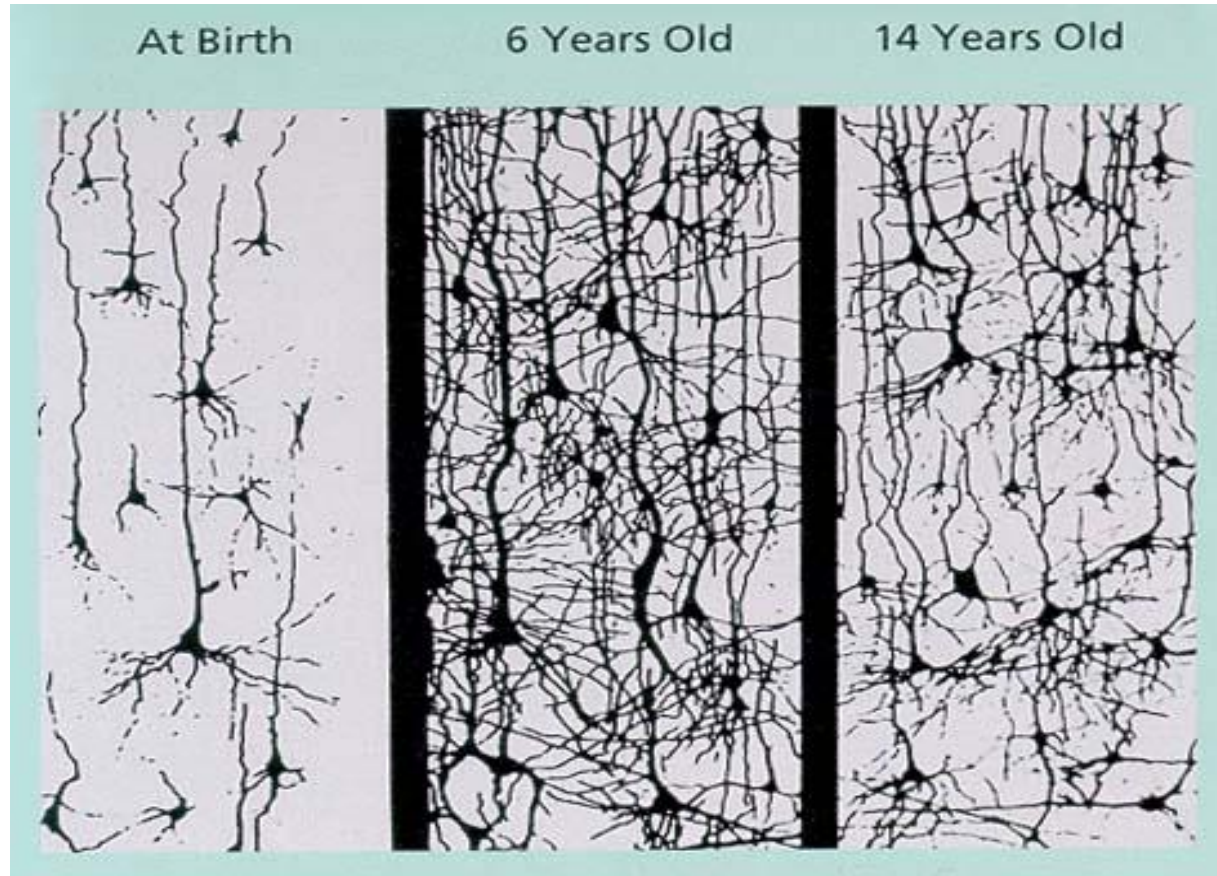
- ◇ A period of brain maturation
 - **Myelination**
 - **Pruning**
 - Connections between neurons used are strengthened
 - Connections among neurons not used wither away
- ◇ Makes the brain more efficient
- ◇ Prefrontal cortex last to mature



