Why do they do that???
Everything you need to know about adolescent and emerging adult substance use

Sarah M. Bagley, MD, MSc

Assistant Professor of Medicine and Pediatrics

Medical Director, CATALYST Program

Grayken Center for Addiction

Boston University School of Medicine/Boston Medical Center

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Disclosure Information

- Sarah M. Bagley, M.D., MSc.

Nothing to disclose

Learning Objectives

1. Describe the current trends in adolescent and young adult substance use and treatment

2. Discuss the effects of childhood stress on development

3. Identify 2 barriers to evidence-based addiction care for adolescents and young adults

Case 1: Prevention

- 17 yo male with mother with history of HIV and substance use, referred from mother's primary care provider
- Referred to CATALYST program as a way to prevent development of problematic substance use
- Meets with social worker for therapy and adolescent provider primary care and prevention

Early onset matters

Take home: delayed onset is protective!

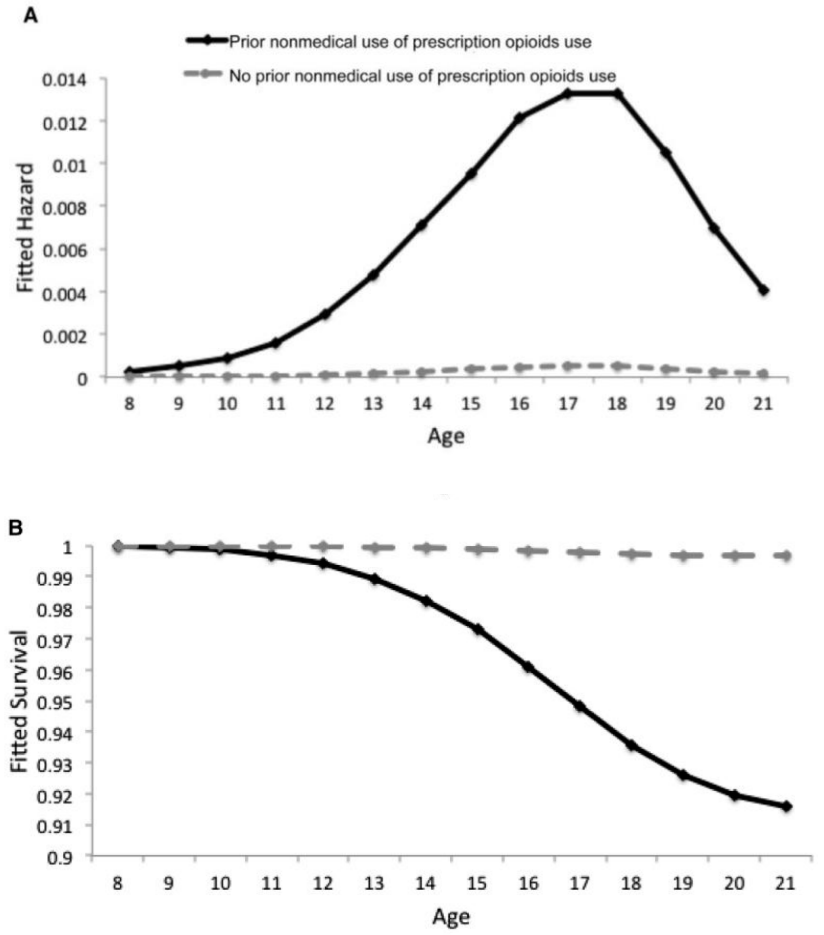
Table 3. Associations Between Age of Initiation to Alcohol and Total Number of Drinks Consumed at Wave 5/Grade 11—Unadjusted and Adjusted Incidence Rate Ratios (IRRs)[a]

	IRRs and 99% CI for number of drinks in wave 5 (n = 839)			
	Unadjusted IRR (99% CI)	p-Value	Adjusted IRR (99% CI)	p-Value
Age of initiation				
13 or under	1.00		1.00	
14 to 15	0.57 (0.42 to 0.78)	<0.001	0.46 (0.33 to 0.63)	<0.001
16 to 17	0.24 (0.18 to 0.33)	<0.001	0.17 (0.13 to 0.24)	<0.001

[a]A conservative type I error threshold of 0.01 was employed in adjusted models.

Aiken et al, 2018

Early onset matters- for more than alcohol

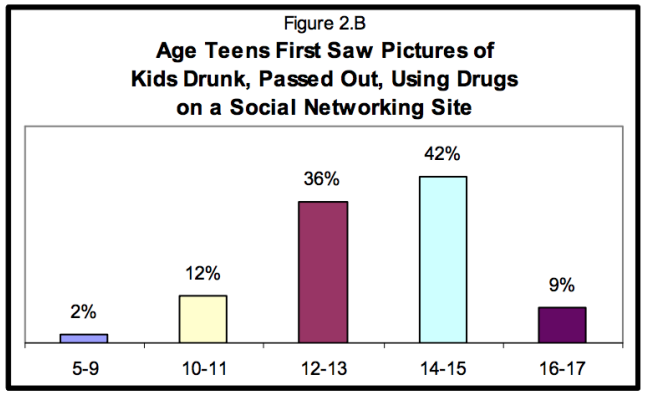


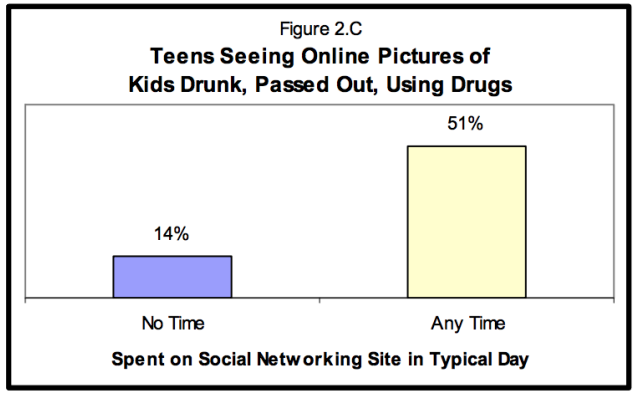
2 in 3 individuals in opioid treatment report first use before **age 25**, and **1 in 3** report first use before **age 18…**

Cerda et al, 2016
Treatment Episode Data Set (TEDS): 2013. SAMHSA, 2015

Kids these days….

