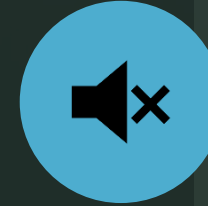


# Basic ECHO Etiquette



WELCOME TO  
EVERYONE AND  
ESPECIALLY NEW  
PARTICIPANTS!



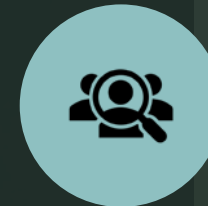
PLEASE MUTE  
MICROPHONE WHEN  
NOT SPEAKING



POSITION WEBCAM  
EFFECTIVELY-  
COLLABORATION IS  
SO MUCH EASIER  
WHEN WE CAN SEE  
EACH OTHER!



TEST AUDIO AND  
VIDEO



NO PATIENT  
IDENTIFIERS!



SPEAK LOUDLY AND  
CLEARLY WHEN  
ZOOMING

TeleECHO sessions  
are recorded for  
educational and  
quality improvement  
purposes

By participating in  
this session you are  
consenting to be  
recorded

## CME/CEU Credits!!

We hope to have these available for participants starting NEXT SESSION

Please help us by submitting your information in Chat function

- First Last Credentials Email address  
George Singletary/MD/gsinglet@Tulane.edu
- If multiple people attending on one computer please do this for EVERYONE
- You need to be registered in the Tulane CME/CEU system ONCE
- Please make it a habit to utilize chat function as a 'sign-in' sheet as keeping attendance will be critical to keeping this project alive!!!



Project ECHO at Tulane University:

## Adolescent Substance Use



Presenter: Dr. George Singletary, MD, MPH

Tulane School of Medicine, Psychiatry Chair: Dr. John Thompson, MD

Program Facilitator: Claudia Achoja, MSN, FNP-C

Program Administrator: Kevin Massey, MS



## Educational Objectives

- Explain how adolescent brain development poses unique risks associated with substance use
- Identify tools for screening adolescents for substance use in clinical settings and appropriate steps to take based on response
- Describe evidence-based treatment options for adolescents with moderate-high risk

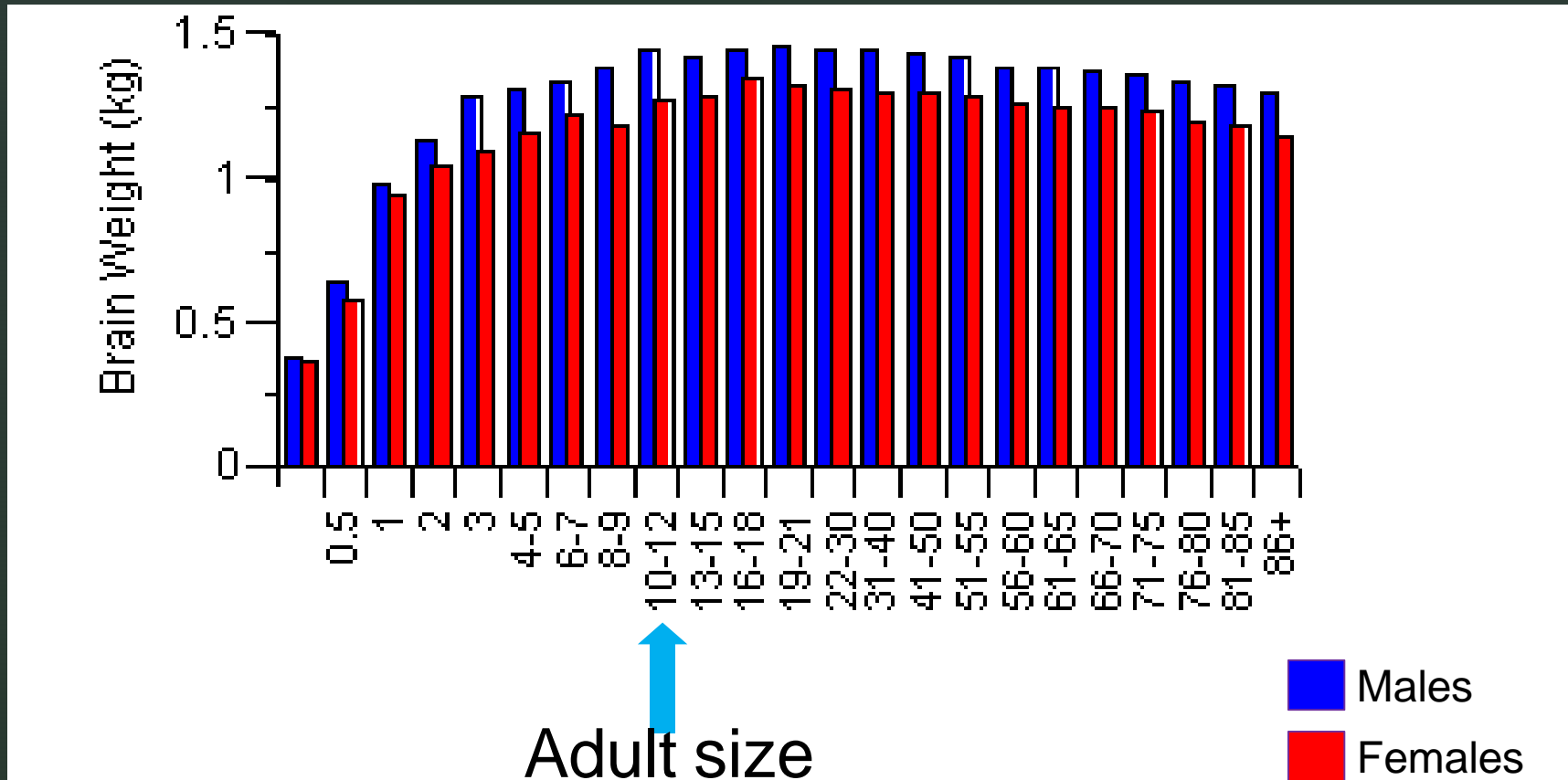


# Definitions

- World Health Organization defines **adolescent** as any person between ages of 10 and 19.
- Further defines **young people** to be between age 10 and 24.
- Merriam-Webster defines **adolescent** as a young person who is **developing** into an adult.