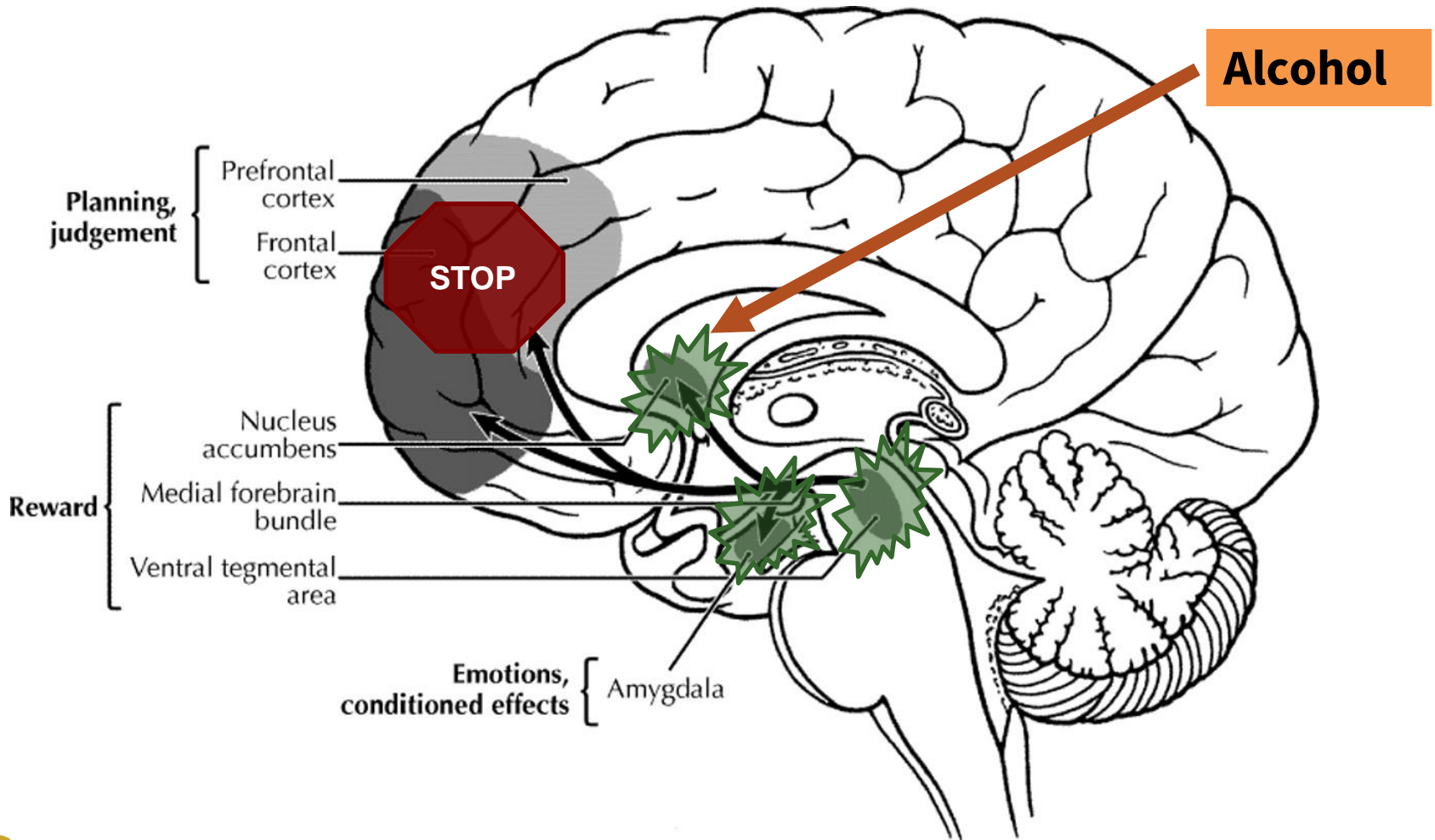
Gogtay et al., 2004



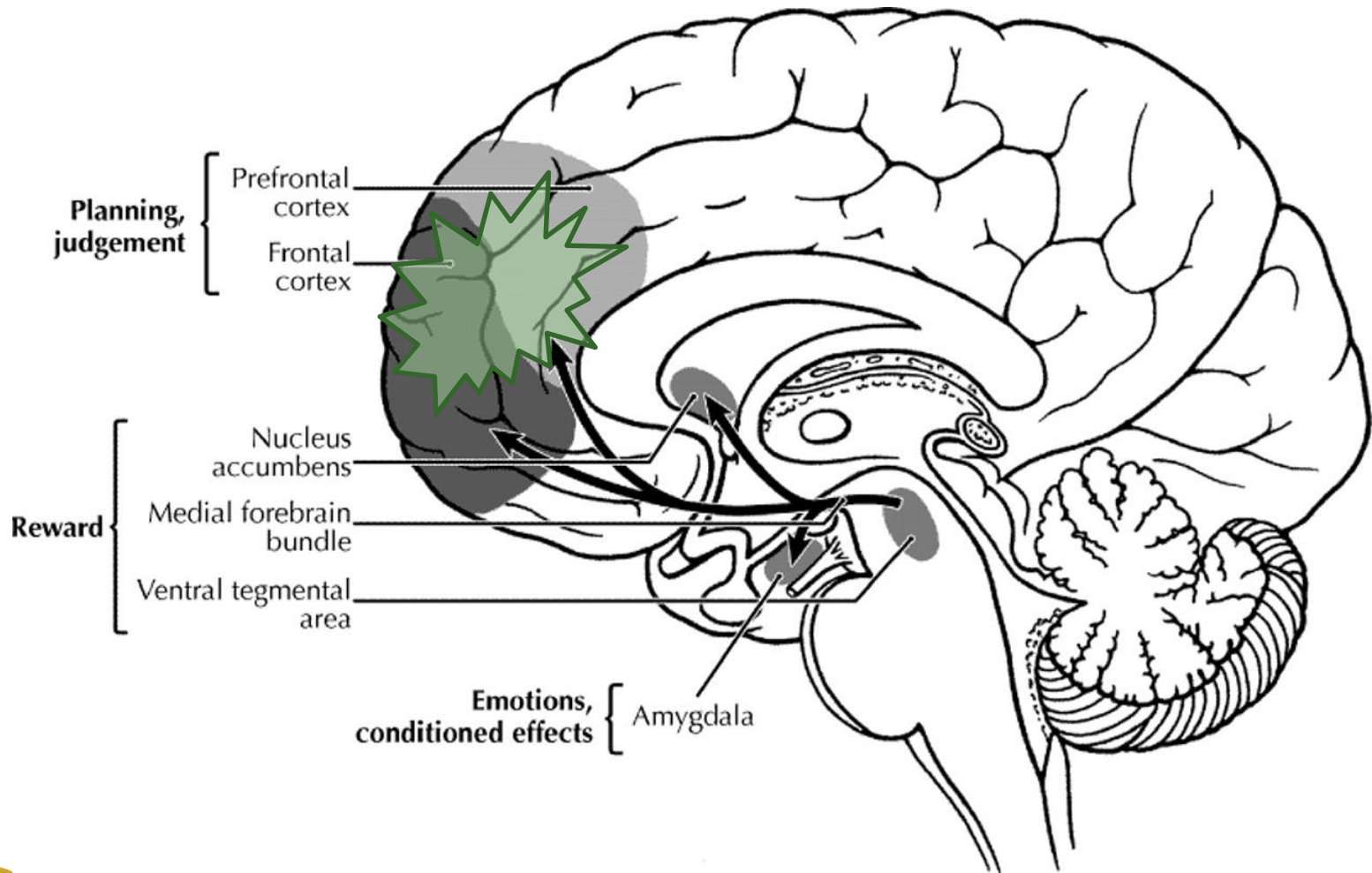
Neuron Growth in Brain Development



Adolescence



Late Adolescence to Young Adulthood



Alcohol as an Acute CNS Depressant

Lower blood alcohol concentration levels

- ✦ Disinhibition
- ✦ Behavioral arousal/social behavior
- ✦ Anxiolysis

Higher blood alcohol concentration levels

- ✦ Sedative/hypnotic
- ✦ Impaired judgement & motor function
- ✦ Blackouts/amnesia
- ✦ Decreased respiratory drive
- ✦ Coma

Note: these effects are for individuals that are not tolerant



Alcohol Withdrawal

(symptoms usually begin 6-24 hours after the last drink)

Anxiety

Sleep disturbances

Vivid dreams

Anorexia

Nausea/Vomiting

Headache

Hallucinations

Tachycardia

Hypertension

Sweating/Hyperthermia

Hyperactive reflexes

Tremors

Seizures

Delirium

- Alcohol withdrawal can be **LIFE-THREATENING**
- At higher risk for severe withdrawal: previous severe withdrawal, daily & heavy drinking, having 3-4 withdrawal episodes (untreated or treated)



Screening



WHAT IS CONSIDERED A "DRINK"?

U.S. STANDARD DRINK SIZES



12 OUNCES
OF 5% ABV
BEER



8 OUNCES
OF 7% ABV
MALT LIQUOR



5 OUNCES
OF 12% ABV
WINE



1.5 OUNCES
OF 40% ABV
(80-PROOF)
DISTILLED SPIRITS
OR LIQUOR
(Examples: gin, rum,
vodka, whiskey)



Young Adult Drinking Levels

Heavy Drinking

- ❖ Men: > 4 drinks on any day or > 14 drinks per week
- ❖ Women: > 3 drinks on any day or > 7 drinks per week





Binge Drinking

- ❖ Men: 5 or more drinks in 2 hours
- ❖ Women: 4 or more drinks in 2 hours



Youth Binge Drinking

What's a "child-sized" or "teen-sized" binge?