New challenges



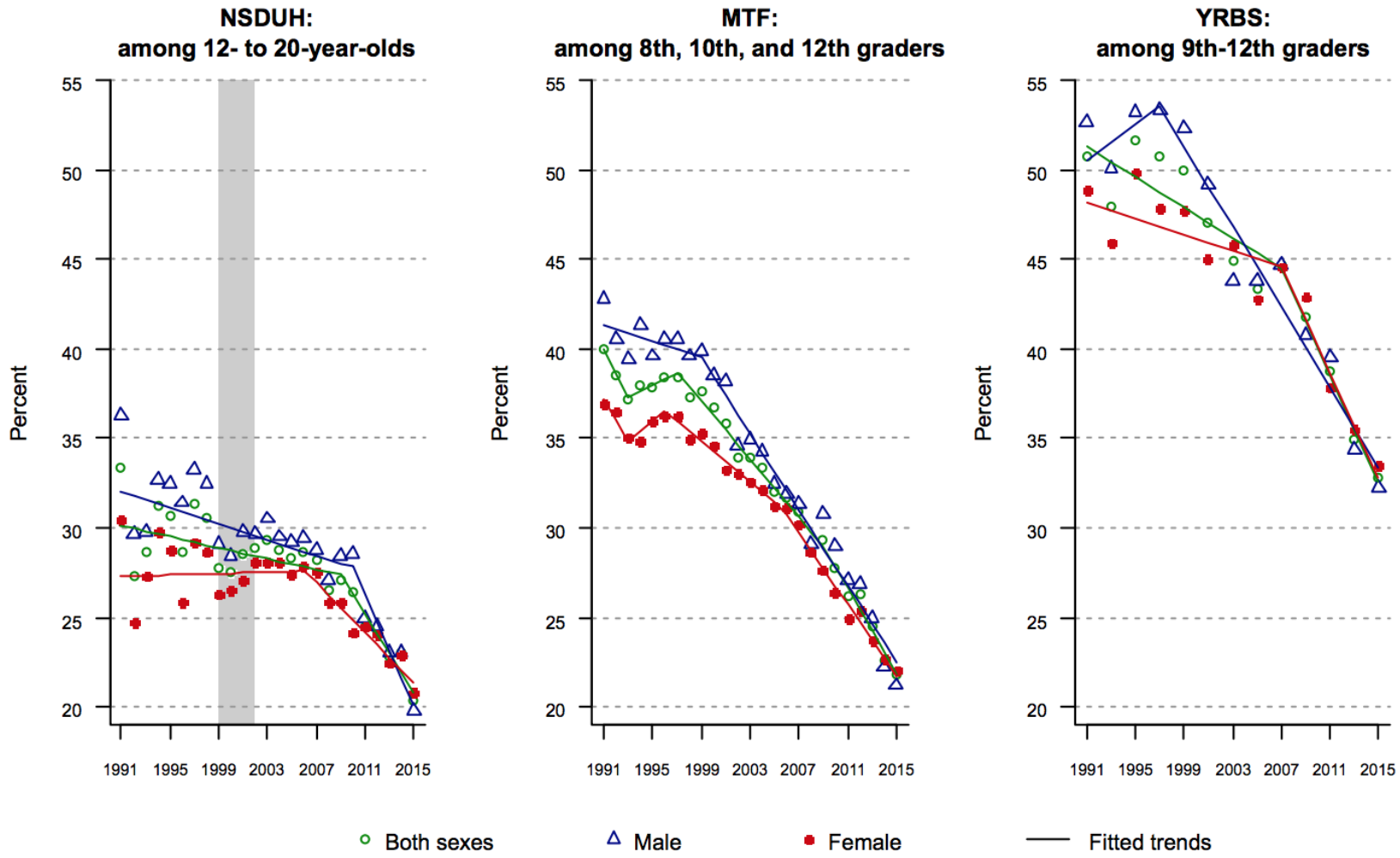


https://www.gse.harvard.edu/news/uk/17/12/social-media-and-teen-anxiety

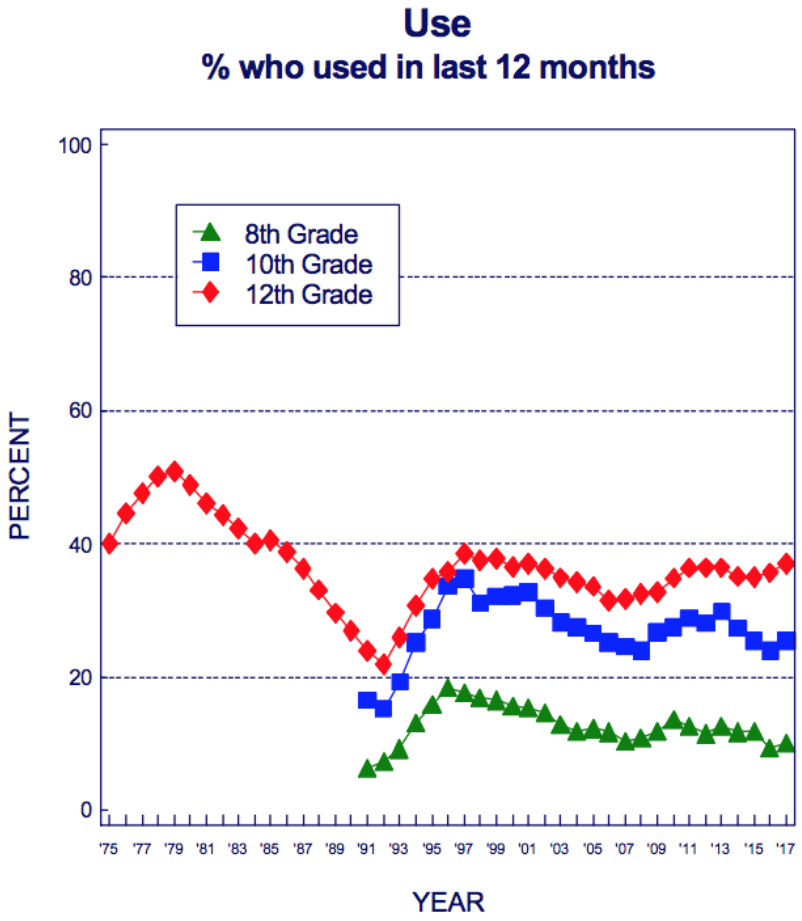
National Survey of American Attitudes on Substance Abuse, 2011