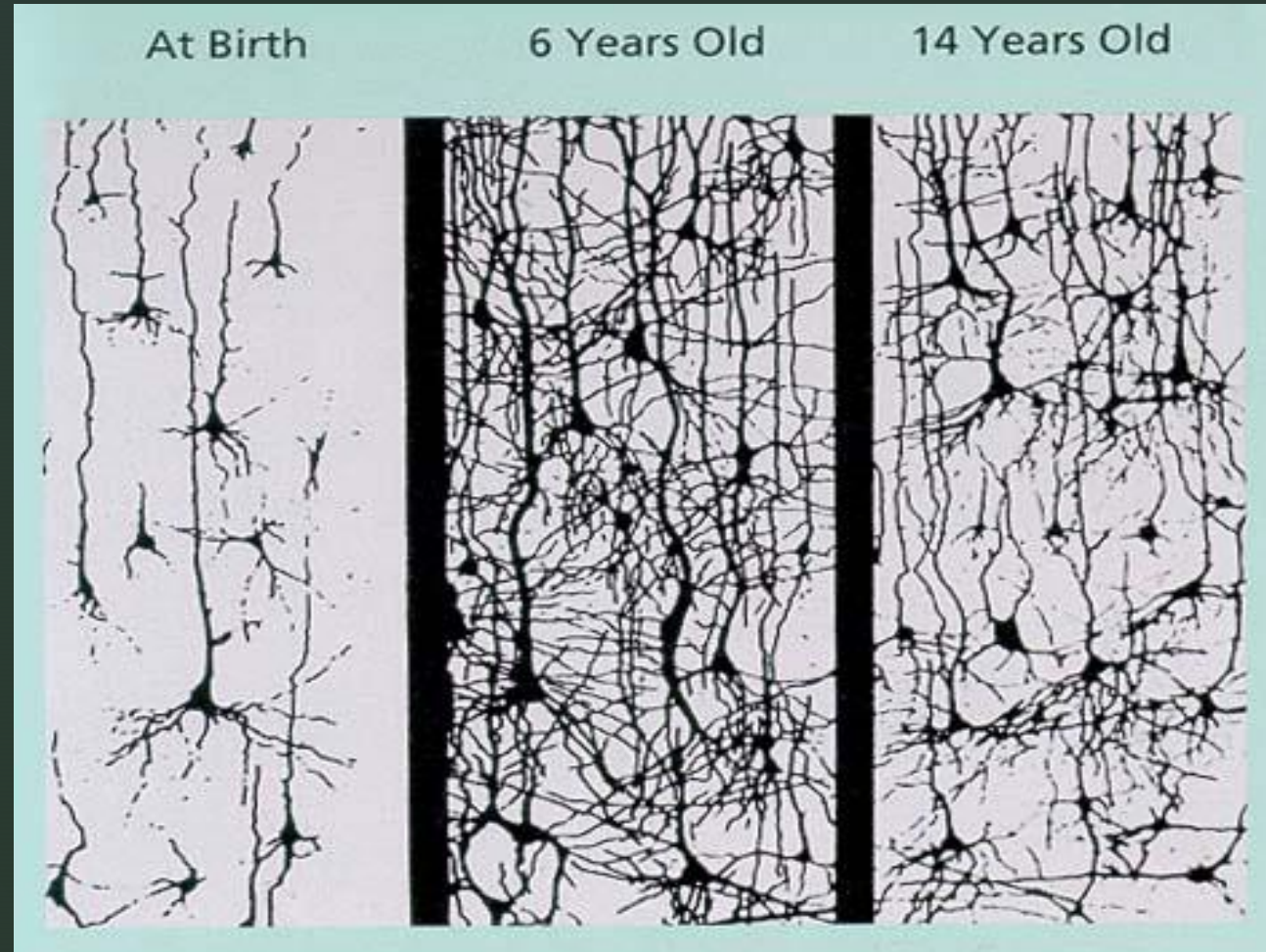


## Brain Weight by Age



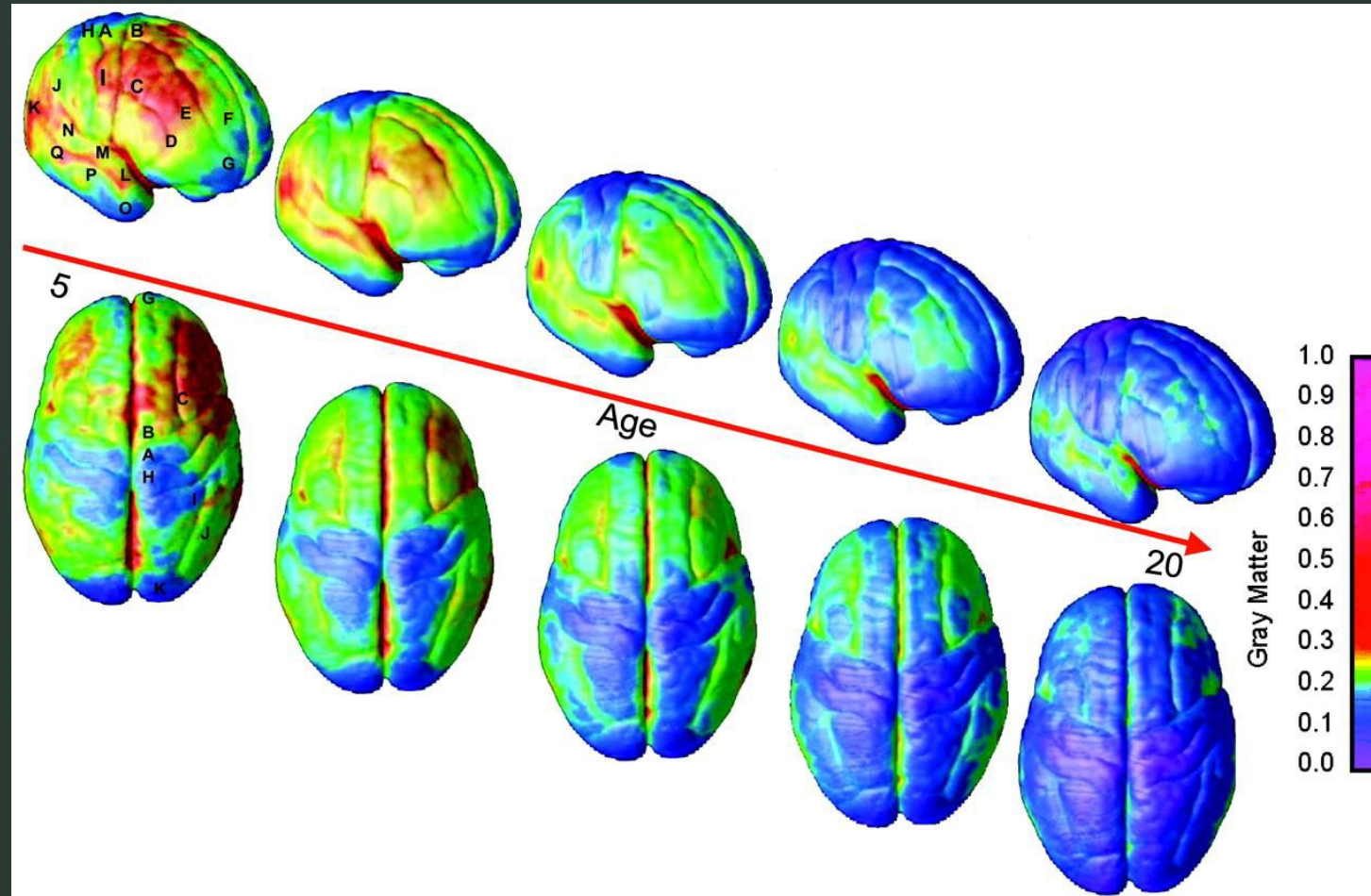


# Neuron Growth in Brain Development





# Brain Maturation



Deceased DUI 0.196  
with death of  
passenger as well

First rehab age 20

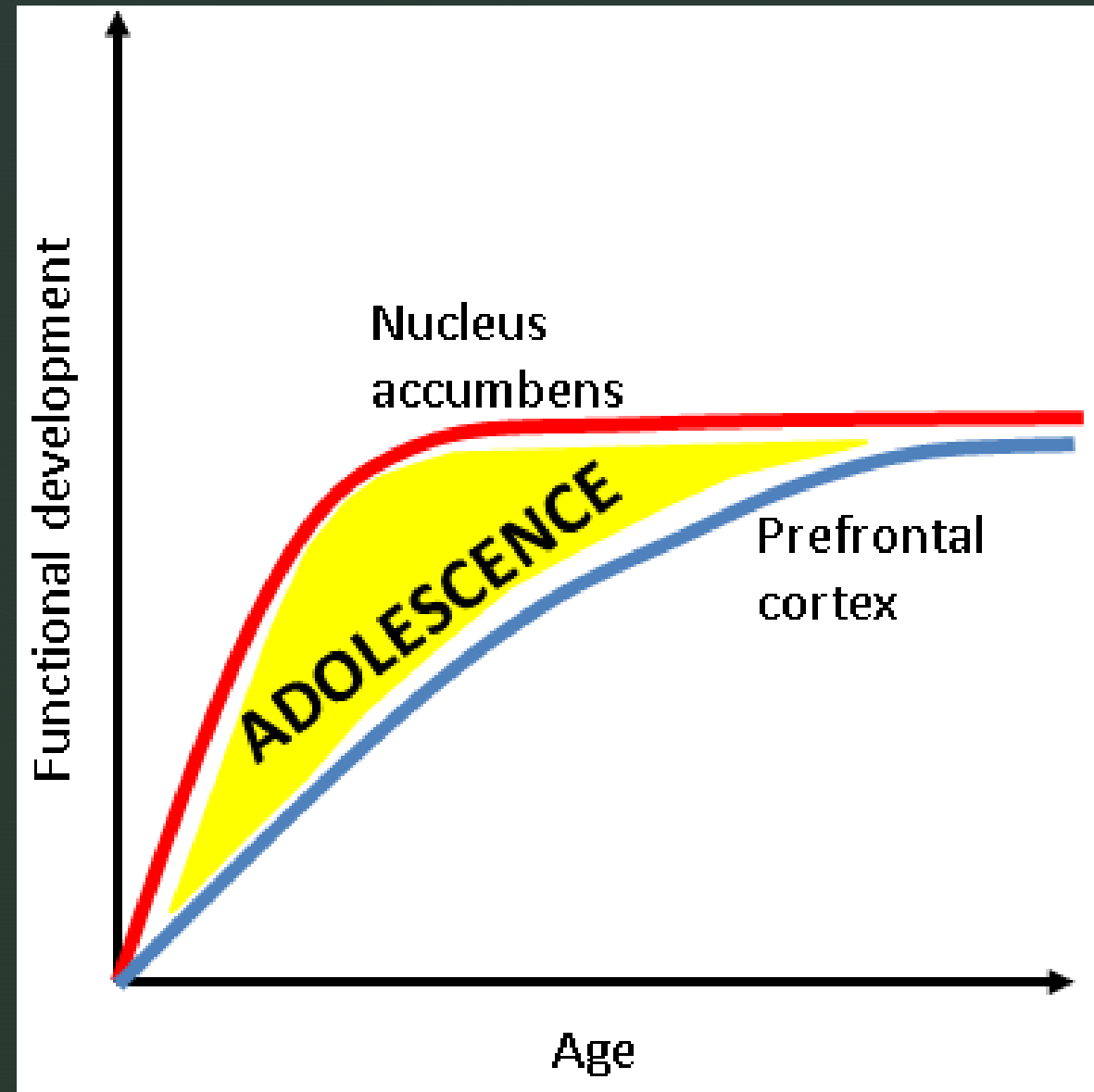
3<sup>rd</sup> rehab January 2019

Multiple rehab stays  
and relapses



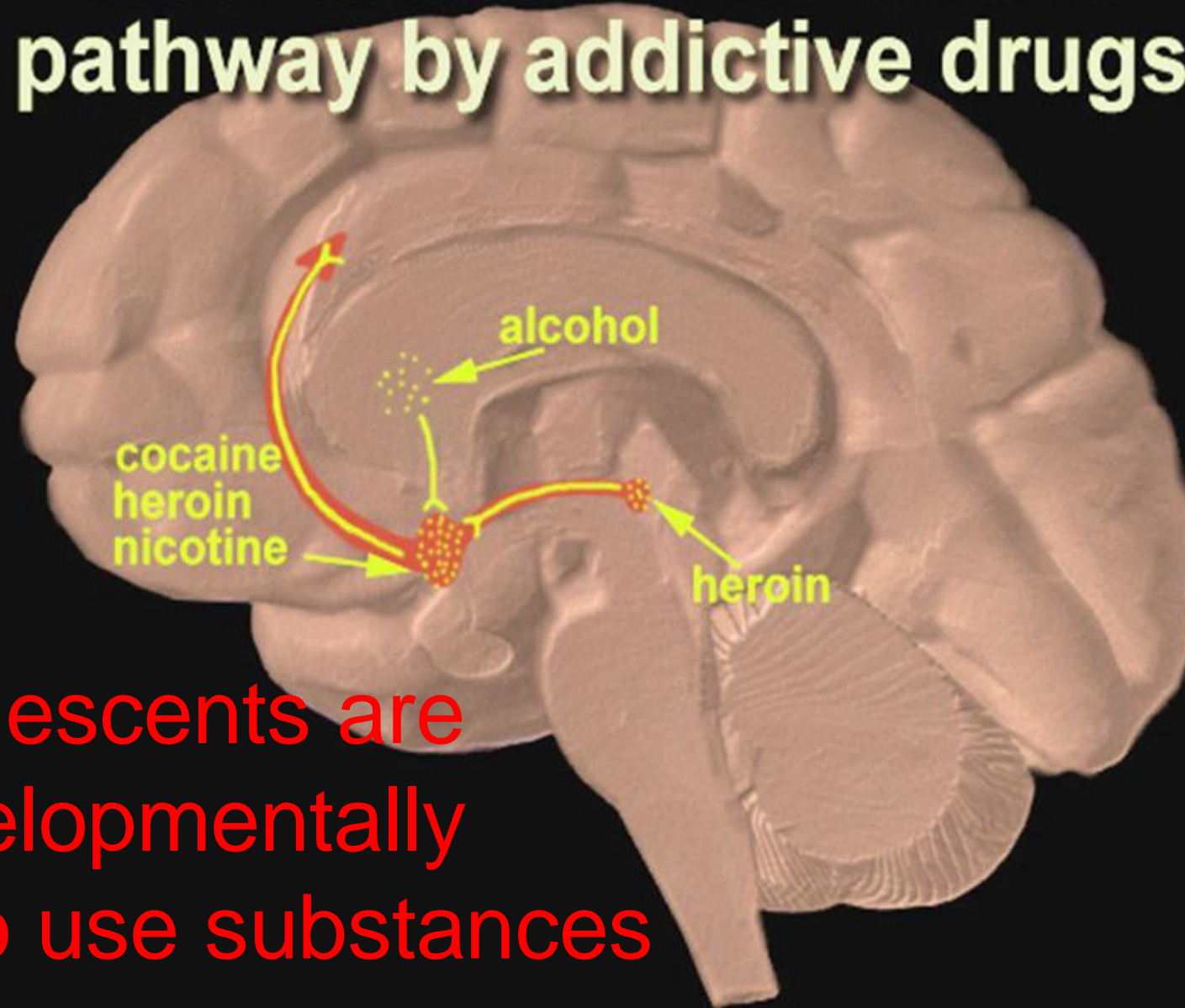
<https://i.ytimg.com/vi/qxBLqjQCMk/maxresdefault.jpg>







# Activation of the reward pathway by addictive drugs



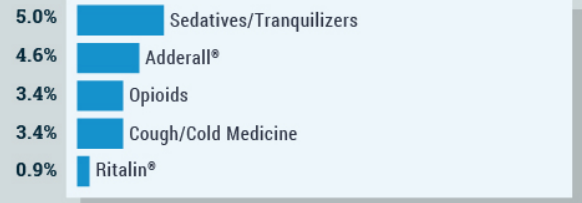