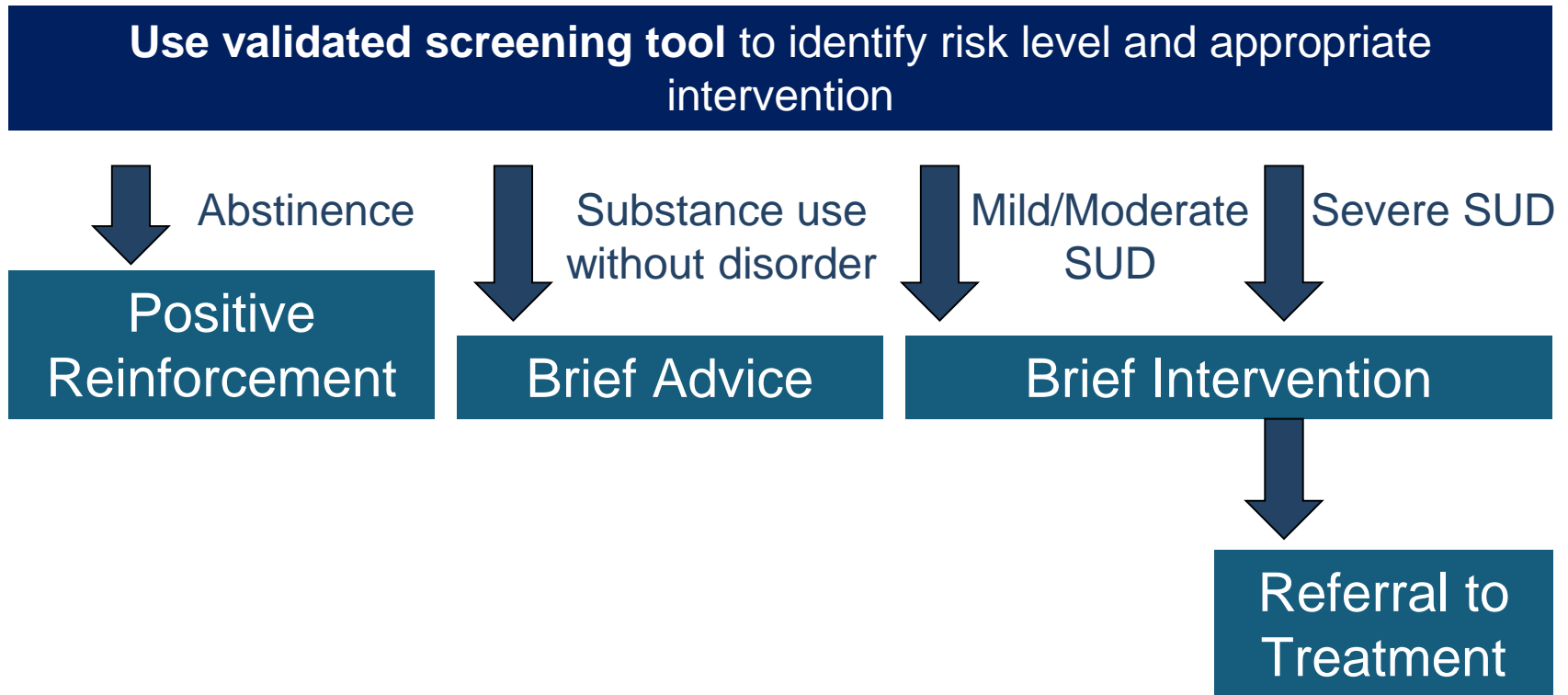
	Boys	Girls
Ages 9–13	 3 drinks	
Ages 14–15	 4 drinks	Ages 9–17  3 drinks
Ages 16+	 5 drinks	

Graphic: <https://www.niaaa.nih.gov/alcohols-effects-health/professional-education-materials/alcohol-screening-and-brief-intervention-youth-practitioners-guide>

Original Data Source: Donovan, J. E. (2009). Estimated blood alcohol concentrations for child and adolescent drinking and their implications for screening instruments. *Pediatrics*, 123(6), e975–81