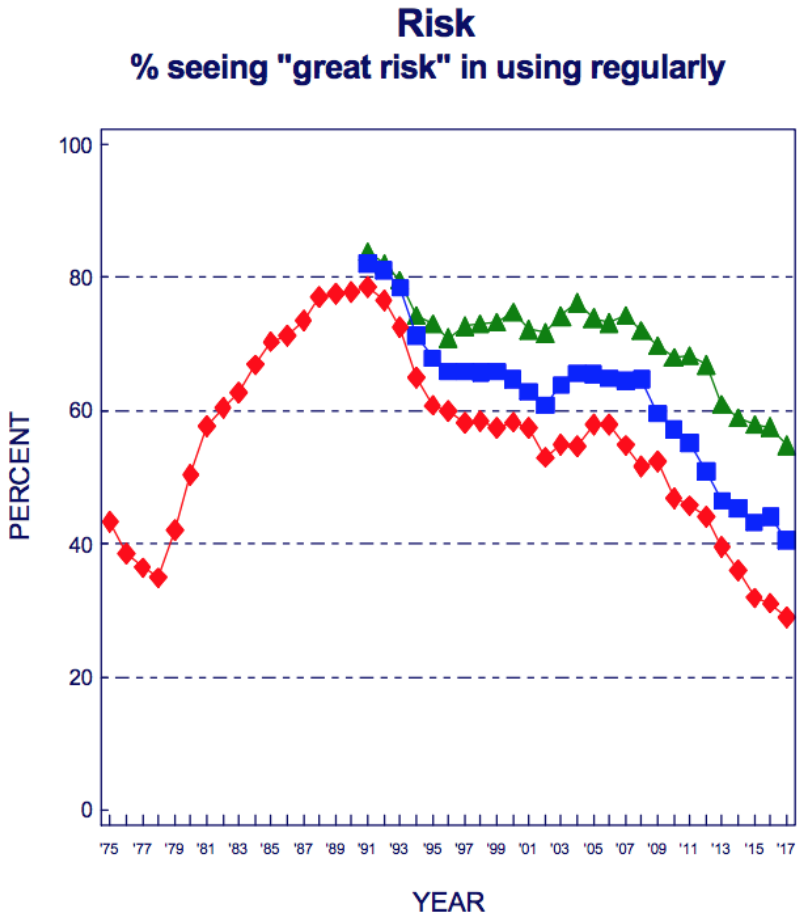
Trends in alcohol use among teens

Figure 1-1. Prevalence of drinking in the past 30 days, by sex, 1991–2015.



