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ADOLESCENT SBIRT Screening, Brief Intervention & Referral to Treatment by NORC at the University of Chicago

Webinar: Who's Doing What? The Epidemiology of Adolescent Substance Use

Questions from Participants and Answers from the Presenter

Q: How often are you dealing with lower income families who may have less resources to help their child, work long hours, and cannot give the supervision needed? What happens to these youth?

A: Yes, many of the families we work with have care-takers who work long hours and live in low-resource settings. Sadly, these are the same families that cannot access higher levels of addiction care for their kids (such as IOP, PHP, or residential treatment) even when it may be indicated because all of the higher level of care options in our area only take cash or private insurance.

In cases when outpatient treatment is inadequate to meet a youth's treatment needs, we work with higher level of care programs to secure single case agreements with Medicaid. We have also worked with school districts to place youth in therapeutic boarding schools that are paid for by the school district.

However, the beauty of outpatient family-based interventions is that they rely on helping families make fundamental changes in how they interact with each other, emphasizing positive reinforcement, withholding rewards (vs. delivering punishment), and natural consequences. Behavioral changes such as these can have big impacts even when care-takers are not always able to provide direct supervision. Also, many of the safety and accountability strategies we suggest are of the "set it and forget it" nature. This includes removing all substances from the home and locking up any prescription medications, limiting access to cash and credit cards (depending on how the youth typically accesses substances), swapping smart phones for "dumb" phones to limit procurement of substances via social media, limits on WiFi access at home, etc.

Q: Are you including nicotine, CBD, and THC in the vaping stats?

A: The 2019 Youth Risk Behavior survey questions on vaping are embedded in the tobacco section of the survey and does not ask respondents to specify whether they are using electronic delivery devices to vape cannabis products. The hader is as follows:

The next 3 questions ask about electronic vapor products, such as JUUL, Vuse, MarkTen, and blu. Electronic vapor products include e-cigarettes, vapes, vape pens, e-cigars, ehookahs, hookah pens, and mods.

The questions on cannabis use come later in the survey (after questions about alcohol use). The heading is as follows:

The next 3 questions ask about marijuana use. Marijuana also is called pot, weed, or cannabis.

The survey instrument is readily available online and can be accessed here: https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2019/2019_YRBS-Standard-HS-Questionnaire.pdf

Q: Is it true that Vicodin and Oxycontin are not as popular as Molly or pill parties now?

Nationwide data in 2019 reveals that 14.3% of high schoolers reported misusing prescription opioids at some point in their lifetime. Conversely only 3.6% reported lifetime use of MDMA. Per the YRBS data, use of MDMA among adolescents has been declining since the survey first included this question in 2001, with 11.1% reporting any lifetime use that year. However, there is state-by-state variation in terms of which substances are used more commonly. Higher rates of lifetime MDMA use are reported in Alabama, Arizona, Arkansas, Georgia, Kansas, Louisiana, Maryland, Mississippi, Nevada, New Mexico, and South Caroline. State-specific data can be found here: https://www.cdc.gov/healthyyouth/data/yrbs/results.htm

Q: Why has prescription drug use declined?

A: The reasons behind declining prescription drug use rates among adolescents are not fully understood and likely multi-factorial. Indeed, substance use rates overall have been declining in this age group and there has been some research into the possible factors influencing this trend. In 2017, Han et al published an interesting study into possible reasons for declining substance use trends among adolescents. They looked at trends in factors that are known to protect youth against substance use as well as known risk factors between 2002 and 2014. They found that, during that time period, attitudes about school improved, parental monitoring increased, parental disapproval of cigarette smoking and alcohol increased, peer disapproval of cigarette smoking, cannabis use, and alcohol use increased, youth participation in community-based activities increased, and mean age of first substance use increased. Of all these, increased age of first substance use was the factor that correlated most highly with overall declining rates of substance use. During the same time period, they found that rates of depression increased, exposure to substance use prevention programs decreased, youth participation in religious activities decreased, and parental disapproval of cannabis use decreased.

In terms of prescription opioid use, we know that even legitimate, medical use of opioids before high school graduation infers a 33% increase in risk of future opioid misuse. Interestingly, rates of opioid prescribing to adolescents in medical settings have not seen significant declines.

Some theories posit that a shift toward electronic communication and away from face-to-face interaction among teens may be a contributing factor to decreasing rates of substance use.