Adolescents are  
developmentally  
primed to use substances

- By senior year:
  - 70% of high school students have tried alcohol
  - 50% will have taken an illegal drug
  - 40% will have smoked a cigarette
  - >20% will have used a prescription drug for a non-medical purpose
- Use before age 18 increases risk of SUD by 6.5%
- Only 10% of adolescents receive treatment
- 9 out of 10 people with substance use problems started before age 18



PAST-YEAR MISUSE OF PRESCRIPTION/OVER-THE-COUNTER VS. ILLICIT DRUGS

PRESCRIPTION/OTC

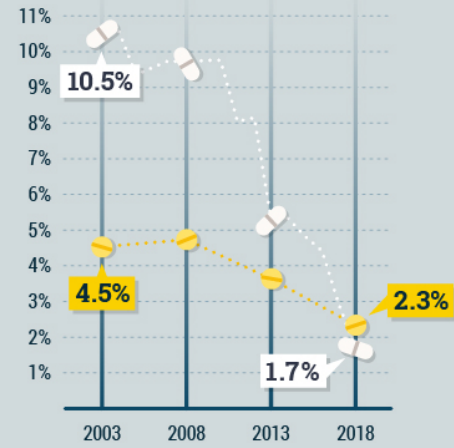


ILLICIT DRUGS



Past-year use among 12th graders

VICODIN® VS. OXYCONTIN®



Past-year misuse of Vicodin® and OxyContin® among 12th graders has dropped dramatically in the past 15 years.

KEY  
 Vicodin®  
 OxyContin®

STUDENTS REPORT LOWEST RATES SINCE START OF THE SURVEY

Across all grades, past-year use of illicit drugs other than marijuana holding steady at the lowest levels in over 20 years.

\*Synthetic cannabinoids are called "synthetic marijuana" in the survey.

