Adolescents and Substance Use

June 14, 2023

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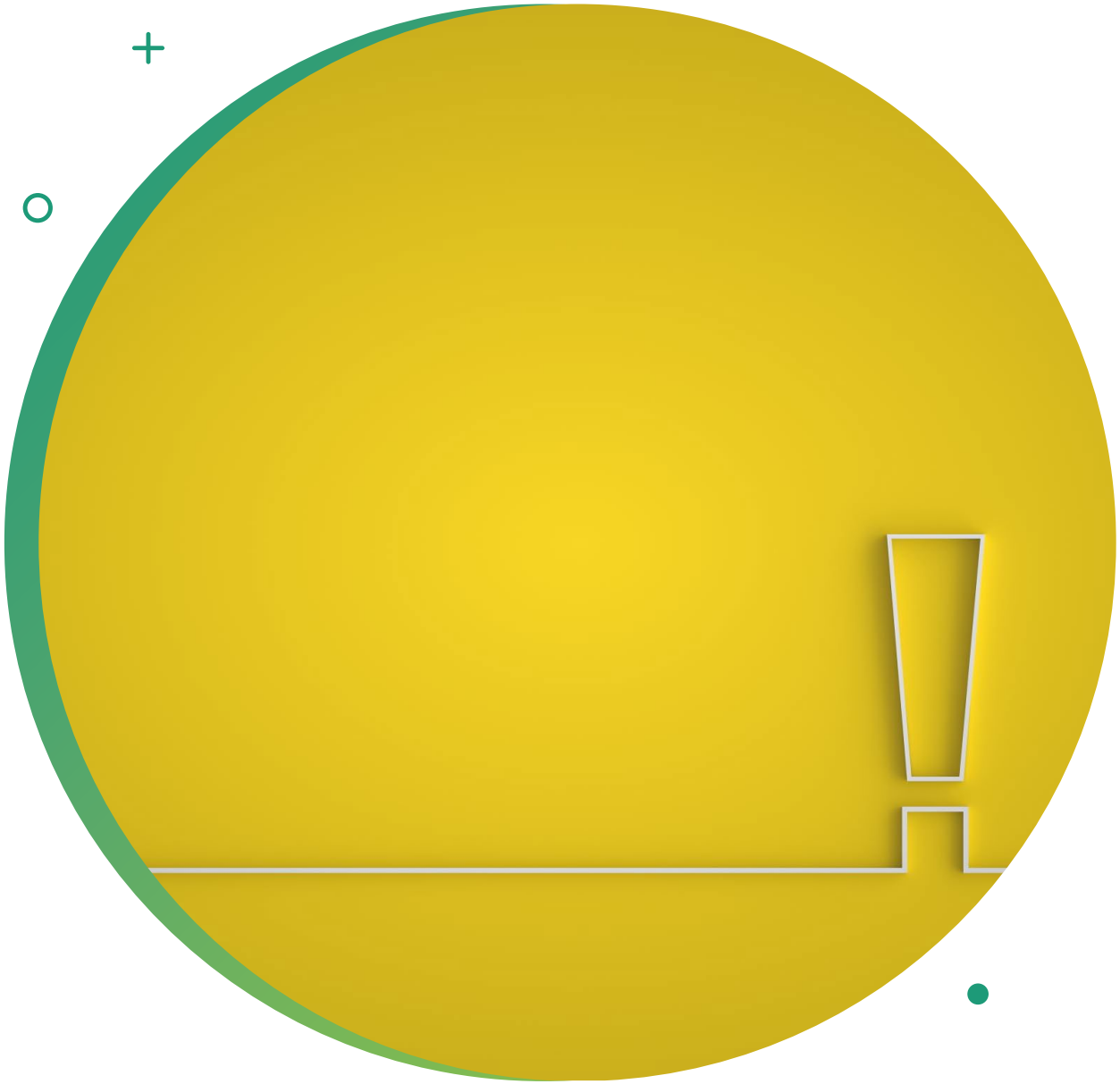


Disclosure

- In the past 12 months, we have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in this CME activity.
- Dr. Fanburg is a speaker and trainer for Organon Pharmacuiticals.

Outline

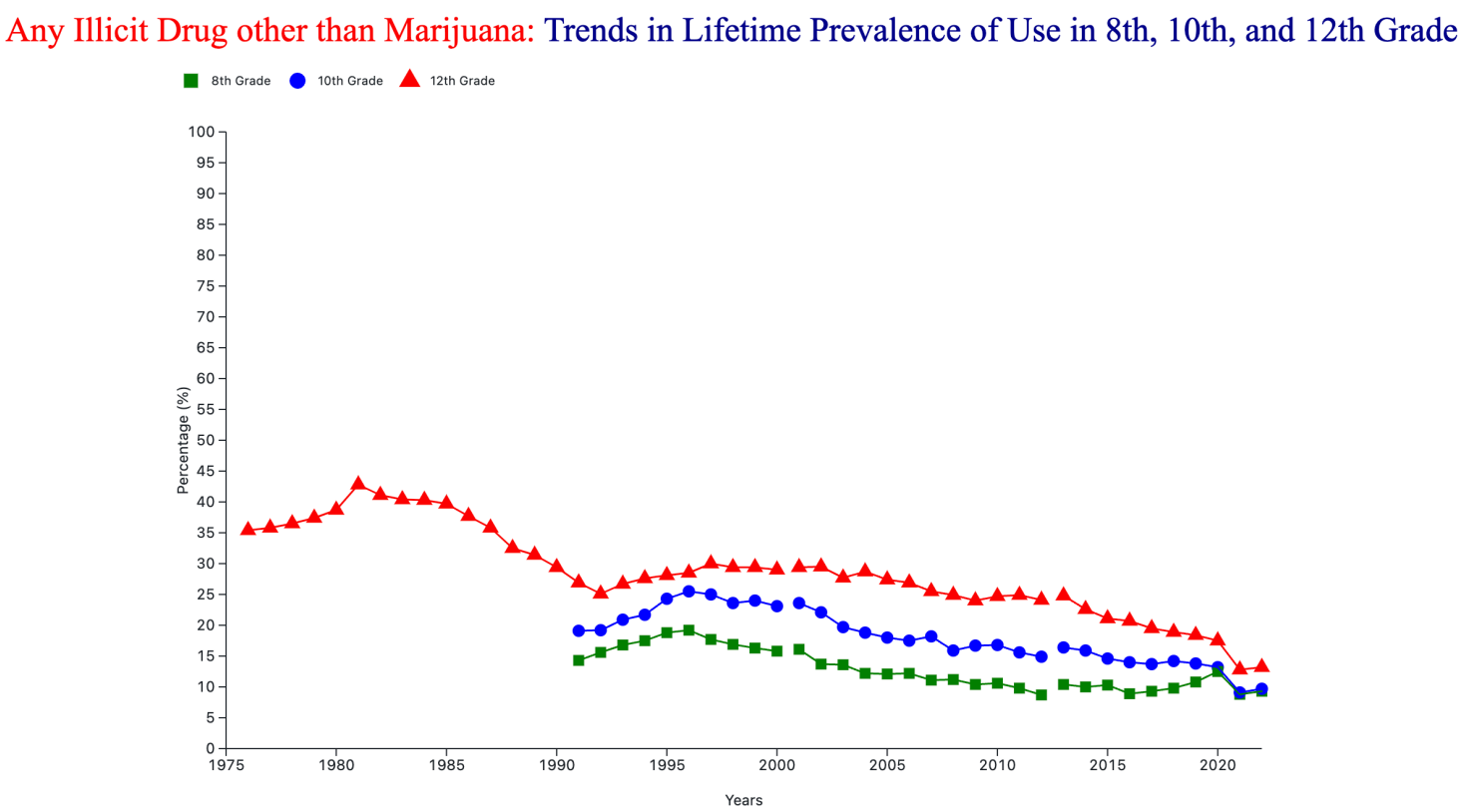
- Brief Overview of Epidemiology of Adolescent Substance Use
- Identification of Youth
- Discuss Intervention and begin to highlight some of the differences working with youth versus adult- Jon will continue with this
- Touch a little deeper on some issues with alcohol and marijuana
- Resources at the end
- TREATME

Brief Epidemiologic Review

- Illicit Use has decreased.
- Alcohol, Marijuana, Nicotine still most common used
- Experimentation increases over the time period of adolescence
- About 1/3 of youth never use over the course of adolescence
- Overdose deaths in adolescents have increased
  - From July 2019-December 2021 median monthly overdose death reports for youth 10-19 increased 109% largely due to illicitly manufactured fentanyl.[1]

1 Tanz LJ, Dinwiddie AT, Mattson CL, O'Donnell J, Davis NL. Drug Overdose Deaths Among Persons Aged 10–19 Years — United States, July 2019–December 2021. MMWR Morb Mortal Wkly Rep 2022;71:1576–1582. DOI: http://dx.doi.org/10.15585/mmwr.mm7150a2.