- Wisk, L. E., & Weitzman, E. R. (2016). Substance use patterns through early adulthood: results for youth with and without chronic conditions. *American journal of preventive medicine*, *51*(1), 33-45.
- Han, B., Compton, W. M., Blanco, C., & DuPont, R. L. (2017). National trends in substance use and use disorders among youth. Journal of the American Academy of Child & Adolescent Psychiatry, 56(9), 747-754.
- Hudgins, J. D., Porter, J. J., Monuteaux, M. C., & Bourgeois, F. T. (2019). Trends in opioid prescribing for adolescents and young adults in ambulatory care settings. *Pediatrics*, *143*(6), e20181578.
- De Looze, M., van Dorsselaer, S., Stevens, G. W. J. M., Boniel-Nissim, M., Vieno, A., & Van den Eijnden, R. J. J. M. (2019). The decline in adolescent substance use across Europe and

North America in the early twenty-first century: A result of the digital revolution?. *International journal of public health*, *64*(2), 229-240.

Q: Have cannabis use rates increased in adolescents living in states where its use is legal?

A: As of November 4, 2020, 36 states and four territories have voted on measures to legalize "medical marijuana" and 15 states and three territories have voted to legalize recreational cannabis use. California was the first state to legalize "medical" use in 1996 and Colorado and Washington were the first states to legalize recreational use in 2012.

Unfortunately, robust studies looking at the effect of cannabis legalization policies in the U.S. on adolescent cannabis use rates remain limited (especially those specific to recreational use policies), and the varied patchwork of laws across states make data difficult to compare. However, recent data suggest that "medical" cannabis laws increase rates of adult cannabis use but not rates of adolescent use. And recreational cannabis laws, so far, have had seemingly little impact on adolescent cannabis use rates but may be associated with increases in rates of use among college students.

Globally, a study of 38 countries with liberalized cannabis control policies revealed that rates of adolescent cannabis use were higher in countries with cannabis liberalization policies (especially in countries with depenalization and partial prohibition) but that statistically significant effects on regular cannabis use were not seen until the policy had been in place for at least 5 years.

So the long-term effects of cannabis legalization on cannabis use rates by U.S. adolescents remains to be determined and will likely vary by state. There is some evidence to suggest that states where dispensaries are allowed to operate may see higher rates of adolescent cannabis use.

- https://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx
- Smart, R., & Pacula, R. L. (2019). Early evidence of the impact of cannabis legalization on cannabis use, cannabis use disorder, and the use of other substances: findings from state policy evaluations. *The American journal of drug and alcohol abuse*, *45*(6), 644-663.
- Shi Y, Lenzi M, An R (2015) Cannabis Liberalization and Adolescent Cannabis Use: A Cross-National Study in 38 Countries. PLoS ONE 10 (11): e0143562. doi:10.1371/journal.pone.0143562

Q: Are there any models that support parenting that you can direct and/or advise on?

A: For parents of adolescents, I recommend the Family Check Up® and the Everyday Parenting program or The Adolescent Community Reinforcement Approach (A-CRA). For parents of young adults, I recommend Community Reinforcement and Family Training (CRAFT) programs. All of these are evidence-based and effective in helping youth recovering from addiction.

- https://reachinstitute.asu.edu/family-check-up/for-parents
- https://www.chestnut.org/ebtx/treatments-and-research/treatments/a-cra/
- https://reachinstitute.asu.edu/family-check-up/program-overview/intervention-process/follow-up
- https://motivationandchange.com/outpatient-treatment/for-families/craft-overview/

Q: What can we do to expand early intervention services in our communities?

A:

1. Connect with local researchers/academics who specialize in early intervention. These folks often already have robust connections to policy-makers in their communities and can help connect you with people and organizations where you can have an influence.

2. Be familiar with scientifically supported, effective early intervention programs and advocate for these whenever possible. A list of evidence-based programs can be found here: https://www.drugabuse.gov/publications/principles-substance-abuse-prevention-early-childhood-research-based-guide-in-brief/nida-funded-early-interventions
3. Speak to your legislators about the importance of early intervention services. Be sure to tout the long-term fiscal benefits of such programs!

Q: Is the number of those with substance use disorders higher this year than previous years, due to the pandemic?