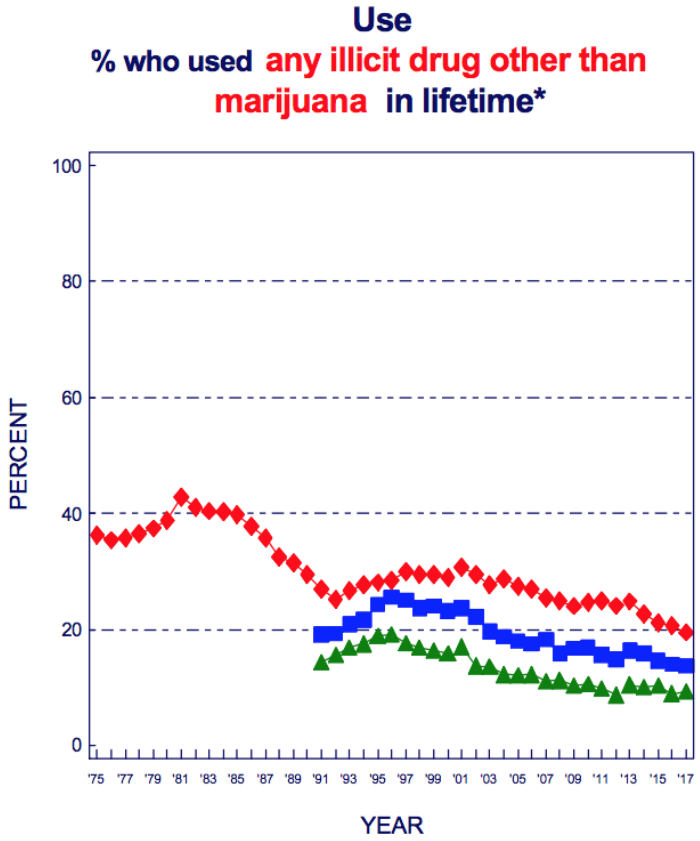
Trends in marijuana use among teens

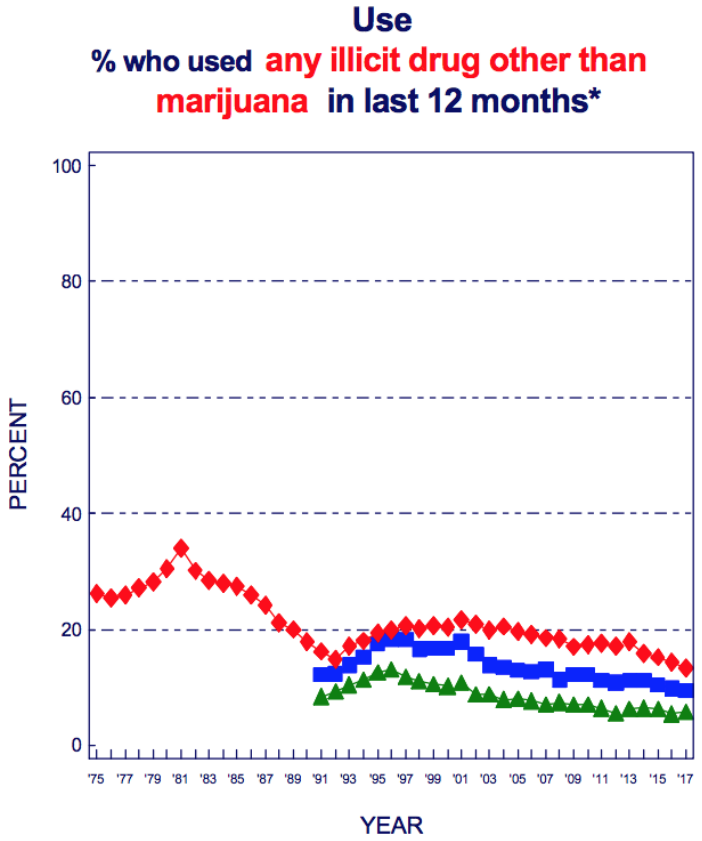




Monitoring the Future, 2017

Trends in other substance use

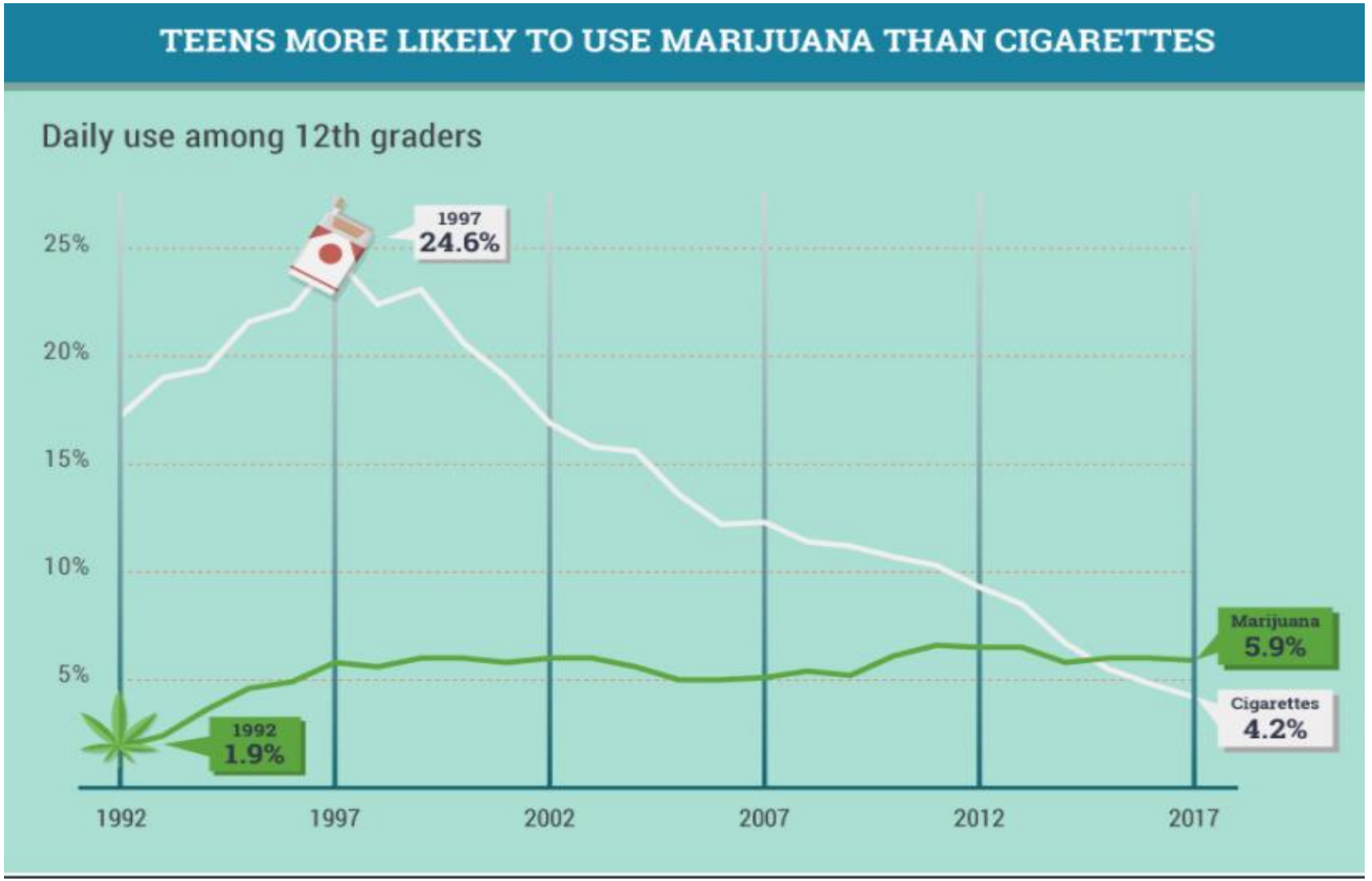




Monitoring the Future, 2017

Cigarettes vs Marijuana

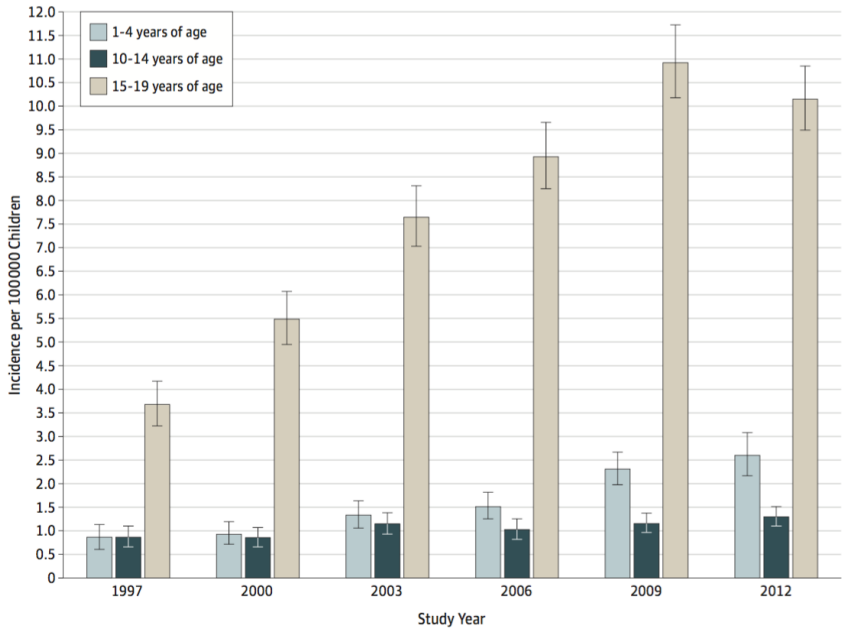
National Institute on Drug Abuse; National Institutes of Health; U.S. Department of Health and Human Services. Monitoring the Future Survey (2017)