Illicit Drug Use not Including Marijuana



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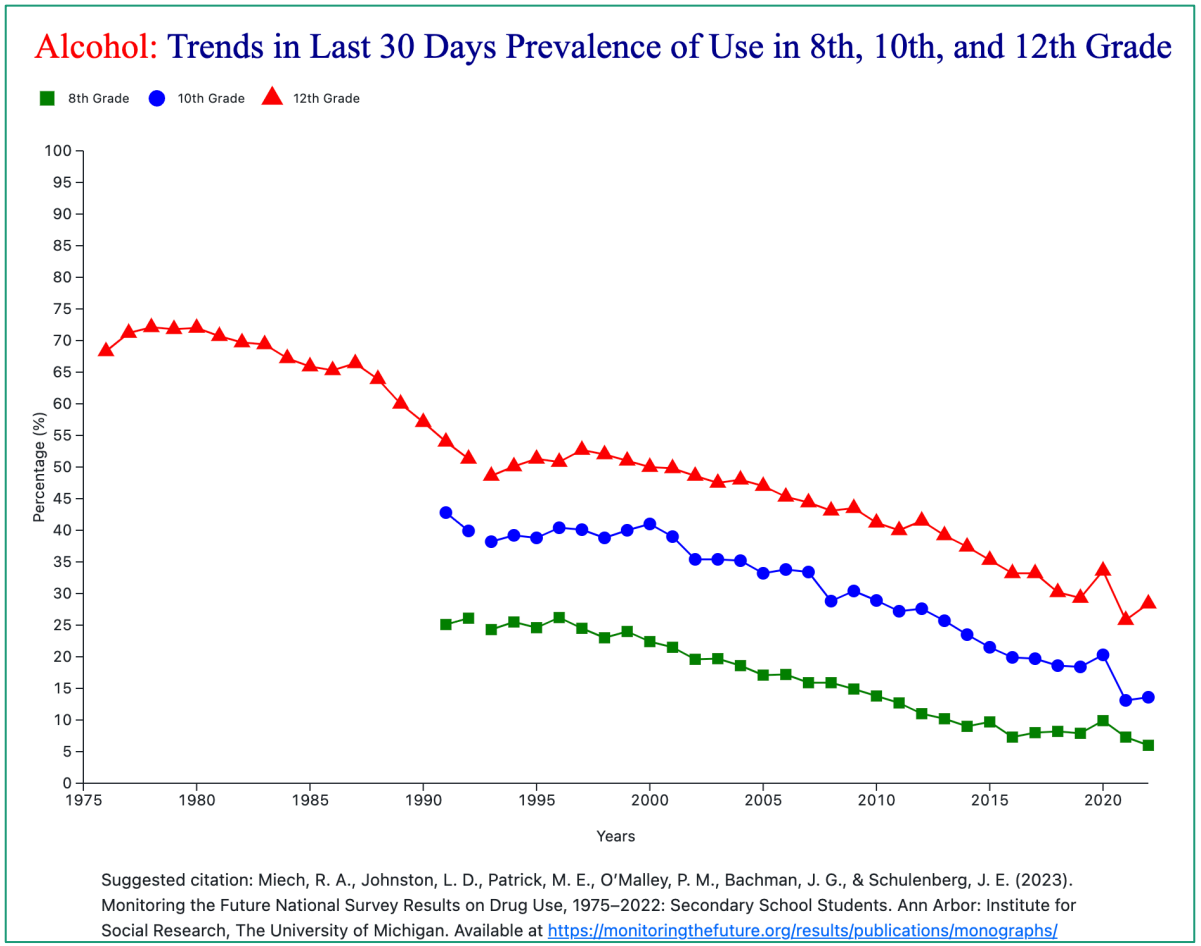
Alcohol



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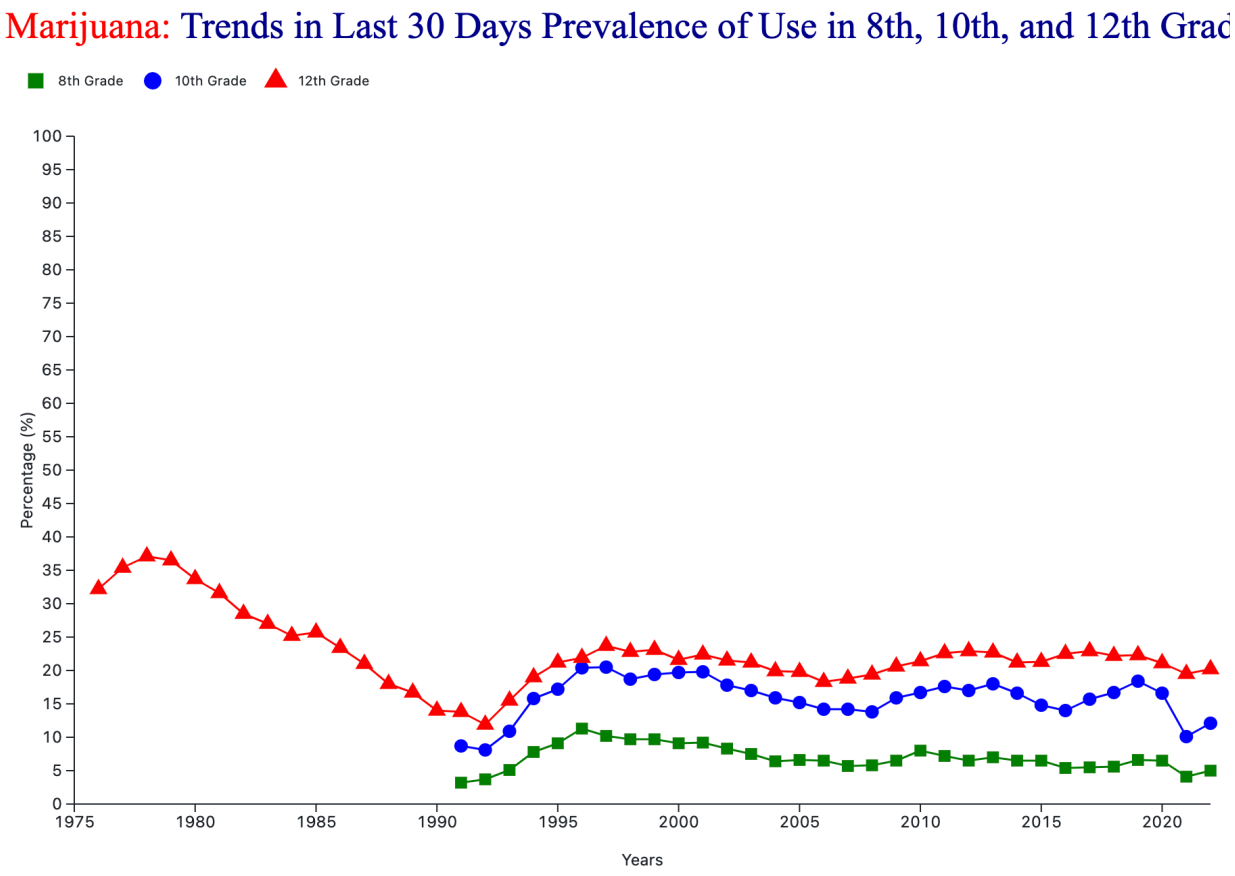
Maine
Alcohol -- 2021 MIYHS High School Report