A: The data on the effect of the COVID-19 pandemic on mental health and substance use are just emerging and the data I presented from the 2019 National Survey of Drug Use and Health were collected before the start of the pandemic. Emerging data reveal that more than 13% of U.S. adults started using substances to cope with stress or increased their use between April and June 2020, with increased substance use rates most commonly reported by people aged 18-24. Among adolescents, frequency of alcohol and cannabis use have increased during the course of the COVID-19 pandemic and more adolescents reported using substances alone (solitary use has previously been associated with increased risk of developing substance use disorders). So while the impact of the COVID-19 pandemic on rates of substance use disorders is not yet fully known, increasing rates and frequencies of substance use in addition to psychological distress related to the pandemic certainly raise concern for higher rates of substance use disorders in the years to come.

- Czeisler, M. É., Lane, R. I., Petrosky, E., Wiley, J. F., Christensen, A., Njai, R., ... & Czeisler, C. A. (2020). Mental health, substance use, and suicidal ideation during the COVID-19 pandemic—United States, June 24–30, 2020. *Morbidity and Mortality Weekly Report*, *69*(32), 1049.
- Dumas, T. M., Ellis, W., & Litt, D. M. (2020). What does adolescent substance use look like during the COVID-19 pandemic? Examining changes in frequency, social contexts, and pandemic-related predictors. *Journal of Adolescent Health*, *67*(3), 354-361.

Q: Are these numbers inclusive of the current pandemic?

A: No, most of these data were collected in 2019, prior to the start of the COVID-19 pandemic.

Q: What do the plus signs in some of the data points mean?

A: The plus signs in the tables representing rates of substance use indicate that the difference between that year's rate is statistically significantly different than the rates reported in 2019.

Q: A common call to our state's poison center for adolescent overdose is self-administered dextromethorphan, typically from taking cough syrup to get high. Are you concerned with overall rates of over the counter drugs in youth populations?

A: According to the 2019 Monitoring The Future Study, misuse of dextromethorphan was reported by 2.8% of youth across grades 8, 10, and 12 and rates of use have been mostly steady over time. It is estimated that approximately 6,000 emergency department visits per year are related to dextromethorphan overdose and half of those are by people aged 12-20. Dextromethorphan overdose can usually be treated with supportive measures but mortality has been reported in the context of congestion with other drugs, including alcohol. Unfortunately, the prevalence and risk of developing dextromethorphan use disorder are unknown.

Among the youth we treat, misuse of dextromethorphan and other over-the-counter medications for recreational purposes is uncommon (both by patient report and by urine drug testing result). However, we have seen youth experiment with these substances during periods of abstinence from other drugs like cannabis and alcohol.

- https://www.drugabuse.gov/drug-topics/trends-statistics/monitoring-future/monitoring-future-study-trends-in-prevalence-various-drugs
- Journey, J. D., Agrawal, S., & Stern, E. (2019). Dextromethorphan Toxicity.
- Whitmore, C. A., & Hopfer, C. (2019). Abuse of hallucinogens and dissociative drugs, prescription opioids and anxiolytics, and over-the-counter (OTC) medications is a significant problem among adolescents and young adults. The use of hallucinogenic and dissociative substances, commonly referred to as "club drugs," became popular during the 1990s. Despite the overall declining trend in adolescents' use of club drugs. *Clinical Manual of Youth Addictive Disorders*, 229.

Q: Could you address some of the factors that led to the spike in use from 17-18 and where we could find more evidence and research related to that bump?

A: This is a great question without a simple answer. We know that prevalence of substance use tends to increase in adolescence and peaks in the early to mid 20s, before declining again. There appear to be variations in these rates based on sex, gender identity and sexual orientation, race/ethnicity, socioeconomic status, exposure to adverse childhood experiences, parental substance use, and the availability (or lack thereof) of rewarding alternatives. However, it seems the overall trend is due to multiple converging factors, such as:

1. Increased freedom and less parental input/oversight as youth leave home
2. Stress related to life transitions like leaving home
3. Ability to legally purchase substances
4. Peer pressure and social norms around substance use in university settings
5. Biological/developmental factors leading to disinhibition and poor decision making/future planning

This is certainly a complicated question that is worthy of more research!

Q: What three ways did you define a substance use disorder?

A: Diagnostic criteria for SUDs are per the DSM5. There are 11 criteria that I have memorized using the mnemonic WORLD CUP MATch
W - withdrawal
O - occupation
R - relationships
L - longer/larger
D - danger
C - cut down
U - urges
P - problems (medical/psychiatric)
M - more (tolerance)
A - activities
T - time
Ch = check the score

However, the 3 most important general areas to think about when considering the presence of a use disorder are 1) Family relationships, 2) occupation (school/work), and 3) Recreation (has the substance use eclipsed hobbies and other pleasurable activities?).