Online Case-Based Learning Collaborative Series on Treating Opioid Use Disorder

OUD in Adolescents and Young Adults
May 29, 2024

FACULTY & DISCLOSURES

Name	Role	Financial Relationship Disclosures
Katy Basques, NP	Moderator & Faculty	No relevant financial relationships to disclose
Dr. Deanna Wilson, MD	Faculty	No relevant financial relationships to disclose

The content of this activity may include discussion of off label or investigative drug uses. The faculty is aware that is their responsibility to disclose this information.

AGENDA

Activity	Length
Orientation and Introductions	5 Minutes
Didactic Presentation	40 Minutes
Didactic Presentation: Facilitated Discussion	15 Minutes
Faculty Real-World Case Scenario & Discussion	15 Minutes
Learner Case Discussion and Q&A	10 Minutes
Closing Announcements	5 Minutes

HOUSEKEEPING

- This event is brought to you by the Providers Clinical Support System – Medications for Opioid Use Disorders (PCSS-MOUD). Content and discussions during this event are prohibited from promoting or selling products or services that serve professional or financial interests of any kind.
- The overarching goal of PCSS-MOUD is to increase healthcare professionals' knowledge, skills, and confidence in providing evidence-based practices in the prevention, treatment, recovery, and harm reduction of OUD.

PARTICIPATION GROUND RULES

1. Please participate!
2. Everyone's experiences differ: Assume the best intentions.
3. Monitor your participation: Everyone is accountable.
4. If someone says something that is not your understanding of the evidence, ask questions and do so respectfully..

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AVOID USE OF STIGMATIZING LANGUAGE

The language we choose shapes the way we treat our patients…	
Instead of:	You can say….
addict, junkie, substance abuser	Person with a substance use disorder
Addicted baby	Baby experiencing substance withdrawal
Alcoholic	Person with alcohol use disorder
Dirty vs clean urine	Positive or negative, detected or not detected
Binge	Heavy drinking episode
Detoxification	Withdrawal management, withdrawal
Relapse	Use, return to use, recurrence of symptoms or disorder
substance abuse	Use (or specify low-risk or unhealthy substance use)
Substitution, replacement, Medication assisted treatment	Opioid agonist treatment, medication treatment

Saitz, R., Miller, S. C., Fiellin, D. A., & Rosenthal, R. N. (2020). Recommended Use of Terminology in Addiction Medicine

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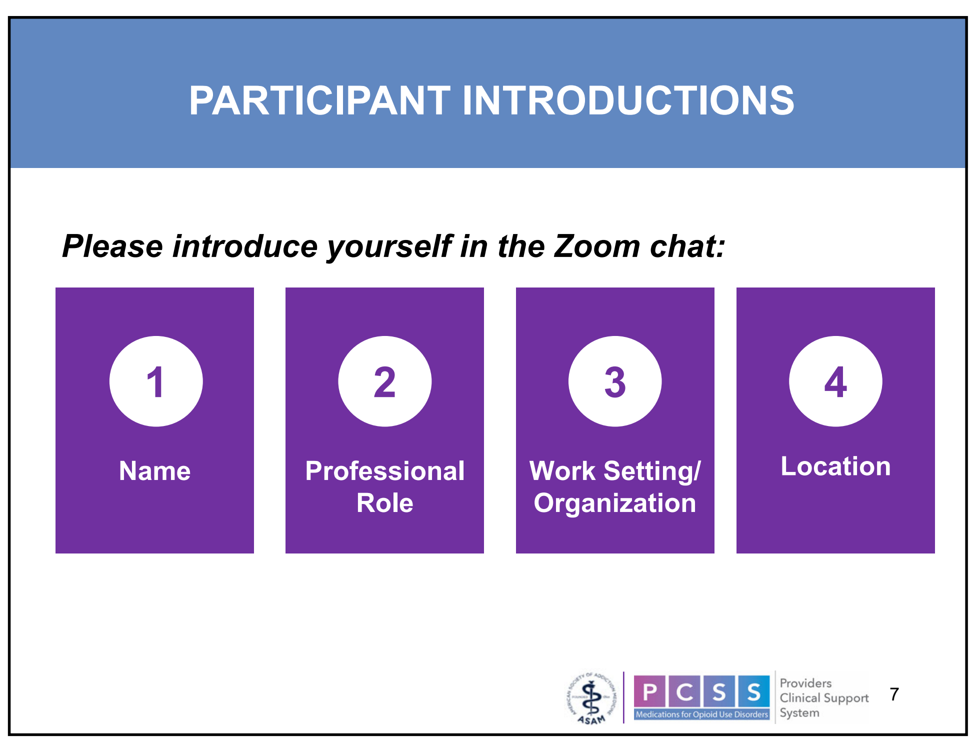

Opioid use and Opioid Use Disorder in Adolescents and Young Adults

Deanna Wilson, MD, MPH

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EDUCATIONAL OBJECTIVES

- At the conclusion of this activity participants should be able to:
  - Describe the epidemiology of opioid use and overdose in adolescents and young adults.
  - Examine harm reduction strategies to reduce opioid-related harms in young people.
  - List medications to treat opioid use disorder in youth and understand indications for their use.