	Questions	Answers of Interest	Maine 2021 95% CI*	Maine 2019 95% CI*	Significance Tests: A. Maine 2021 vs. Maine 2019
23.	How old were you when you had your first drink of alcohol other than a few sips? (hn79/hn79)	Among students who have had more than a few sips of alcohol, the percentage of students who answered before age 13	**25.6%** **(24.4% - 26.9%)**	23.8% (22.6% - 24.9%)	
24.	How old were you when you had your first drink of alcohol other than a few sips? (hn79_2/hn79_2)	The percentage of students who answered before age 13	**11.1%** **(10.6% - 11.6%)**	12.1% (11.5% - 12.7%)	
25.	How old were you when you had your first drink of alcohol other than a few sips? (hn79_3/hn79_3)	Percentage of students who have ever drank alcohol	**43.3%** **(42.1% - 44.4%)**	51.0% (49.8% - 52.1%)	L
26.	During the past 30 days, on how many days did you have at least one drink of alcohol? (hn80/hn80)	Percentage of students who answered at least 1 day	**19.0%** **(17.8% - 20.2%)**	22.9% (21.8% - 24.0%)	L
27.	During the past 30 days, what is the largest number of alcoholic drinks you had in a row, that is, within a couple of hours? (hn241a/hn241a)	Among those who have drank alcohol in the past 30 days, the percentage who answered 5 or more drinks	**34.4%** **(32.4% - 36.4%)**	32.7% (31.1% - 34.2%)	

Marijuana



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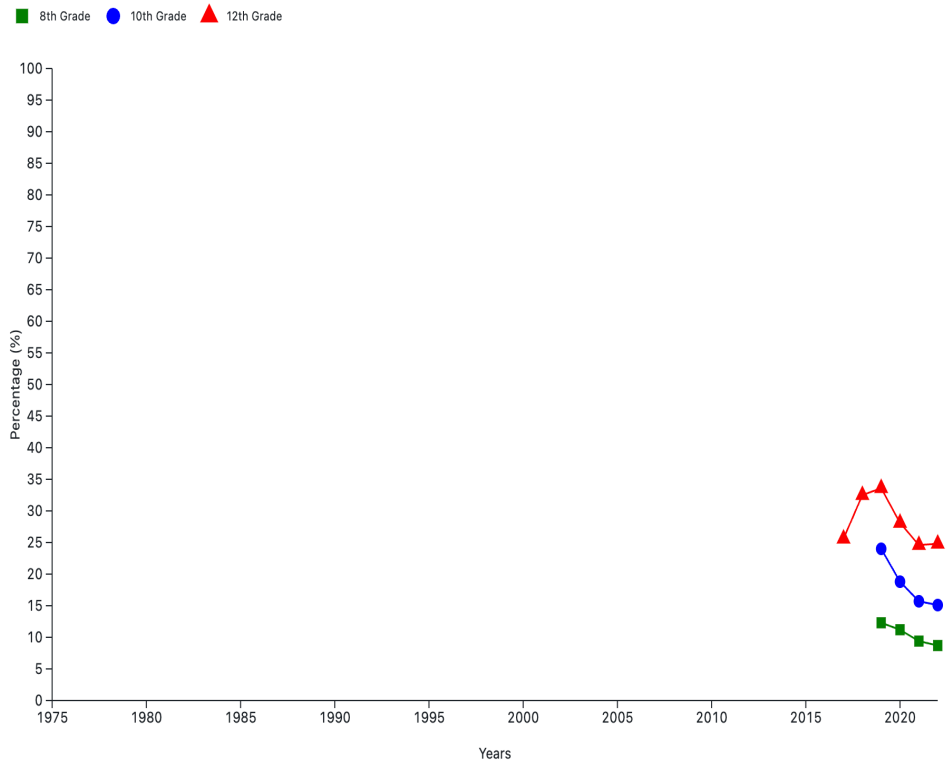
Maine
Marijuana -- 2021 MIYHS High School Report

	Questions	Answers of Interest	Maine 2021 95% CI*	Maine 2019 95% CI*	Significance Tests: A. Maine 2021 vs. Maine 2019
33.	During your life, how many times have you used marijuana? (hn98/hn98)	Percentage of students who answered at least 1 time	**30.5%** **(29.4% - 31.5%)**	36.4% (35.2% - 37.6%)	L
34.	How old were you when you tried marijuana for the first time? (hn99/hn99)	Among students who have tried marijuana, the percentage of students who answered before age 13	**18.5%** **(17.2% - 19.9%)**	16.6% (15.3% - 17.9%)	
35.	How old were you when you tried marijuana for the first time? (hn99_2/hn99_2)	Percentage of students who answered before age 13	**5.7%** **(5.2% - 6.2%)**	6.1% (5.6% - 6.6%)	
36.	During the past 30 days, how many times did you use marijuana? (hn100/hn100)	Percentage of students who answered at least 1 time	**17.9%** **(17.0% - 18.7%)**	22.0% (21.1% - 23.0%)	L
37.	If you wanted to get some marijuana, how easy would it be for you to get some? (hn101/hn101)	Percentage of students who answered "Sort of easy" or "Very easy"	**47.1%** **(45.9% - 48.3%)**	53.1% (51.9% - 54.4%)	L
38.	How much do you think people risk harming themselves (physically or in other ways) if they use marijuana once or twice a week? (hn259/hn259)	Percentage of students who answered "No risk" or "Slight risk"	**65.1%** **(64.1% - 66.1%)**	66.7% (65.8% - 67.5%)	

Nicotine

Any Nicotine Use: Trends in Last 30 Days Prevalence of Use in 8th, 10th, and 12th Grade



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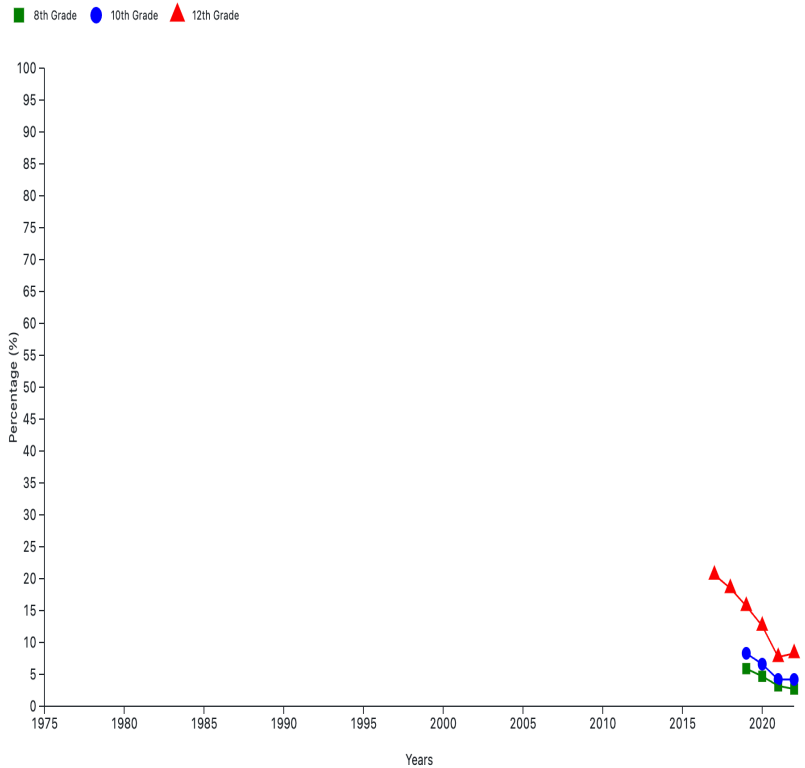
Any Nicotine Use other than Vaping: Trends in Last 30 Days Prevalence of Use in 8th, 10th, and 12th Grade