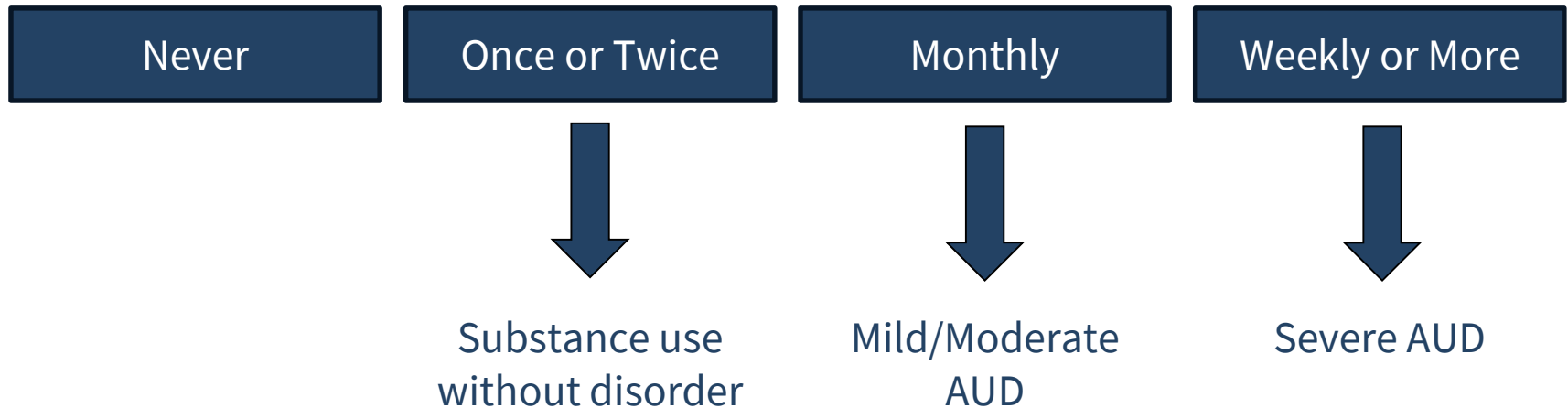


SBIRT Framework



S2BI Screening Question

In the PAST YEAR, how many times have you used alcohol?



NIAAA Youth Alcohol Screening

2-question tool

Elementary School (ages 9–11)

Friends: Any drinking?

“Do you have any friends who drank beer, wine, or any drink containing alcohol in the *past year*?”

ANY drinking by friends heightens concern.

Patient: Any drinking?

“How about you—have you **ever** had more than a few sips of any drink containing alcohol?”

ANY drinking:
Highest Risk

Middle School (ages 11–14)

Friends: Any drinking?

“Do you have any friends who drank beer, wine, or any drink containing alcohol in the *past year*?”

ANY drinking by friends heightens concern.

Patient: How many days?

“How about you—in the *past year*, on how many days have you had more than a few sips of any drink containing alcohol?”

ANY drinking:
Moderate or **Highest Risk**
(depending on age and frequency)

High School (ages 14–18)

Patient: How many days?

“In the *past year*, on how many days have you had more than a few sips of beer, wine, or any drink containing alcohol?”

Lower, **Moderate**, or
Highest Risk

(depending on age and frequency)

Friends: How much?