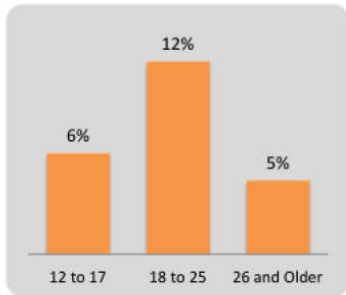


# Abuse of Prescription (Rx) Drugs Affects Young Adults Most

Young adults (age 18 to 25) are the biggest abusers of prescription (Rx) opioid pain relievers, ADHD stimulants, and anti-anxiety drugs. They do it for all kinds of reasons, including to get high or because they think Rx stimulants will help them study better. But Rx abuse is dangerous. In 2014, more than 1,700 young adults died from prescription drug (mainly opioid) overdoses—more than died from overdoses of any other drug, including heroin and cocaine combined—and many more needed emergency treatment.<sup>1</sup>



## PAST-YEAR USE



In 2014, the nonmedical use of prescription drugs was highest among young adults.<sup>2</sup>

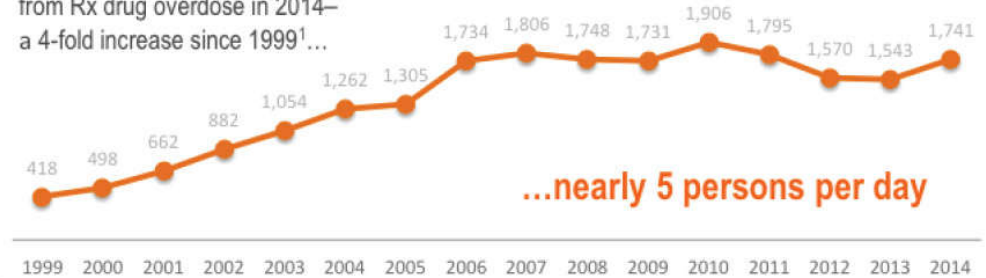
## MOTIVATIONS FOR USE

Most young adults say they use Rx drugs to<sup>3,4,5</sup>



## CONSEQUENCES

More than 1,700 young adults, ages 18-24, died from Rx drug overdose in 2014—a 4-fold increase since 1999<sup>1</sup>...



Among young adults, for every death due to Rx drug overdose, there were:

119

Emergency Room Visits<sup>6</sup>

&

22

Treatment Admissions<sup>7</sup>



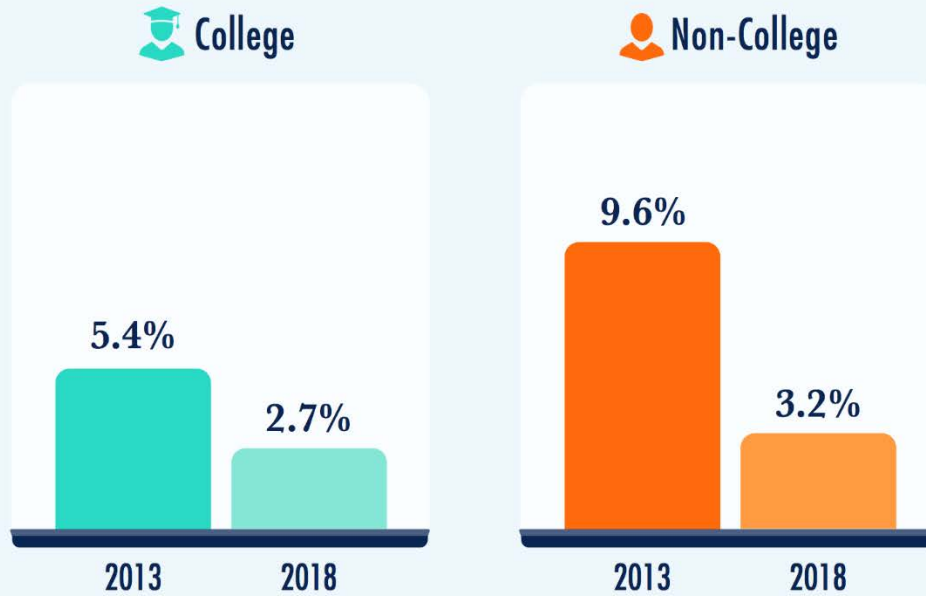
National Institute on Drug Abuse

1. CDC Wonder, 2015; 2. SAMHSA, NSDUH, 2015; 3. Rabiner et al., 2009; 4. McCabe et al., 2007; 5. Lord et al., 2011; 6. SAMHSA, DAWN, 2014; 7. SAMHSA, TEDS, 2015



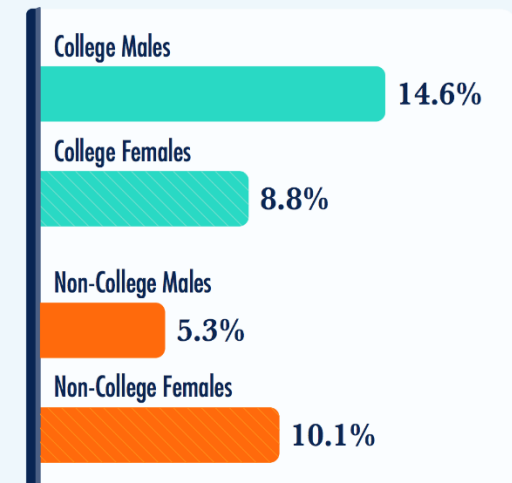
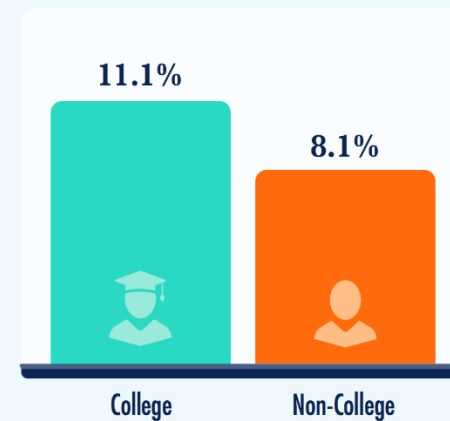
# Rx OPIOID MISUSE: SIGNIFICANT FIVE-YEAR DROP IN BOTH GROUPS\*

## PAST YEAR MISUSE



## ADDERALL® MISUSE: SIGNIFICANT GENDER DIFFERENCES

### PAST YEAR MISUSE 2018



\*Called "Narcotics other than heroin" in the survey



**POLICY STATEMENT** Organizational Principles to Guide and Define the Child Health  
Care System and/or Improve the Health of all Children

American Academy  
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

# Substance Use Screening, Brief Intervention, and Referral to Treatment

COMMITTEE ON SUBSTANCE USE AND PREVENTION

“The nonuse message should be reinforced by pediatricians through clear and consistent information presented to patients, parents, and other family members.”