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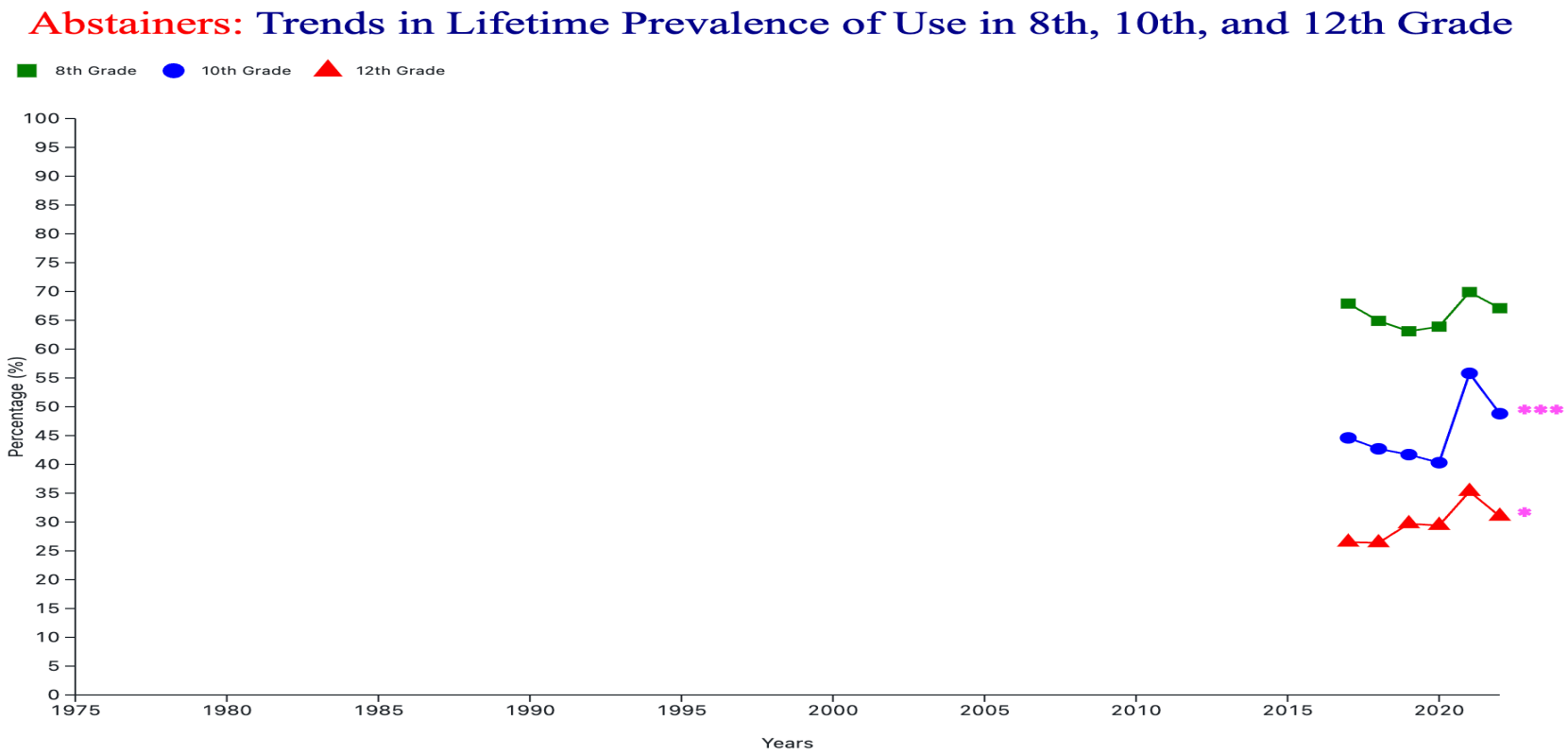
Trends in Teen Abstinence



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Identifying Youth

SBIRT- AAP recommends initiating at age 12.