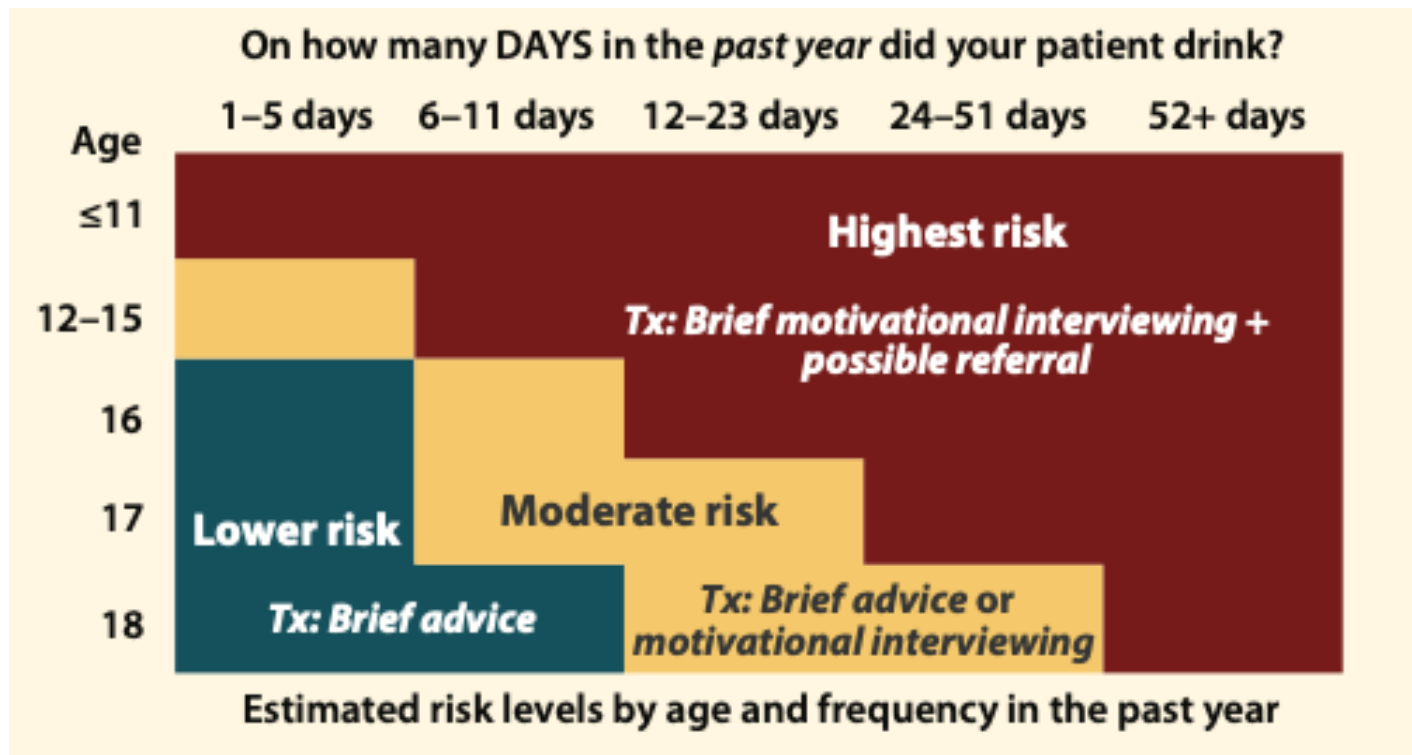
“If your friends drink, how many drinks do they usually drink on an occasion?”

Binge drinking by friends heightens concern.

(See “What Counts as a Drink? A Binge?” on reverse)



Assessing Risk of Youth Drinking



CRAFFT: Identifying Problematic or Risky Use

C

Have you ever ridden in a **CAR** driven by someone (including yourself) who was “high” or had been using alcohol or drugs?

R

Do you ever use alcohol or drugs to **RELAX**, feel better about yourself, or fit in?

A

Do you ever use alcohol or drugs while you are by yourself, **ALONE**?

F

Do you ever **FORGET** things you did while using alcohol or drugs?

F

Do your **FAMILY** or **FRIENDS** ever tell you that you should cut down on your drinking or drug use?

T

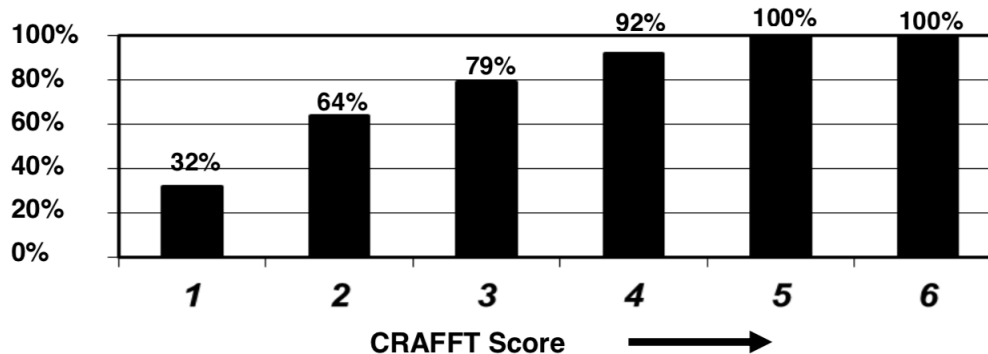
Have you ever gotten into **TROUBLE** while you were using alcohol or drugs?



Scoring the CRAFFT

- ✧ Two or more YES answers suggest a serious problem and need for further assessment

Percent with a DSM-5 Substance Use Disorder by CRAFFT score*



*Data source: Mitchell SG, Kelly SM, Gryczynski J, Myers CP, O'Grady KE, Kirk AS, & Schwartz RP. (2014). The CRAFFT cut-points and DSM-5 criteria for alcohol and other drugs: a reevaluation and reexamination. *Substance Abuse*, 35(4), 376–80.