Slide courtesy of Nicholas Chadi

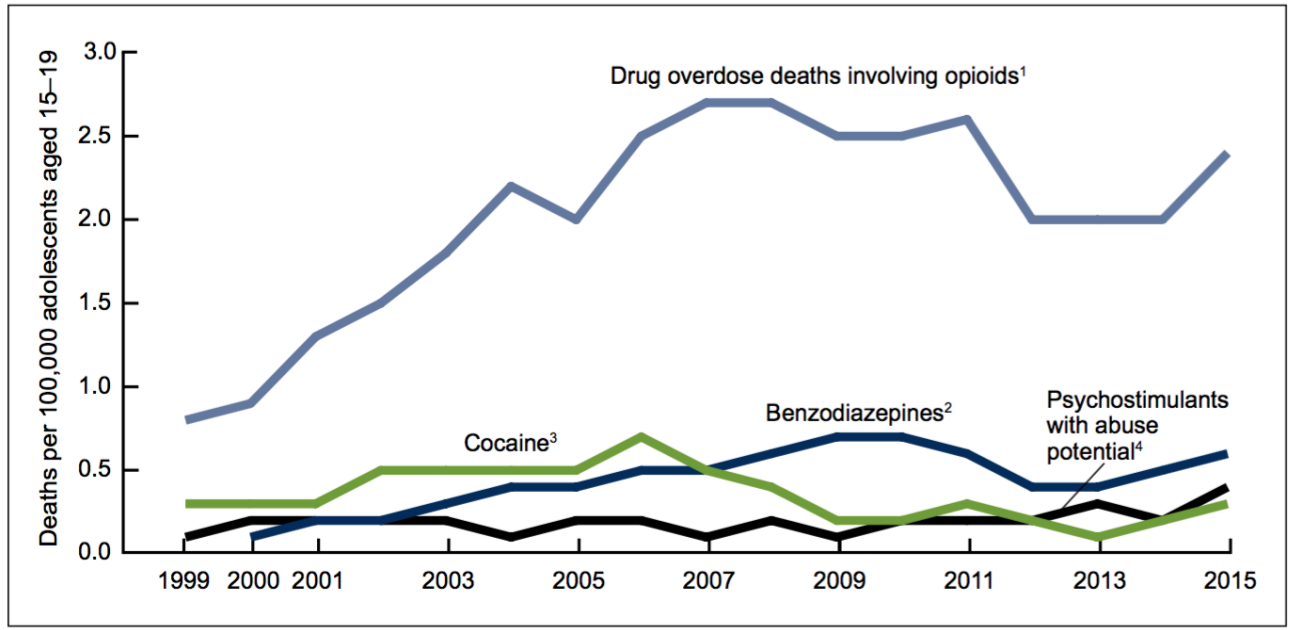
Hospitalizations and overdoses among teens increasing

Figure 1. Weighted National Estimates of Temporal Trends in Hospitalizations for Prescription Opioid Poisonings Stratified by Age Category



Error bars indicate 95% CI
trend, <.001 for all ages). E
for 5- to 9-year-olds do not meet the
criteria for statistical reliability and
thus are not shown.

Figure 3. Drug overdose death rates for adolescents aged 15–19, by type of drug involved: United States, 1999–2015



Gauthier et al. *JAMA Peds*, 2016

Curtin SC, et al. *NCHS Data Brief*, 2017.

Alcohol use among young adults

Figure 35. Alcohol Use Disorder in the Past Year among People Aged 12 or Older, by Age Group: Percentages, 2002-2016

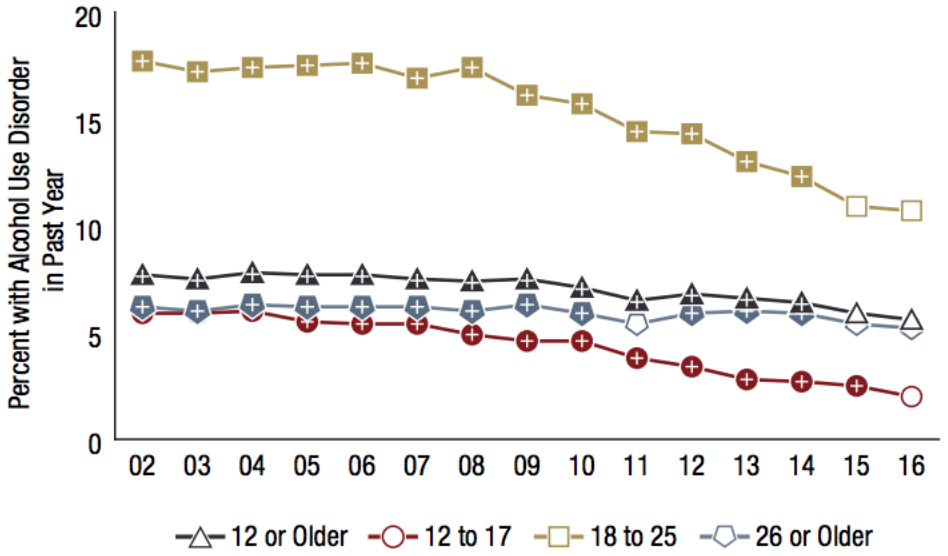
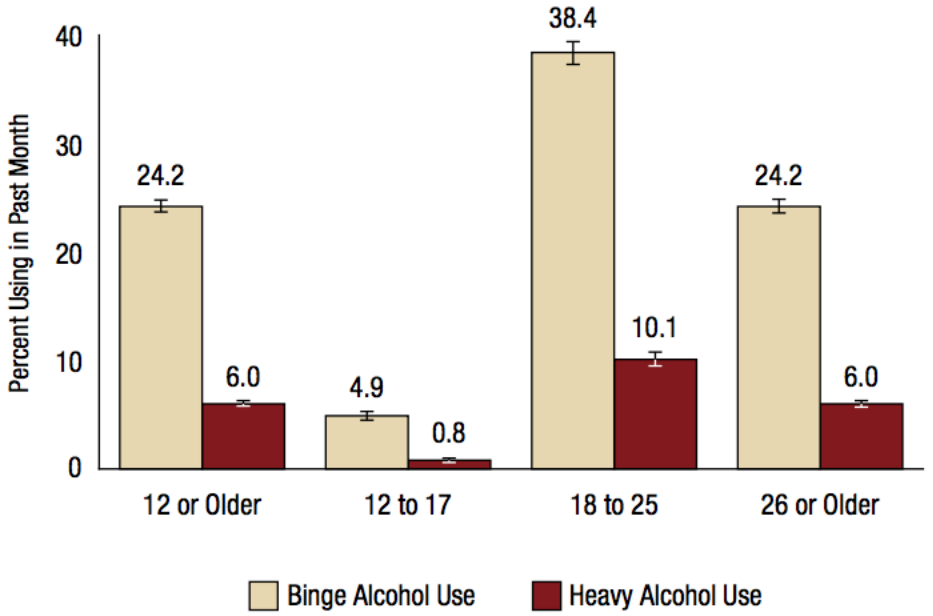