Parent Concerns

Mental Illness

Sleep Disorders

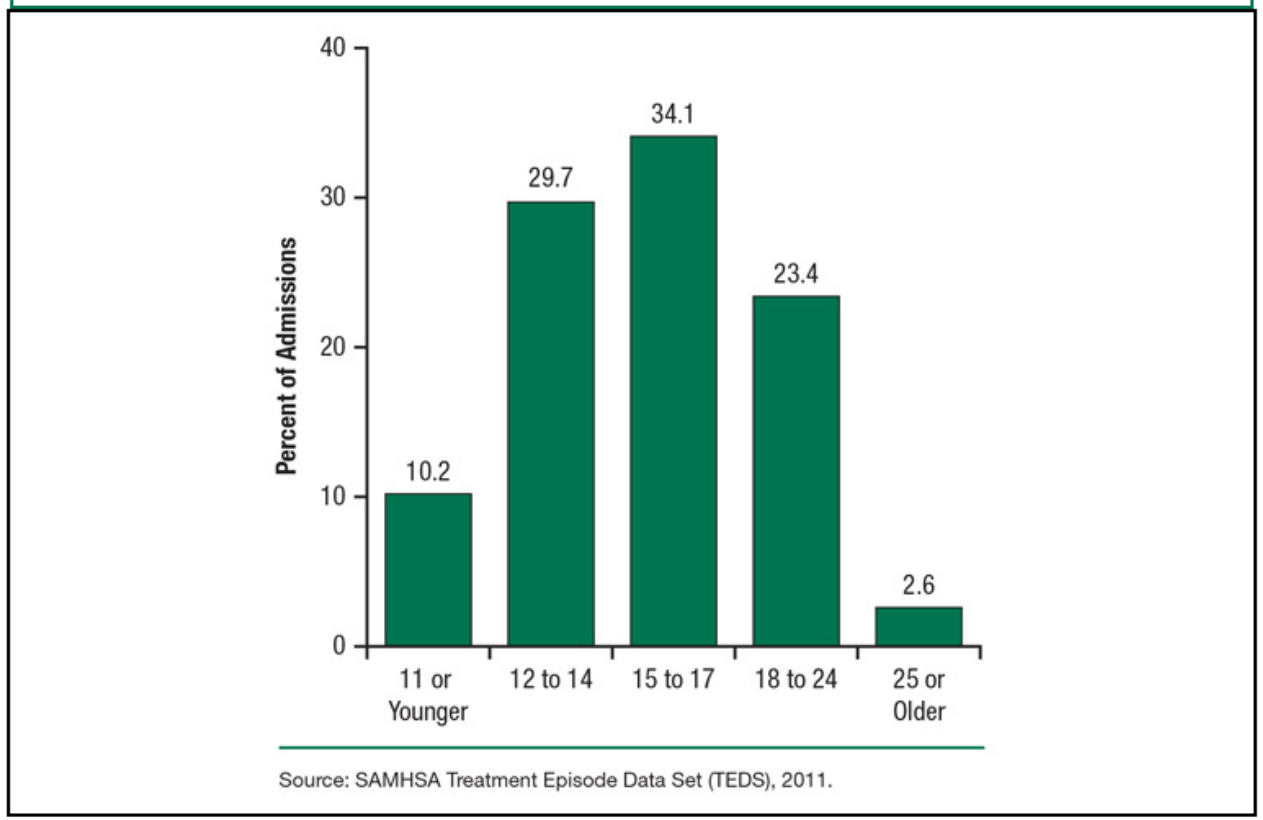
Exacerbation of Medical Illness

ASK

Starts Early

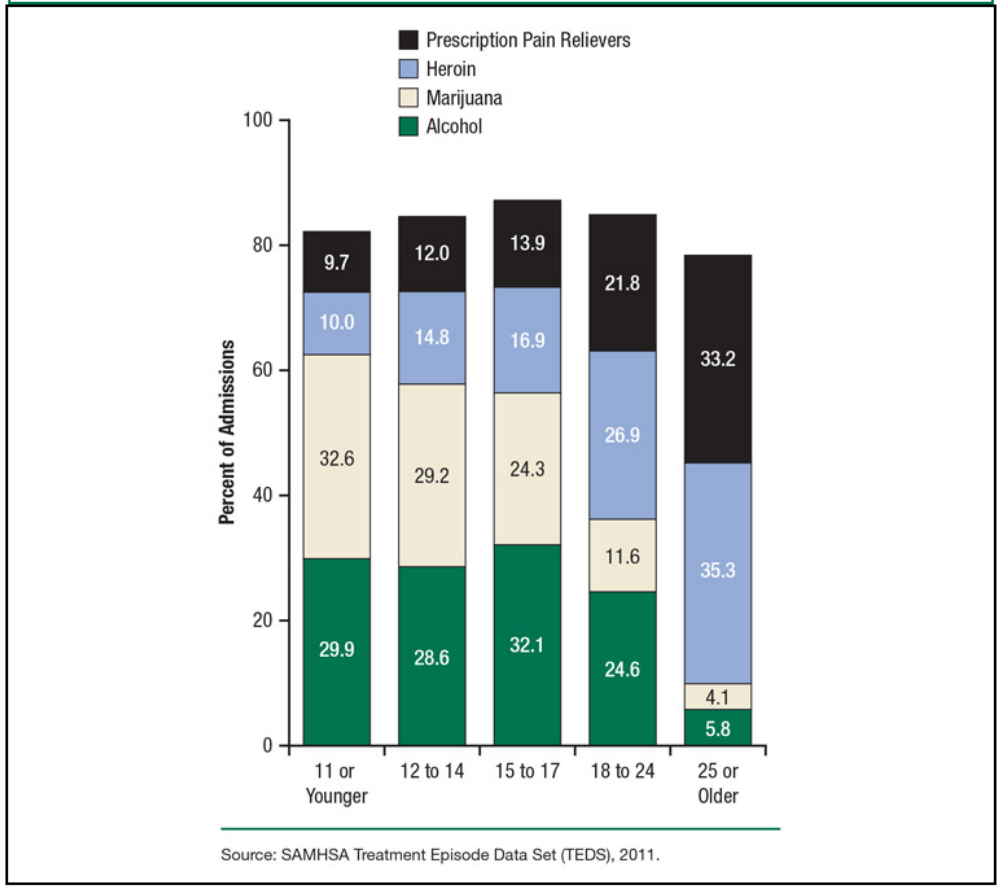
Substance Use Initiation

Figure 1. Age of Substance Use Initiation among Treatment Admissions Aged 18 to 30: 2011



Source: SAMHSA Treatment Episode Data Set (TEDS), 2011.

Figure 4. Primary Substance of Abuse, by Age at Substance Use Initiation, among Treatment Admissions Aged 18 to 30: 2011

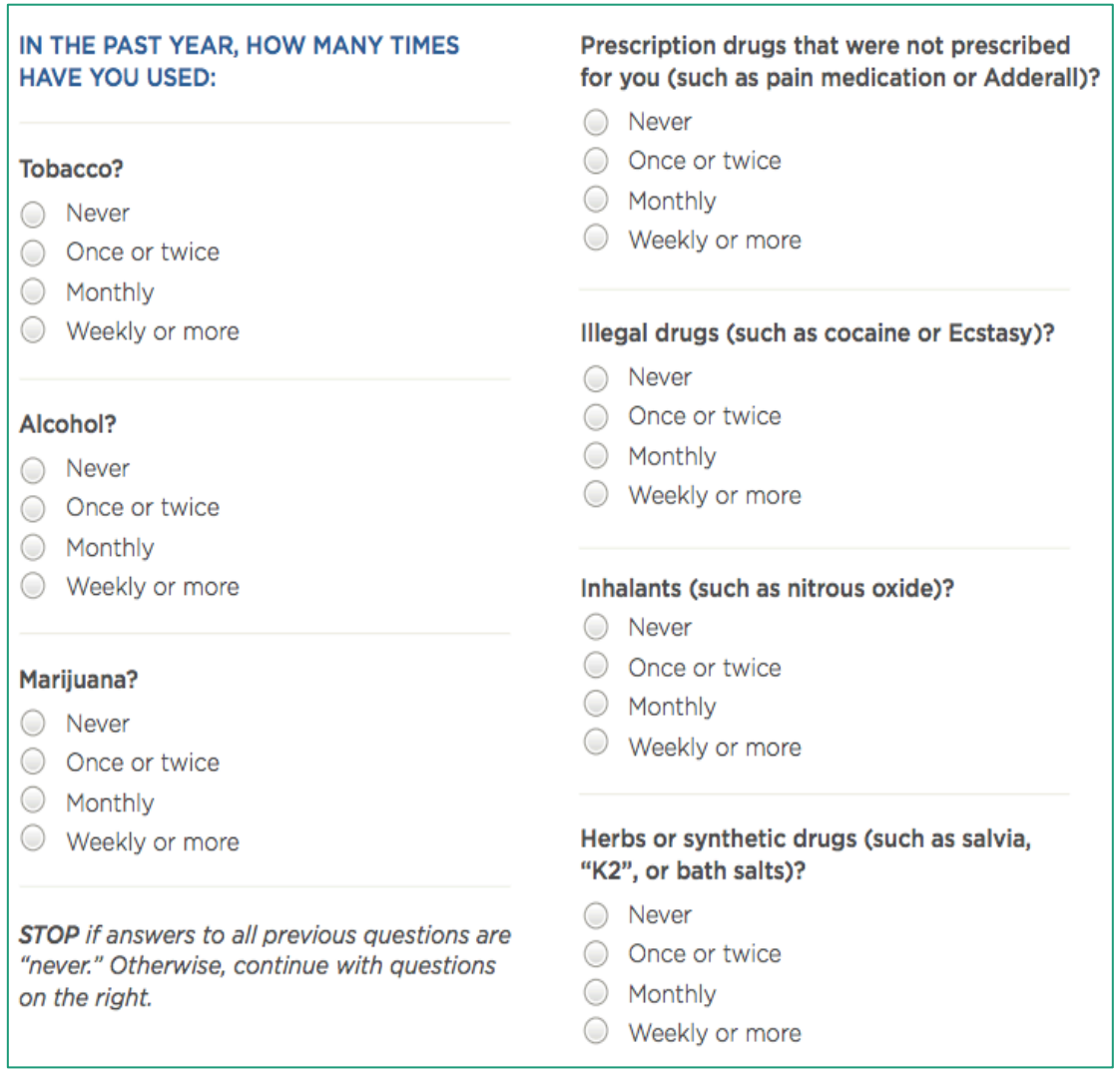


Source: SAMHSA Treatment Episode Data Set (TEDS), 2011.

From: Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (July 17, 2014). *The TEDS Report: Age of Substance Use Initiation among Treatment Admissions Aged 18 to 30*. Rockville, MD.

S2BI
(SCREENING TO BRIEF INTERVENTION)

Data from D' Souza-Li L, Harris SK. The future of screening, brief intervention and referral to treatment in adolescent primary care: research directions and dissemination challenges. Curr Opin Pediatr. 2016 Aug; 28(4):434–440.



IN THE PAST YEAR, HOW MANY TIMES HAVE YOU USED:

Tobacco?
- Never
- Once or twice
- Monthly
- Weekly or more

Alcohol?
- Never
- Once or twice
- Monthly
- Weekly or more

Marijuana?
- Never
- Once or twice
- Monthly
- Weekly or more

***STOP** if answers to all previous questions are "never." Otherwise, continue with questions on the right.*

Prescription drugs that were not prescribed for you (such as pain medication or Adderall)?
- Never
- Once or twice
- Monthly
- Weekly or more

Illegal drugs (such as cocaine or Ecstasy)?
- Never
- Once or twice
- Monthly
- Weekly or more

Inhalants (such as nitrous oxide)?
- Never
- Once or twice
- Monthly
- Weekly or more

Herbs or synthetic drugs (such as salvia, "K2", or bath salts)?
- Never
- Once or twice
- Monthly
- Weekly or more

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bstad

(brief Screener for Tobacco, Alcohol and other drugs)

Data from from D' Souza-Li L, Harris SK. The future of screening, brief intervention and referral to treatment in adolescent primary care: research directions and dissemination challenges. Curr Opin Pediatr. 2016 Aug; 28(4):434–440.

FRIENDS' USE

Do you have friends who
smoked cigarettes or used other tobacco products in the past year? ☐ No ☐ Yes

Do you have friends who
drank beer, wine, or any drink containing alcohol in the past year? ☐ No ☐ Yes

Do you have friends who in the past year:

- sniffed or "huffed" anything;
- took illegal drugs like marijuana (weed, blunts), cocaine, etc;
- took prescription medications that were not prescribed for them; or
- took prescription or over-the-counter medications and took more than they were supposed to take?