“It’s great that you haven’t [insert “no” response(s) from CRAFFT], but it sounds like [insert “yes” response(s)]. Can we talk more about this?”



Risky Alcohol Use Considerations

✧ Assess for co-use

- Alcohol + opioids (both are depressants) = decreased respiratory drive → increased risk of overdose

✧ Drinking and driving

- As driver and as passenger
- Increased risk of motor vehicle accidents & death

✧ Using alcohol during sex

- Increased risk of unprotected or non-consensual sex



ADHD and Alcohol

- ✦ Adolescents with untreated ADHD are more likely to engage in alcohol/substance use earlier and develop SUD later in life as compared to peers
 - Genetics, impulsivity, executive function issues
- ✦ Literature suggests that proper use of stimulants for the treatment of ADHD does not increase SUD risk
 - May be protective if ADHD is effectively treated early
 - However, assessing for misuse is appropriate



DSM V: Alcohol Use Disorder

A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within past 12 months:

Impaired Control

- Drinking more or longer than intended
- Unsuccessful attempts to cut down or quit
- Excessive time spent obtaining, drinking, or recovering
- Craving or urge to drink

Social Impairment

- Failure to fulfill academic, work, family responsibilities
- Continued drinking despite recurring interpersonal problems
- Giving up or reducing important personal activities because of drinking

Risky Use

- Recurrent drinking in hazardous situations
- Continued drinking despite knowledge of physical/psychological problems due to drinking

Pharmacologic Criteria

- Tolerance
- Withdrawal

Severity:

2-3 Mild

4-5 Moderate

≥ 6 Severe



Case



- ✦ 15y/o F presenting with mother for well adolescent care.
- Today's concerns: sleep issues, mood changes

In the PAST YEAR, how many times have you used alcohol?

Never

Once or Twice

Monthly

Weekly or More



Case



✦ 15y/o F presenting with mother for well adolescent care.

In the PAST YEAR, how many times have you used tobacco?

Never

Once or Twice

Monthly

Weekly or More

In the PAST YEAR, how many times have you used marijuana?

Never

Once or Twice

Monthly

Weekly or More

In the PAST YEAR, how many times have you used opioids?

Never

Once or Twice

Monthly

Weekly or More



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Have you ever ridden in a **CAR** driven by someone (including yourself) who was “high” or had been using alcohol or drugs?



Do you ever use alcohol or drugs to **RELAX**, feel better about yourself, or fit in?



Do you ever use alcohol or drugs while you are by yourself, **ALONE**?



Do you ever **FORGET** things you did while using alcohol or drugs?



Do your **FAMILY** or **FRIENDS** ever tell you that you should cut down on your drinking or drug use?



Have you ever gotten into **TROUBLE** while you were using alcohol or drugs?



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Case



- ✧ 15y/o F presenting with mother for well adolescent care.
- Today's concerns: sleep issues, mood changes
- H: Lives with mother primarily. Father is involved.
- E: In the 10th grade, was getting mostly Bs in school
- A: +social media accounts & spends a lot of time on them
- D: +alcohol at parties, +binges alcohol mostly, has had unprotected sex while drinking, unsure if she was sexually assaulted at a party this past year, +MJ, denies cigarettes or vaping
- S: identifies as female, attracted to males, +sexually active, +hx of chlamydia last year (s/p treatment)
- S: PHQ-9A: 14 (moderate depression), denies SI or passive death wishes



Case



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- Drinking more or longer than intended
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- Recurrent drinking in hazardous situations
- Continued drinking despite knowledge of physical/psychological problems due to drinking
- Tolerance
- Withdrawal

Case Formulation

- Severe alcohol use disorder
- Severe cannabis use disorder
- Depression



Note: This is a representative case only, not a real patient

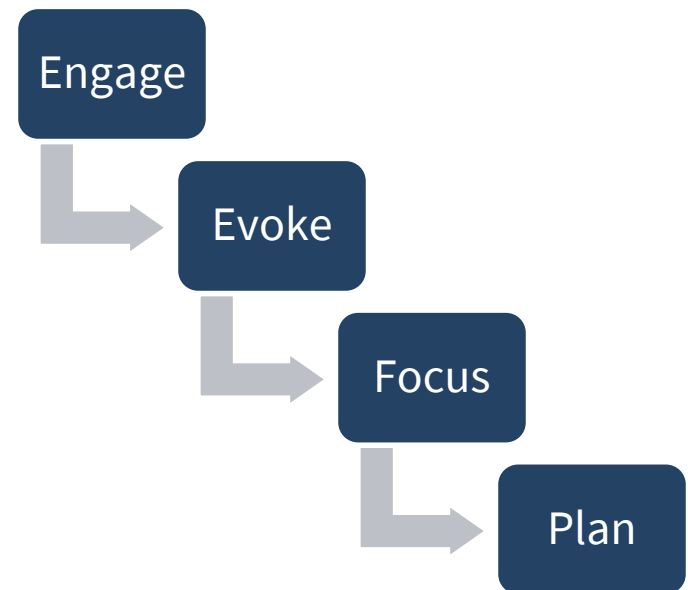
Strategies to Address Alcohol Use in Adolescents