# Screening Tests

- A good screening tool is FAST, EVIDENCE BASED, and has a HIGH SENSITIVITY for the population being tested.
- Screens
  - S2CI (Screening to Brief Intervention)
    - <https://www.drugabuse.gov/ast/s2bi/#/>
  - BSTAD (Brief Screener for Tobacco, Alcohol, and other Drugs)
    - <https://www.drugabuse.gov/ast/bstad/#/>
- Brief Assessment Guides
  - CRAFFT +/- PHQ-9 Modified for TEENS
    - <http://www.sbirtoregon.org/screening-forms/>





## S2BI:

In the <b>PAST YEAR</b> , how many times have you used:	Never	Once or twice	Monthly	Weekly
Tobacco:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marijuana:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you answered “Never” to all questions above, you can skip to **CRAFFT question #1** and then turn the page. Otherwise, please continue answering all questions below.

Prescription drugs that were not prescribed for you: (such as pain medication or Adderall)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Illegal drugs: (such as cocaine or ecstasy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inhalants: (such as nitrous oxide)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Herbs or synthetic drugs: (such as salvia, “K2”, or bath salts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you answered “Never” or “Once or twice” to all questions above, you can answer only **CRAFFT question #1** below and then turn the page. Otherwise, please continue answering all questions below.



### Interpreting the S2BI\*

<b>Highest frequency of non-tobacco substance use</b>	<b>Risk category</b>	<b>Recommended action</b>
Never	Abstinence	Positive reinforcement
Once or twice	No substance use disorder (SUD)	Brief advice
Monthly	Possible mild or moderate SUD	Brief intervention, employing principles of motivational interviewing
Weekly	Possible moderate or severe SUD	Referral for further assessment and possible specialized treatment, conveyed through a brief intervention





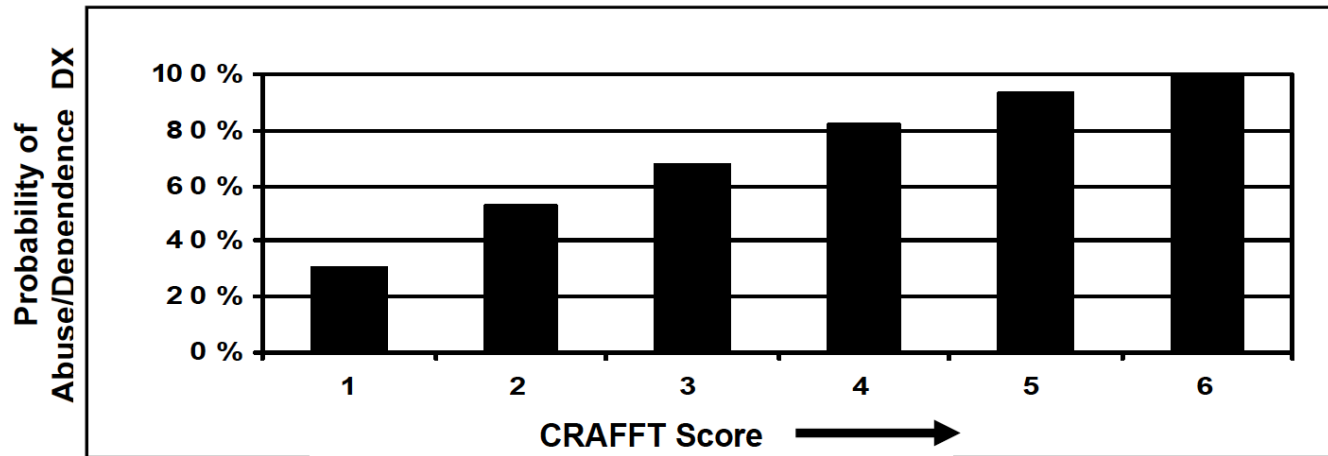
- **C**-Have you ever ridden in a **CAR** driven by someone (including yourself) who was “high” or had been using alcohol or drugs?
- **R**-Do you ever use alcohol or drugs to **RELAX**, feel better about yourself, or fit in?
- **A**-Do you ever use alcohol or drugs while you are by yourself? **ALONE**?
- **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 INSTRUCTIONS: FOR CLINIC STAFF USE ONLY

CRAFFT Scoring: Each “yes” response in **Part B** scores 1 point.  
A total score of 2 or higher is a positive screen, indicating a need for additional assessment.

### Probability of Substance Abuse/Dependence Diagnosis Based on CRAFFT Score<sup>1,2</sup>



### DSM-IV Diagnostic Criteria<sup>3</sup> (Abbreviated)

#### Substance Abuse (1 or more of the following):

- Use causes failure to fulfill obligations at work, school, or home
- Recurrent use in hazardous situations (e.g. driving)
- Recurrent legal problems
- Continued use despite recurrent problems

#### Substance Dependence (3 or more of the following):

- Tolerance
- Withdrawal
- Substance taken in larger amount or over longer period of time than planned
- Unsuccessful efforts to cut down or quit
- Great deal of time spent to obtain substance or recover from effect
- Important activities given up because of substance
- Continued use despite harmful consequences