☐ No ☐ Yes

PERSONAL USE

In the past year, have you
smoked cigarettes or used other tobacco products? ☐ No ☐ Yes

In the past year, have you
had more than a few sips of beer, wine, or any drink containing alcohol? ☐ No ☐ Yes

In the past year, have you:

- sniffed or "huffed" anything;
- taken illegal drugs like marijuana (weed, blunts), cocaine, etc;
- taken prescription medications that were not prescribed for you; or
- taken prescription or over-the-counter medications and took more than you were supposed to take?

☐ No ☐ Yes

[IF DRUGS ARE ENDORSED IN THE PERSONAL USE QUESTION, ASK THE FOLLOWING:]

Which of the following substances have you used in the past year? (check all that apply)

☐ Marijuana or Hashish
☐ Cocaine or crack
☐ Heroin
☐ Amphetamines or methamphetamine (nonpharmaceutical)
☐ Hallucinogens (eg, Mushrooms, LSD)
☐ Inhalants

Which of the following medications have you used in the past year that were not prescribed for you or which you took more of than you were supposed to take? (check all that apply)

☐ Prescription pain relievers (eg, morphine, percocet, vicodin, oxycontin, dilaudid, methadone, buprenorphine)
☐ Prescription sedatives (eg, Valium, Xanax, Klonopin, Ativan)
☐ Prescription stimulants (eg, Adderall, Ritalin)
☐ Over-the-Counter Medications (eg, Nyquil, Benadryl, cough medicine, sleeping pills)

[FOR EACH SUBSTANCE WHERE USE WAS ENDORSED, ASK:]

In the past 30 days, on how many days have you…
smoked cigarettes or used other tobacco products/used alcohol/used [SUBSTANCE]? ☐☐ days

In the past 90 days, on how many days have you…
smoked cigarettes or used other tobacco products/used alcohol/used [SUBSTANCE]? ☐☐ days

In the past year, on how many days have you…
smoked cigarettes or used other tobacco products/used alcohol/used [SUBSTANCE]? ☐☐☐ days

From Kelly SH, Gryczynski J, Mitchell SG, et al. Validity of brief screening instrument for adolescent tobacco, alcohol, and drug use. Pediatrics. 2014 May 133(5):819-826.

Crafft (car relax, Alone, friends/family, forget, trouble)

The CRAFFT Questionnaire (version 2.1)

To be completed by patient

Please answer all questions **honestly**; your answers will be kept **confidential**.

During the PAST 12 MONTHS, on how many days did you:

1.	Drink more than a few sips of beer, wine, or any drink containing **alcohol**? Put "0" if none.	# of days
2.	Use any **marijuana** (weed, oil, or hash by smoking, vaping, or in food) or "**synthetic marijuana**" (like "K2," "Spice")? Put "0" if none.	# of days
3.	Use **anything else to get high** (like other illegal drugs, prescription or over-the-counter medications, and things that you sniff, huff, or vape)? Put "0" if none.	# of days

READ THESE INSTRUCTIONS BEFORE CONTINUING:

- **If you put "0" in ALL of the boxes above, ANSWER QUESTION 4, THEN STOP.**
- **If you put "1" or higher in ANY of the boxes above, ANSWER QUESTIONS 4-9.**

		No	Yes
4.	Have you ever ridden in a **CAR** driven by someone (including yourself) who was "high" or had been using alcohol or drugs?	☐	☐
5.	Do you ever use alcohol or drugs to **RELAX**, feel better about yourself, or fit in?	☐	☐
6.	Do you ever use alcohol or drugs while you are by yourself, or **ALONE**?	☐	☐
7.	Do you ever **FORGET** things you did while using alcohol or drugs?	☐	☐
8.	Do your **FAMILY** or **FRIENDS** ever tell you that you should cut down on your drinking or drug use?	☐	☐
9.	Have you ever gotten into **TROUBLE** while you were using alcohol or drugs?	☐	☐

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Initiate Treatment

- 85-90% adolescents visit a primary care physician annually
- Ongoing relationship
- Familiarity with referral process and local resources- ability to work with many facets of youth's world.
- Familiarity with care coordination- helpful to have team to help keep track of teens. Frequent gentle follow ups.
- Familiarity with uncertainty- Keep door open (consider dismissal policies with teens there are many challenges for them coming to clinic.)

Brief Intervention / Initiate Treatment

- Motivational Interviewing
- Avoid Shame Judgement
- Harm Reduction
- Build team
- Address Mental Health
- Keep Engaged
- Work with family if possible

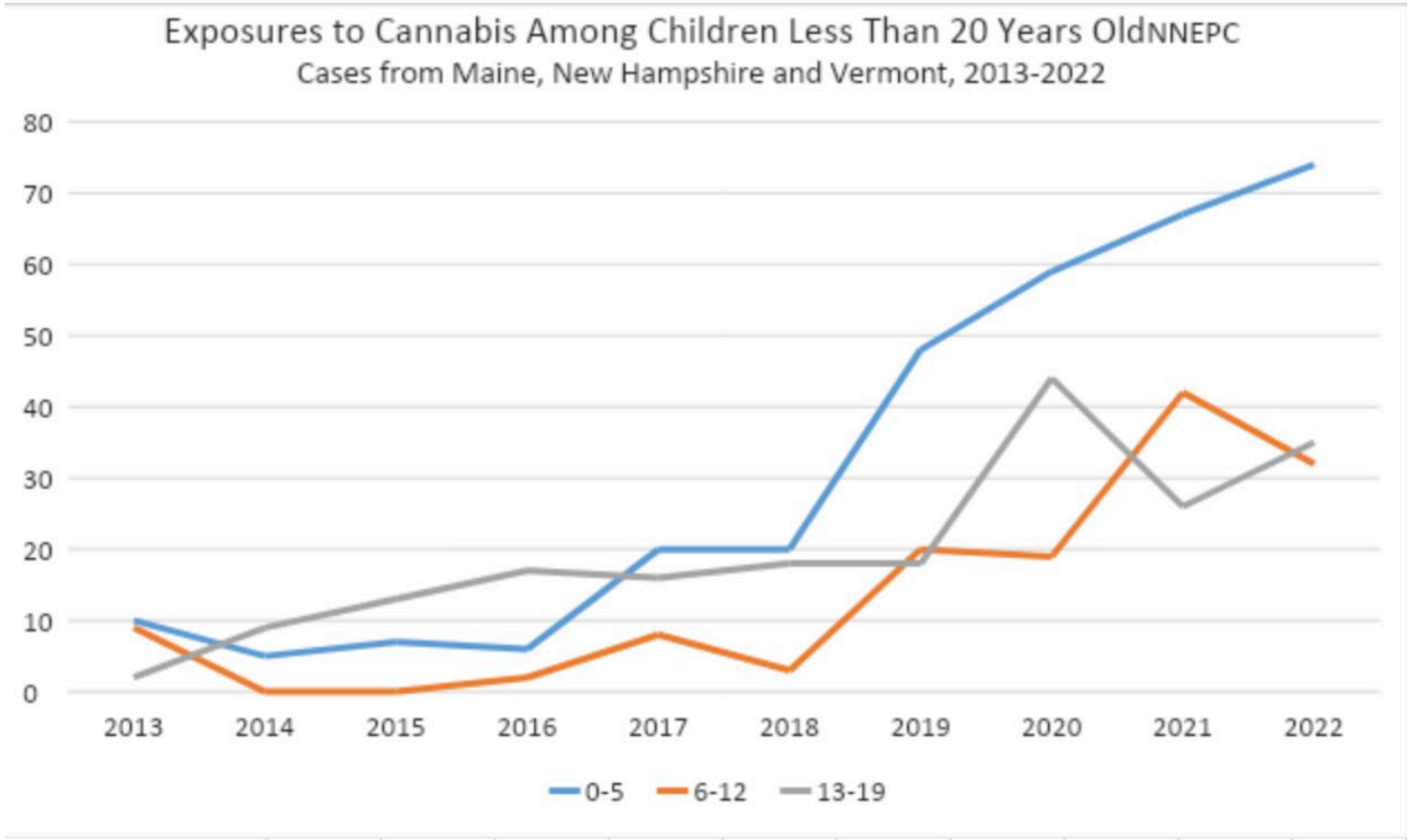
- Parental Attitudes/Use
- Parental Monitoring
- Peer Attitudes
- School Engagement
- Engagement in Extracurricular Activities

Donnelly J, Young M, Marshall B, Hecht ML, Saldutti E. Public Health Implications of Cannabis Legalization: An Exploration of Adolescent Use and Evidence-Based Interventions. Int J Environ Res Public Health. 2022 Mar 11;19(6):3336. doi: 10.3390/ijerph19063336. PMID: 35329023; PMCID: PMC8950733.