Figure 11. Past Month Binge and Heavy Alcohol Use among People Aged 12 or Older, by Age Group: Percentages, 2016



NSDUH, 2017

Substance use among young adults

Figure 17. Past Month Marijuana Use among People Aged 12 or Older, by Age Group: Percentages, 2002-2016

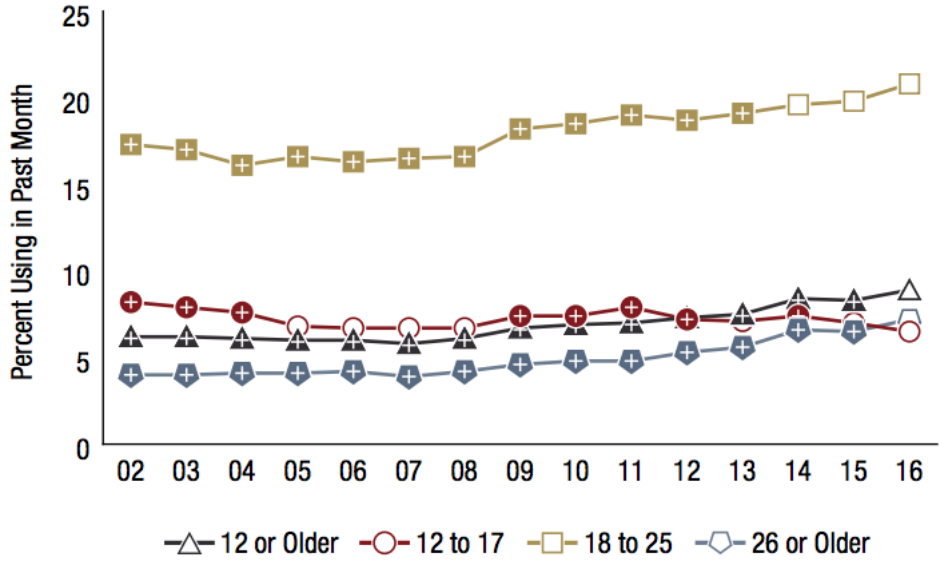
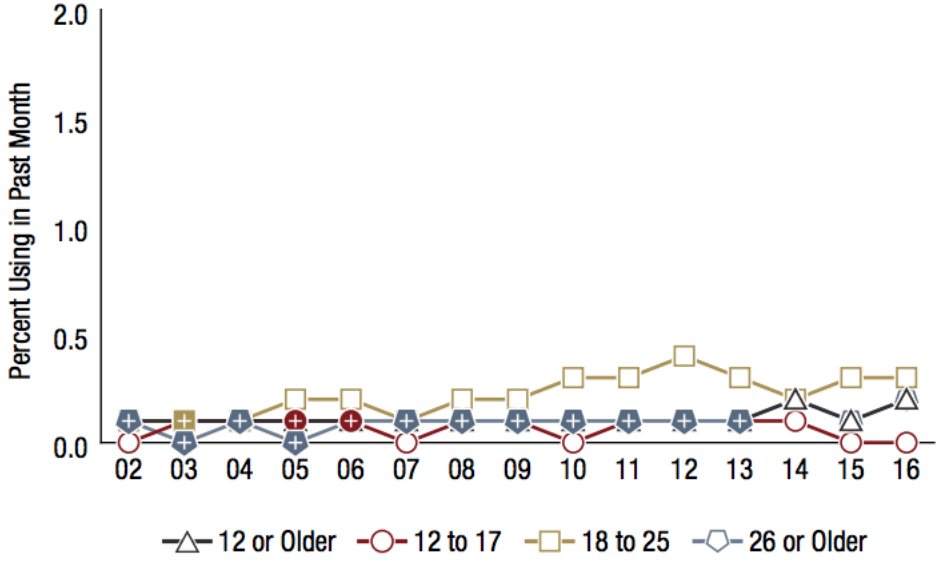


Figure 23. Past Month Heroin Use among People Aged 12 or Older, by Age Group: Percentages, 2002-2016



NSDUH, 2017

Trends in overdose deaths

TABLE 2. Annual number and age-adjusted rate of drug overdose deaths* involving heroin† and synthetic opioids other than methadone,§,¶ by sex, age, race and Hispanic origin, urbanization level,†† and selected states§§ — United States, 2015 and 2016**