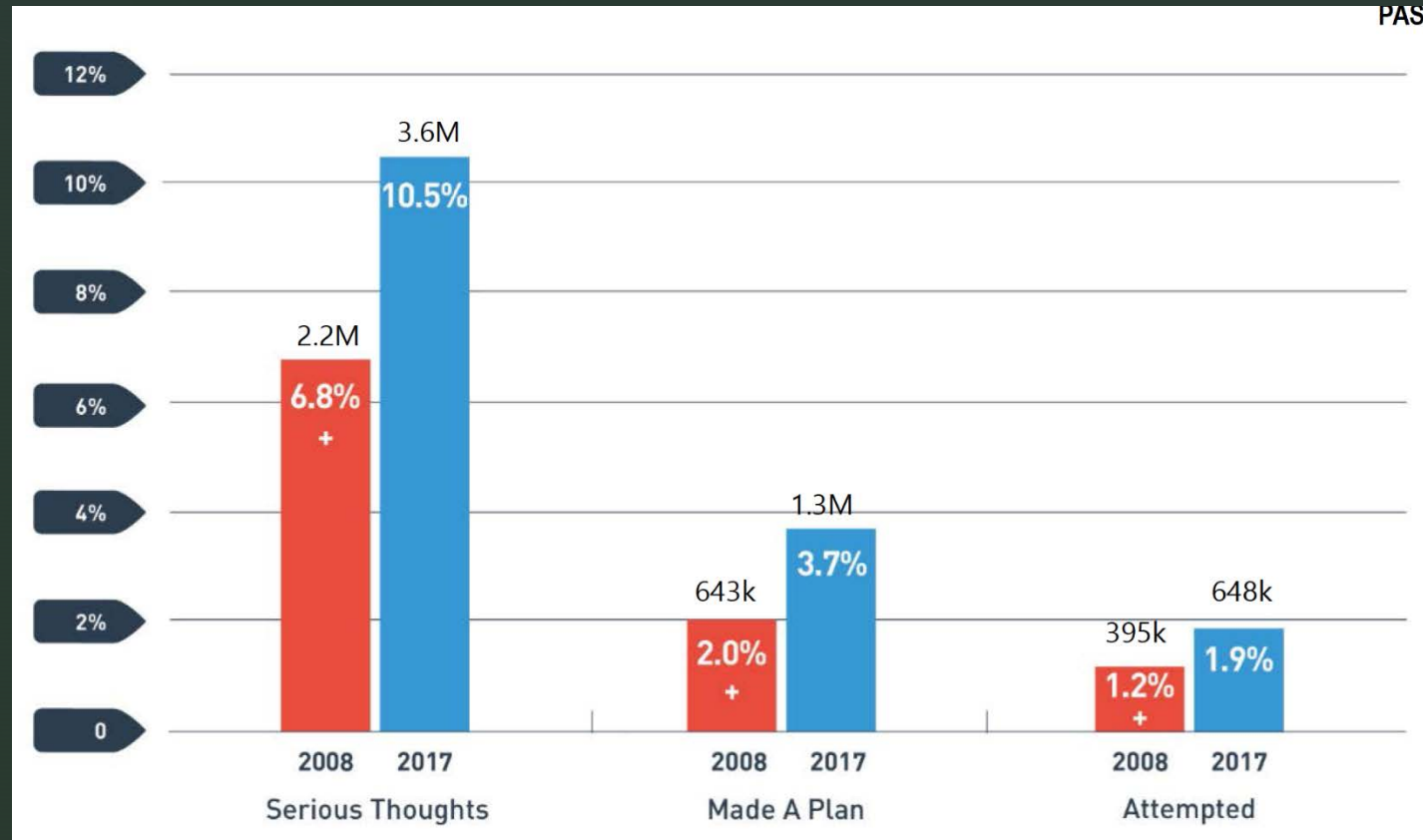
## PHQ-9 Modified for Teens:

How often have you been bothered by each of the following symptoms during the past <b>TWO WEEKS</b> ?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Feeling down, depressed, irritable, or hopeless?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

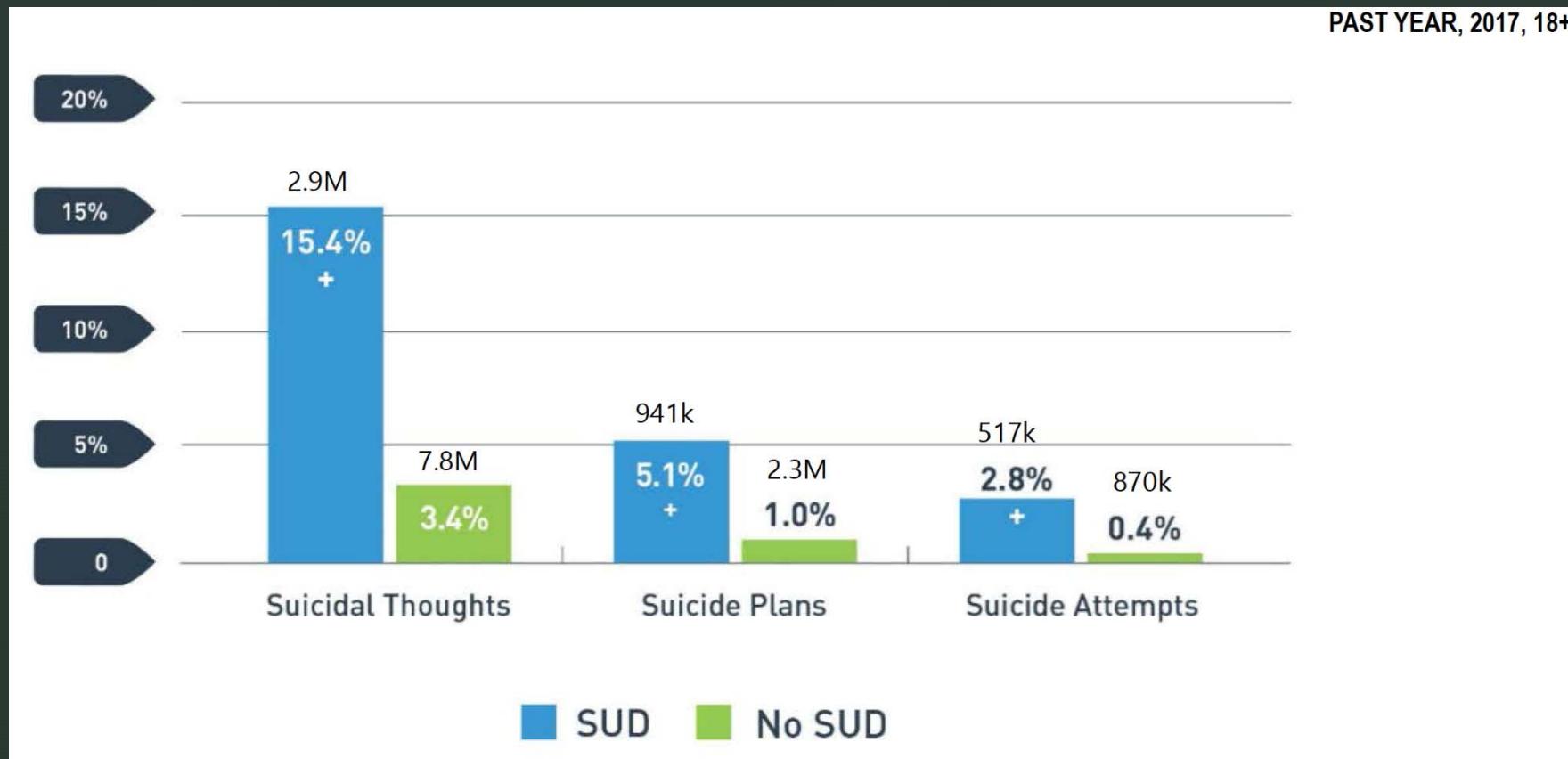
If you answered “Not at all” to both questions above, you are finished answering questions. Otherwise, please continue answering all the questions below.