A few reminders about alcohol and marijuana

- Overall youth use has been steady, but some things have increased.

New England Poison Center



Risk of Addiction

- 1 in 6 teens who use will develop addiction
- Daily adolescent users have much higher risk 25 to 50%
- Onset of use in adolescence versus adulthood increases risk by2 to 4 times of dependence in 2 years after initiation.
- Increases risk of other substance use.

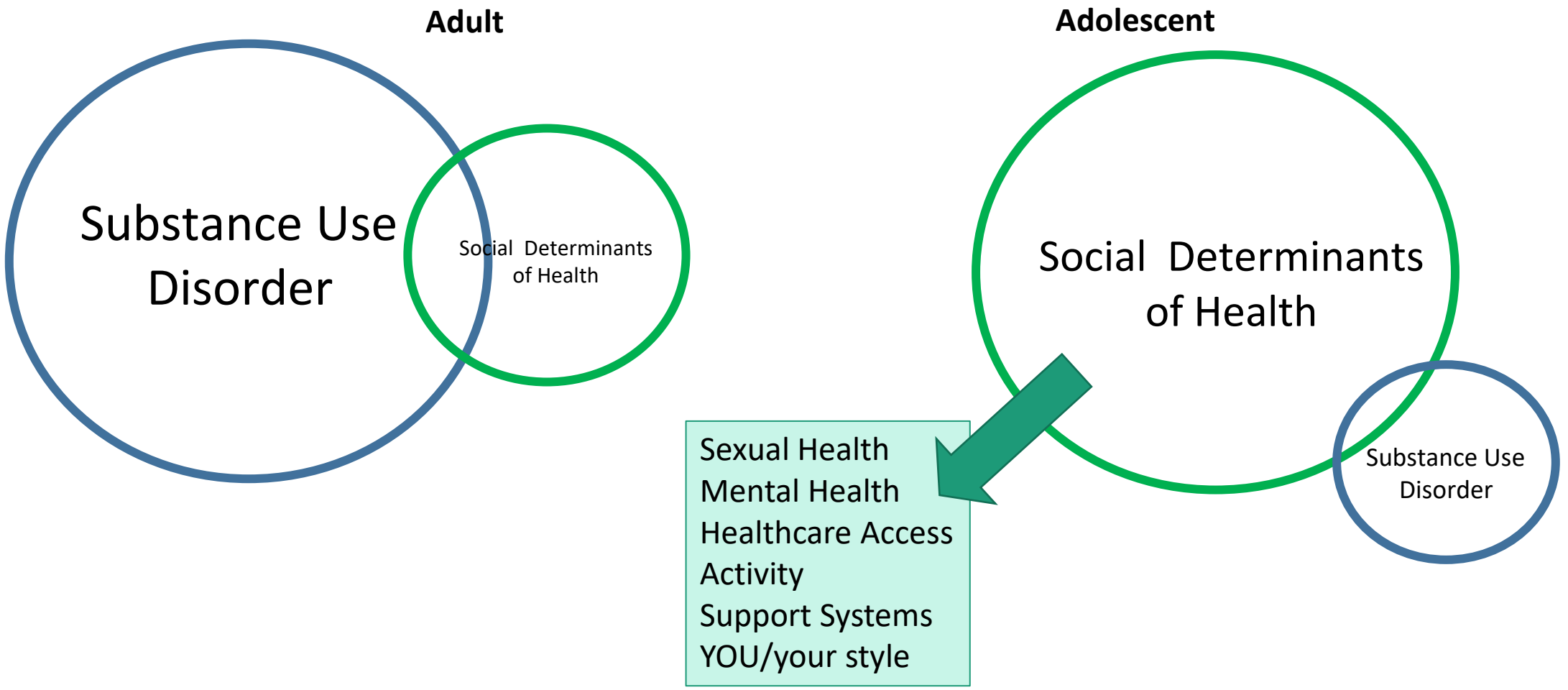
Volkow ND, Baler RD, Compton WM, Weiss SR. Adverse health effects of marijuana use. N Engl J Med. 2014 Jun 5;370(23):2219-27. doi: 10.1056/NEJMra1402309. PMID: 24897085; PMCID: PMC4827335.

FASD

- Estimates as high as 1 in 20 in first grade youth
- 10% have true physical findings
- Almost half of all pregnancies in US unplanned
- Alcohol is neurotoxin – no amount is considered safe during pregnancy
- Children with FASD at risk for a host of challenges over a lifetime as they have issues with memory, learning thinking and behavior and higher risk of interaction with criminal justice system and an increased risk of suicide.
- Entirely preventable/ Evidence based interventions for those with diagnosis
- More prevalent in foster and adoptive care populations

May PA, Chambers CD, Kalberg WO, et al. Prevalence of Fetal Alcohol Spectrum Disorders in 4 US Communities. *JAMA.* 2018;319(5):474–482. doi:10.1001/jama.2017.21896

Big Picture – The Most Important Part of Tx



What are you actually treating for?

MARIJUANA USE - COMMON

OPIATE ADDICTION / POLY PHARMACY

Differences between adults and adolescents: nuances matter

SEXUAL HEALTH

LARCs are preferred

(IUD, Implant, Depo)

Same day med start.

Many start sex prior to protection.

Screen for STI's

Chalmydia (common)

Gonorrhea exists

Syphyllis is back

HIV and Hep too

HIV Prophylaxis is IN

Truvada

Be Gender Friendly

Differences between adults and adolescents: nuances matter

MENTAL HEALTH

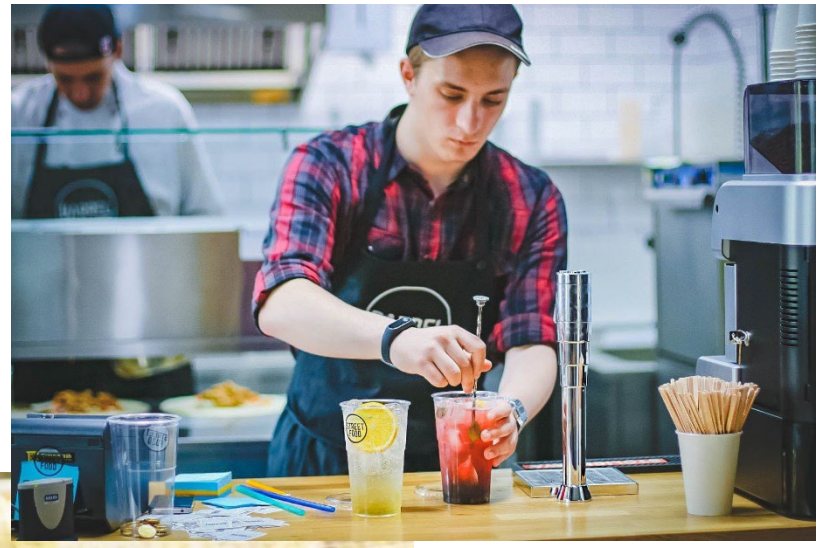
- Be able to diagnose and treat Depression, Anxiety, ADHD
- Be prepared for bipolar, personality disorder
- Coordinating the appointments and warm handoffs are essential

Understand ACCESS

- Call, Write, or TEXT ???
- Reminder contact day before and day of
- Same day appointments?
- Transportation – UBER vouchers?

Differences between adults and adolescents: nuances matter

- Need to understand and attend to:
  - **An ACTIVITY**
  - School?
  - Job?
  - Something/anything?



Nuances matter:

SUPPORT SYSTEMS

- Family
- Coach
- Relative
- Peers?

- Confidentiality

- Need to understand and attend to:

Your STYLE

AYA want Straight Talk

Non-Judgemental

Empathy Counts. Express It.

Confidentiality

They lead.
You guide.
(nudge?)
Talk in Questions

Acceptance

- Your age and clothes don't matter.