	Heroin						Synthetic opioids other than methadone					
	2015		2016		Change from 2015 to 2016¶¶		2015		2016		Change from 2015 to 2016¶¶	
Decedent characteristic	No.	Rate	No.	Rate	Absolute rate change	% Change in rate	No.	Rate	No.	Rate	Absolute rate change	% Change in rate
All	**12,989**	**4.1**	**15,469**	**4.9**	**0.8*** **	**19.5*** **	**9,580**	**3.1**	**19,413**	**6.2**	**3.1*** **	**100.0*** **
Sex												
Male	9,881	6.3	11,752	7.5	1.2***	19.0***	6,560	4.2	13,835	8.9	4.7***	111.9***
Female	3,108	2.0	3,717	2.4	0.4***	20.0***	3,020	1.9	5,578	3.5	1.6***	84.2***
Age group (yrs)												
0–14	—†††	—†††	—†††	—†††	—†††	—†††	14	—†††	18	—†††	—†††	—†††
15–24	1,649	3.8	1,728	4.0	0.2	5.3	999	2.3	1,958	4.5	2.2***	95.7***
25–34	4,292	9.7	5,051	11.3	1.6***	16.5***	2,896	6.6	6,094	13.6	7.0***	106.1***
35–44	3,012	7.4	3,625	9.0	1.6***	21.6***	2,289	5.6	4,825	11.9	6.3***	112.5***
45–54	2,439	5.6	3,009	7.0	1.4***	25.0***	1,982	4.6	3,872	9.1	4.5***	97.8***
55–64	1,407	3.4	1,777	4.3	0.9***	26.5***	1,167	2.9	2,238	5.4	2.5***	86.2***
≥65	184	0.4	275	0.6	0.2***	50.0***	232	0.5	405	0.8	0.3***	60.0***

MMWR, 2018

Case 2: Engagement

21 yo male with multiple presentations to the ED for cocaine associated chest pain and abscesses (starting in 3/2017), each time, our team called to see him

Appointments are made but not kept – he expressed extreme remorse for his lack of adherence

Mid July 2017 arrives at appointment with me and SW

Social: homeless, no family supports, gang involvement in the past, unable to name one positive support in his life

Case continued

Childhood: abandoned as a infant, has a foster family with whom he has severed all ties, multiple experiences of physical, sexual, and emotional abuse

RESULT: severely traumatized, unable to organize thoughts, reacts violently to benign stimuli,

Example: unable to get medications at pharmacy, interaction with security in emergency department

Case continued

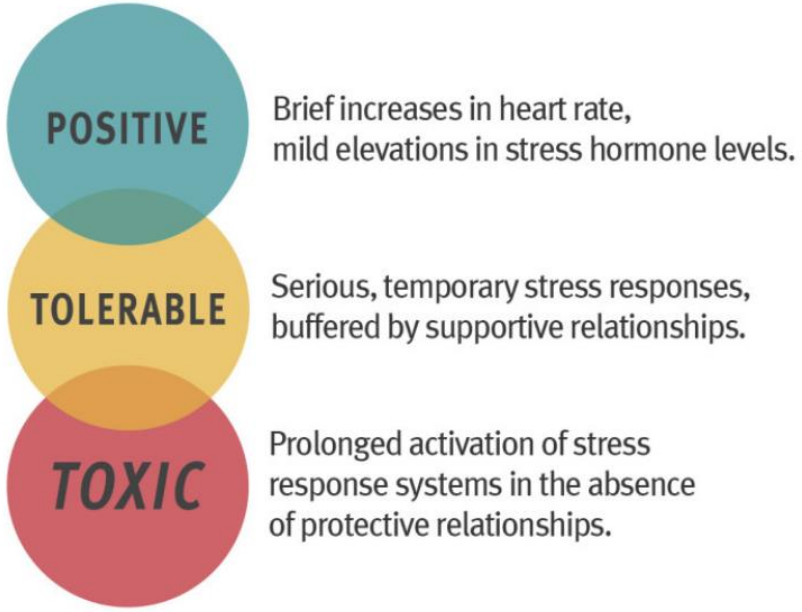
- How is his history going to play a role in both his presentation and how we need to think about a treatment plan for him?

Why adolescents and emerging adults are hard to engage

What is toxic stress?

- We often talk about how our patients development seems as though it was arrested
- Can be two reasons for this- (1) substance use (2) effects of toxic stress/trauma that many of our patients have experienced
- This has a direct impact on our interactions with our patients- even when caring for adults

What does history of toxic stress mean for our treatment plans?



In clinic: consistent behavior and treatment plans, ensure that entire clinic staff understands the challenges and responses

Compassion is key- behavior not intentionally “manipulative”

Life skills and training that might need more tailored support- for example help with resumes, looking for jobs, taxes, finding housing

May need to find classes that can specifically address these concerns and can help with skill development

https://developingchild.harvard.edu/science/key-concepts/toxic-stress/

Trauma-informed approach

1. *Realizes* the widespread impact of trauma and understands potential paths for recovery;
2. *Recognizes* the signs and symptoms of trauma in clients, families, staff, and others involved with the system;
3. *Responds* by fully integrating knowledge about trauma into policies, procedures, and practices; and
4. Seeks to actively resist *re-traumatization*.