Principles of Brief Intervention for Clinicians

- ✧ Use a non-judgmental approach
- ✧ Use patient-centered & strengths-based approach
- ✧ Determine goals, readiness, & willingness to change behavior
- ✧ Elicit and reinforce change talk
- ✧ Advise adolescent to consider decreasing/stopping use
 - 2 week challenge

Principles of motivational interviewing



Engaging the Adolescent

“Would you mind taking a few minutes to talk about your alcohol use? Tell me about when you first used alcohol. What was it like for you? Where does your alcohol use fit in your life right now?”

“What is a typical day like for you? What are the most important things in your life right now?”



Talking to Adolescents about Alcohol Use

- ✦ Explore perceived benefits & risks of alcohol use
- ✦ Assess future goals & how alcohol use may affect it
 - Remember adolescents are usually not developmentally ready to understand future consequences
- ✦ Recognize that many adolescents believe alcohol use is common
- ✦ Ask permission to provide education and a quit message

**“As your doctor, I am concerned about your alcohol use, and I recommend you quit.
Can we discuss this?”**



But What if They Don't Want to Talk?

✧ Don't

- Blame, shame, confront, preach, or label

✧ Do

- Provide your concerns + support and follow up

“I am concerned about your alcohol use, but I see you aren't ready to talk about this today. Remember that I am here at anytime if you change your mind”



Involving Parents

- ✦ Providers should have some time to talk with adolescents without parent(s) in the room
- ✦ Decide when and how to break confidentiality
 - Know your applicable local laws
 - Work with your patient to make a plan on disclosing
- ✦ Consider any parental alcohol use



Mainstay of Treatment for AUD in Adolescents: Psychotherapy

Family-based interventions

Cognitive-behavioral therapy

Motivational enhancement therapy



Pharmacotherapy for AUD in Adolescents

- ✦ **No** FDA approved medication for those under 18 years of age
- ✦ 3 medications approved for adults (≥ 18 y/o):

Naltrexone

(oral or injectable)

Opioid antagonist that decreases the reinforcing effects of alcohol

Acamprosate

(oral, TID dosing)

GABA receptor agonist/
NMDA receptor modulator

Disulfiram

(Antabuse)

Aversive medication

- ✦ Limited trial data using medications for AUD in AYA
 - Some data for efficacy with naltrexone



Resources for Adolescents and Young Adults

- NIDA for Teens: <https://teens.drugabuse.gov/>
- Partnership to End Addiction: drugfree.org
- <https://truthinitiative.org/>
- <https://teen.smokefree.gov/>
- Young People in Recovery: youngpeopleinrecovery.org
- SMART Recovery Young Adults:
<https://www.smartrecovery.org/young-adults/>



Case



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Case Formulation

- Severe alcohol use disorder
- Severe cannabis use disorder
- Depression

Treatment Plan for AUD

- Give quit message, positive reinforcement for opioid non-use
- Engage her family and refer to family-based therapy
- Start naltrexone 50mg/day
- Frequent follow up visits + consider referral to specialist



Summary

- ✦ Addressing adolescent alcohol use is a part of preventing opioid misuse and opioid use disorder.
- ✦ Due to multiple neurotransmitters that alcohol interacts with, acute and chronic effects vary. Alcohol withdrawal can be **life-threatening**.
- ✦ Youth can be screened for risky alcohol use with the S2BI screening questions, the NIAAA Youth Alcohol Screening Tool, or the CRAFFT.
- ✦ Psychotherapy is evidenced-based treatment of AUD for adolescents.
- ✦ There are currently **no** FDA approved medications for AUD for youth younger than 18 years old. However, naltrexone, acamprosate, and disulfiram are approved for adults ≥ 18



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Thank You!

Contact: camille.broussard@jhmi.edu

Questions?





**Thank you!
Please fill out
our brief
survey:**

<https://tinyurl.com/Aug-Broussard>