Diagnostic Differences

- Tolerance – teens may develop tolerance more quickly, esp when moving from experimentation to more regular use.
- Risky behavior – Adults are more likely to engage in hazardous activities (in part because teens may have less access to those activities).
- Withdrawal – Adults are more likely to have withdrawal, as those types of symptoms don't appear for years after starting drugs. Lack of withdrawal does not rule out the dx in adolescents.
- Cravings – how they present in teenagers may be vague.

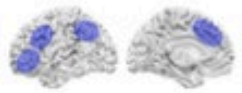
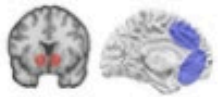
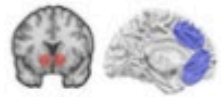
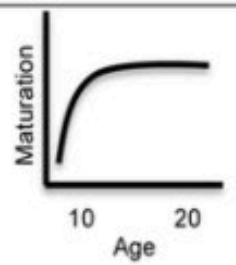
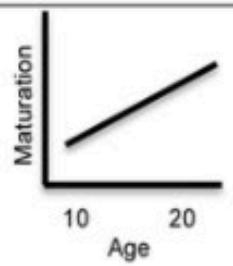
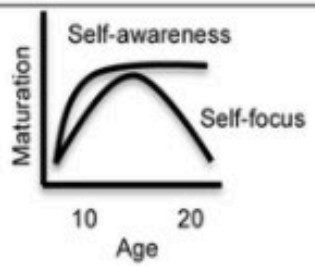
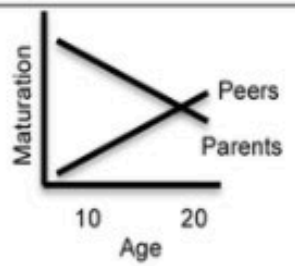
Treatment Differences

- More denial in teens. They don’t recognize a problem in most cases. Many treatments are involuntary.

Predictors of Successful Treatment

- Adults
  - Employment
  - Duration of use
  - Parenthood
  - Financial stability
  - Intensity of Use
  - Mental health
  - Community engagement
  - Marriage
- Teens
  - Educational engagement
  - Positive Peer Influences
  - Addressing the underlying cause
  - Positive Family Influences
  - Pro-social leisure activities
  - Family integration

Treatment in the Context of Maturation

	Puberty	Cognitive change	Sense of self	Social landscape
Brain systems	Multi-system			
Age pattern				
Treatment relevance	-Identifying prosocial sources of novelty seeking to replace substances	-Enhanced ability to use cognitive strategies -Recognition that cognitive skills are context-dependent	-Harness increased desire for autonomy -Examine role of introspection in substance use	-Identify prosocial sources of reward -Seek out positive peer influences -Acknowledge continued role of parents on behavior

Silvers JA, Squeglia LM, Rømer Thomsen K, Hudson KA, Feldstein Ewing SW. Hunting for What Works: Adolescents in Addiction Treatment. Alcohol Clin Exp Res. 2019 Apr;43(4):578-592. doi: 10.1111/acer.13984. Epub 2019 Mar 15. PMID: 30779445; PMCID: PMC6443447.

Drug Treatment Differences

Alcohol

Rare DT's

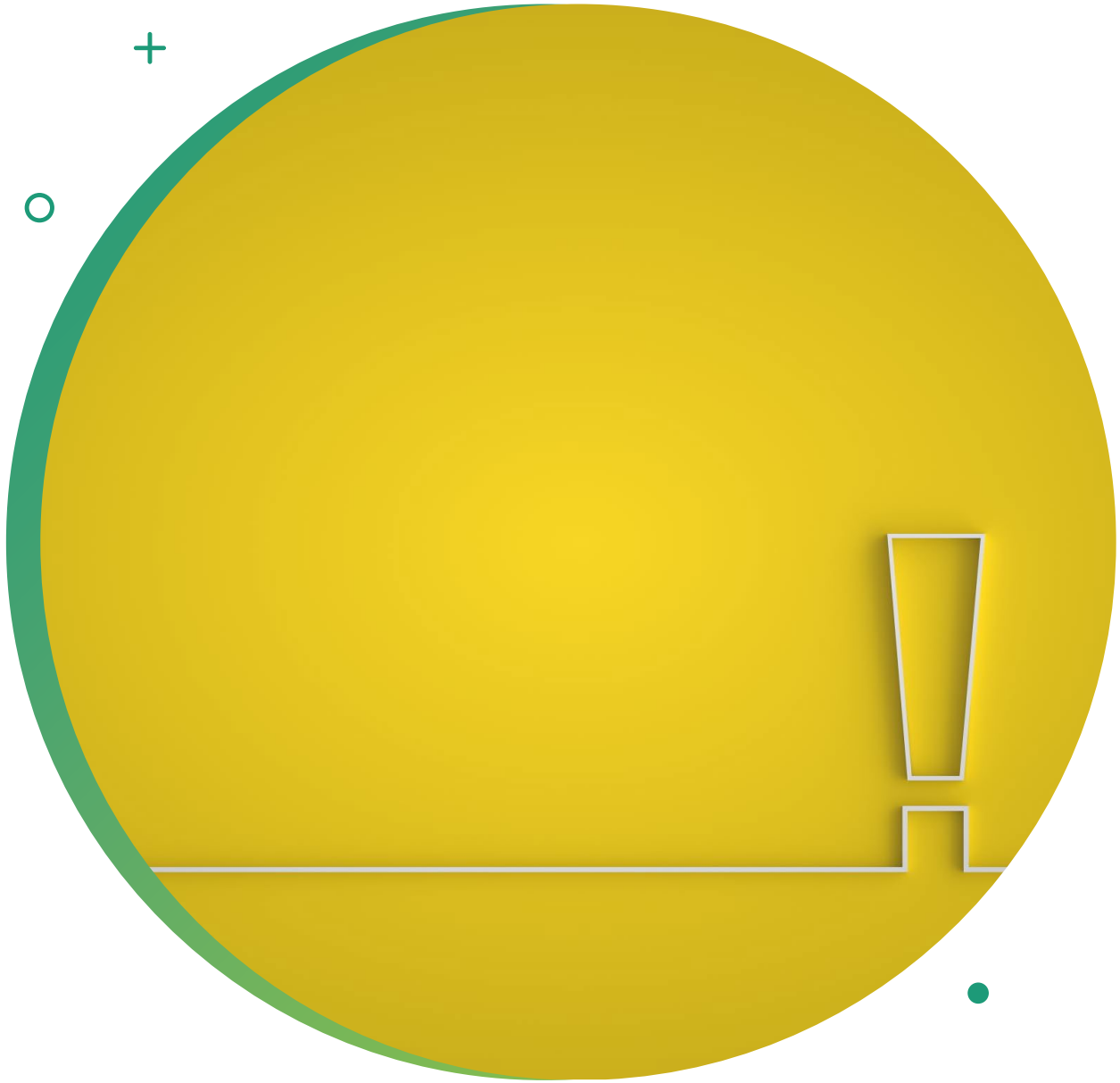
Opioids

Lower Threshold for use.

Potentially lower doses.

Marijuana

NAC?



Take Away

Teens are different from adults

1. Their body is effected differently
2. Their environment is their trigger
3. Assessment and Treatments need to be comprehensive

   (Sexual Health, Mental Health)

1. How you talk and work with teens is more important then the substance use itself

Resources

- TREATME
- Partnership to End Addiction
- Proof Alliance
- FASD MAINE
- Maine Pediatric and Behavioral Health Partnership Program
- Youth Peer Support Statewide Network | Maine Behavioral Healthcare | Maine (mainehealth.org)
- Regional Care Teams
- Partnership to End Addiction
- Talk They Hear You
- Online Parent CRAFT TRAINING
- https://shifttheinfluence.org/

References

- D' Souza-Li L, Harris SK. The future of screening, brief intervention and referral to treatment in adolescent primary care: research directions and dissemination challenges. *Curr Opin Pediatr*. 2016 Aug;28(4):434–440
- Levy SJ, Williams JF, AAP Committee on Substance Use and Prevention. Substance use screening, brief intervention, and referral to treatment. *Pediatrics*. 2016;138(1):e20161210
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