* Not the same as have specific interventions to address effects of trauma

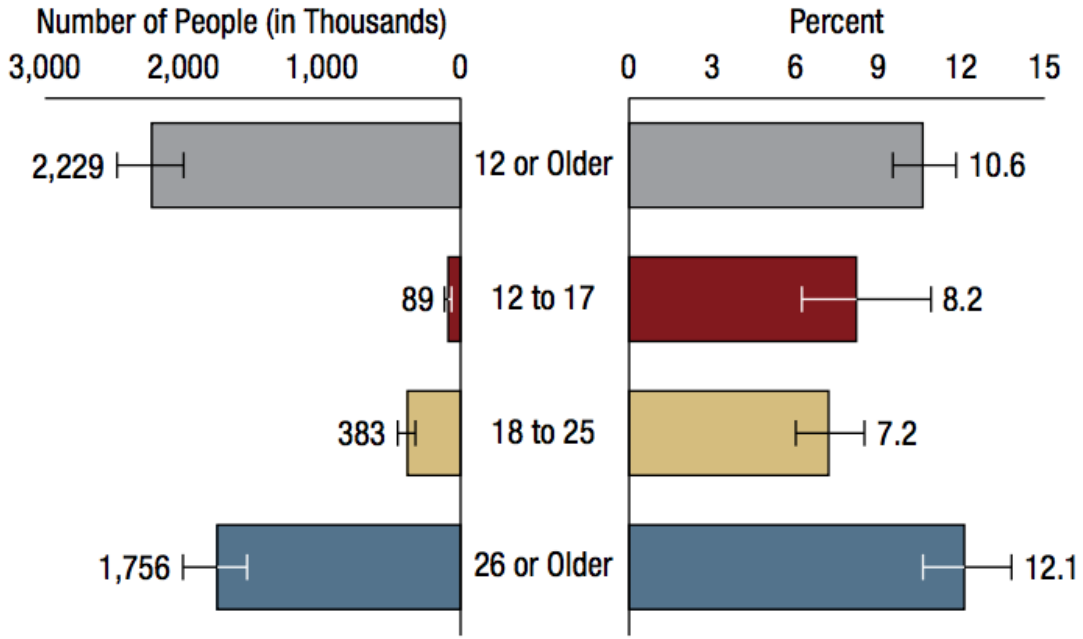
www.samhsa.gov

Case 3: Gaps in Treatment

- 20 year old female referred to us from the adolescent/emerging adult crisis stabilization program
- Has had multiple admissions related to opioid use and never offered medication treatment until this last admission
- Started on buprenorphine at program and we then see her for regular follow-up
- Despite some relapses, she explicitly says that medication treatment has made a huge impact on her ability to get sober

Adolescents and young adults have poor access to addiction care

Figure 48. Received Specialty Substance Use Treatment in the Past Year among People Aged 12 or Older Who Needed Substance Use Treatment in the Past Year, by Age Group: 2016



NSDUH, 2017

Should Youth Receive Meds…?

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

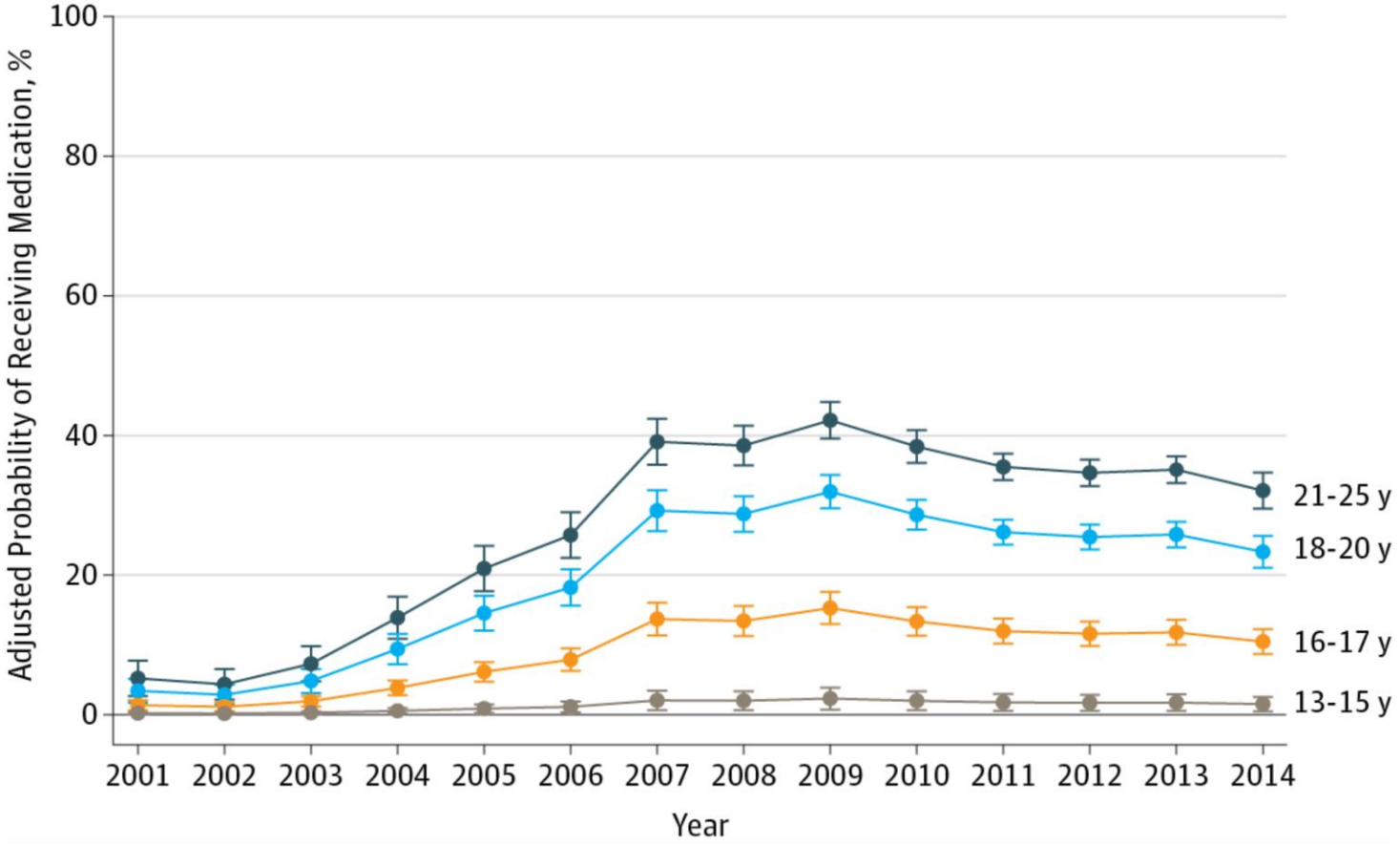
Medication-Assisted Treatment of Adolescents With Opioid Use Disorders

COMMITTEE ON SUBSTANCE USE AND PREVENTION

The AAP recommends that pediatricians consider offering medication-assisted treatment to their adolescent and young adult patients with severe opioid use disorders or discuss referrals to other providers for this service.

AAP Committee on Substance Use and Prevention, August 2016

Disparities in Access Based on Age



Hadland SE, et al. *JAMA Pediatr*, 2017;171(8):747-755.

Barriers and opportunities for care

- Stigma: significant misinformation about what medication treatment is and it's benefits
- Lack of training: only 1% of waivered providers identify as pediatricians
- Coordination of care: these cases are complicated- involve state agencies, families, children→ can be hard to ensure that a consistent plan is being offered and implemented

Summary

- Addressing substance use during adolescent and emerging adults years is critical
- Engagement is challenging but integration of a a trauma-informed care approach is key
- Treatment should be offered to all- regardless of age