# Suicidal Thoughts, Plans, and Attempts Increase for Young Adults. NSDUH 2017 18-25



# ▶ Suicidal Thoughts, Plans, and Attempts among Adults by SUD. 2017 NSDUH 18+





# Medications for Opioid Use Disorders

Medication	Level of Evidence (for adults)	Comments
Methadone	High <sup>1</sup>	<ul style="list-style-type: none"> <li>• Full agonist</li> <li>• Limited access under age 18</li> <li>• Effect on developing brain unknown</li> </ul>
Buprenorphine	High <sup>2</sup>	<ul style="list-style-type: none"> <li>• Partial agonist</li> <li>• Indicated for patients <math>\geq 16</math> years old</li> <li>• Can be prescribed in medical office</li> <li>• Abuse potential less than full agonist</li> <li>• Effects on developing brain unknown</li> </ul>
XR-Naltrexone	Moderate-High <sup>3</sup>	<ul style="list-style-type: none"> <li>• Antagonist</li> <li>• Hepatotoxic risk</li> </ul>

1. injectable naltrexone for opioid use disorder. Fullerton CA, et al. *Psychiatric Services*, 2014; 65(2): 146-157.

2. Thomas CP, et al. Medication-Assisted Treatment with Buprenorphine: Assessing the Evidence. *Psychiatric Services*, 2014; 65(2): 158-170.

3. Jarvis BP, et al. Extended-release opioid use disorder: a systematic review. *Addiction*, 2018.





# ▶ The case for buprenorphine in an adolescent

- FDA Approved  $\geq 16$  years of age
- Even though short duration of use, elevated risk for risky behavior purely based on developmental stages as previously discussed
  - Accidents, Homicide, Suicide are the three leading causes of death in the adolescent age group
  - It is easy to see the relationship with increased risk of DUI's, drug deals, and substance induced mood disorders/self medication



# Counseling for Adolescent SUD

Technique	Level of Evidence	Comments
Motivational Interviewing	Moderate <sup>1</sup>	Foundational basis of brief interventions
Cognitive Behavioral Therapy	Moderate <sup>2</sup>	Support for teens motivated for behavior change
Dialectical Behavior Therapy	Moderate <sup>3</sup>	Useful for patients with co-occurring mental health or personality disorders
Contingency Management	Moderate <sup>4</sup>	Challenging to implement

1. Jonas DE, *Annals of Internal Medicine*, 2012; 157(9): 645-654.
2. Kaminer Y, In C. Rowe & H. Liddle (eds.), *Adolescent substance abuse: Research and clinical advances*. New York: Cambridge University Press, pp. 346-419, 2006.
3. Dimeff LA, *Addict Sci Clin Pract*, 2008; 4(2):39-47.
4. Benishek LA, Prize-based contingency management for the treatment of substance abusers: a meta-analysis.



# Group Therapy

**NOT TREATMENT  
OF CHOICE IN  
ADOLESCENTS**

**Contagion risk  
negative behaviors**



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# Family Therapy

Technique	Level of Evidence	Comments
Brief Strategic Family Therapy	Moderate <sup>1</sup>	Can be adapted for a range of situations in various settings and treatment modalities
Multidimensional Family Therapy	High <sup>2</sup>	Aims to foster family collaboration with school/juvenile justice and facilitate reentry of juvenile detainees into community
Multi-Systemic Family Therapy	High <sup>3</sup>	Effective with adolescents who have severe SUD and other delinquent/violent behavior
Functional Family Therapy	Moderate <sup>4</sup>	Aims to improve communication, parenting skills, problem solving, conflict resolution
Family Behavioral Therapy	Moderate <sup>5</sup>	Uses contingency management and behavioral contracting

1. Robbins MS, et al. *Journal of Consulting and Clinical Psychology*, 2011: 79(6):713-727.

2. Liddle HA, et al. *International Journal of Offender Therapy and Comparative Criminology*, 2011: 55(4):587-604.

3. Sheidow AJ, In N. Jainchill (Ed.), *Understanding and Treating Adolescent Substance use Disorders*. Civic Research Institute, pp. 9-1-9-22, 2012.

4. Donohue B, et al. Family Behavior Therapy. In D. Springer; and A. Rubin (eds.), *Substance Abuse Treatment for Youth and Adults*. Wiley & Sons, Inc. pp 205-255, 2009.

5. Waldron HB, et al.. *Addictive Behaviors*, 2005:30(9): 1775-1796.



## Summary

- Adolescents are highly vulnerable to *substance use disorders*
- The AAP recommends abstinence as the best health advice for adolescents
  - This does not exclude MAT for OUD
- Include screening and counseling/intervention as part of routine medical care for adolescents
- Effective evidence-based treatments for adolescent SUD exist





- <http://CRAFFT.org/resources>
  - Great link to all things adolescent and substance abuse
  - Might be link to text out to teens
  - Also links to twitter accounts where anonymous health questions can be posted
  - Have to meet your patient where they are...even if it is in cyberspace...





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