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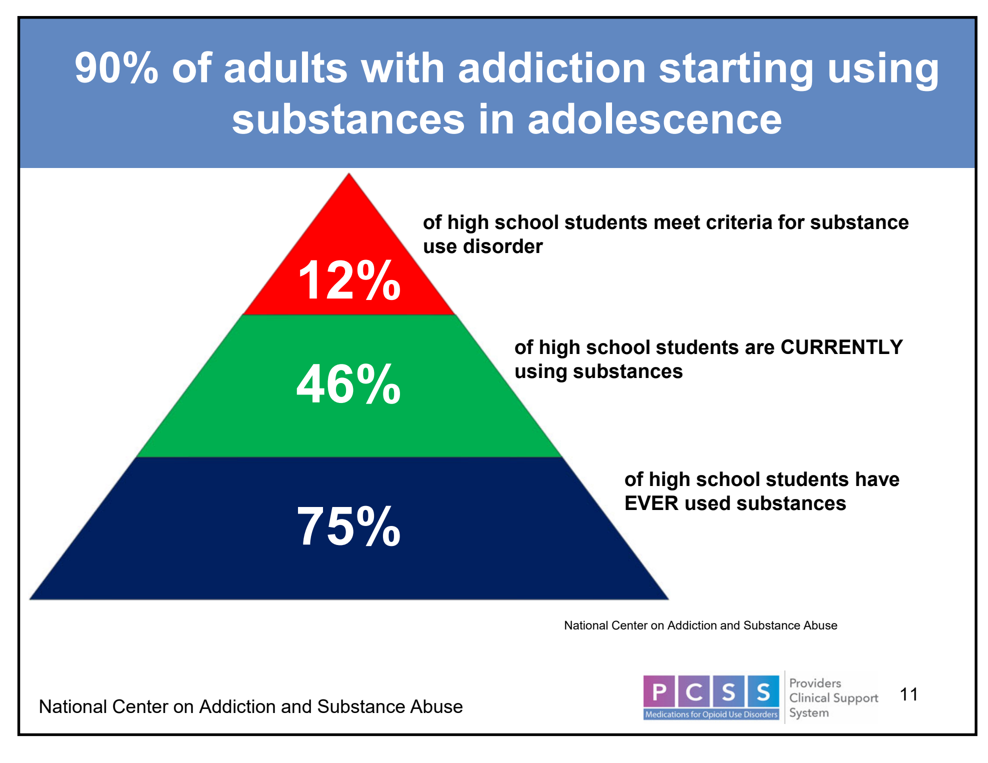

Substance use is common, SUD is less

Age category	Past Year Alcohol	AUD in Past year	Past Year Illicit Drug	SUD (drugs) in past year
12-17	17.8	3.4	14.1	6.8
18-25	67.1	15.0	38.0	16.3

Data from the 2021 *National Survey of Drug Use and Health (SAMHSA).*

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Substance use disorder at 18 predicts outcomes later in life

Table 3. Multivariate Logistic Regression Results: Adult (Ages 35-50 Years) Prescription Drug Use, Misuse, and Substance Use Disorder Symptoms Adjusting for Covariates[a] (continued)

	AOR (95% CI)		
Variable	Prescription drug use	Past-year PDM	≥2 AUD symptoms
SUD	Prescription drug use	Past-year PDM	≥2 SUD symptoms
Participants, No.	2867	2866	2867
SUD at age 18 y, symptoms			
No symptoms	1 [Reference]	1 [Reference]	1 [Reference]
1	1.10 (0.71-1.70)	1.01 (.671-1.52)	1.24 (0.93-1.67)
2-3	1.24 (0.94-1.65)	1.31 (.959-1.80)	1.89 (1.51-2.38)
4-5	1.56 (1.06-2.32)	2.08 (1.41-3.06)	2.16 (1.63-2.87)
≥6	1.55 (1.11-2.16)	1.97 (1.39-2.80)	2.62 (2.00-3.43)

McCabe SE, et al. *JAMA Netw Open*, 2022.

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Young people are developmentally vulnerable

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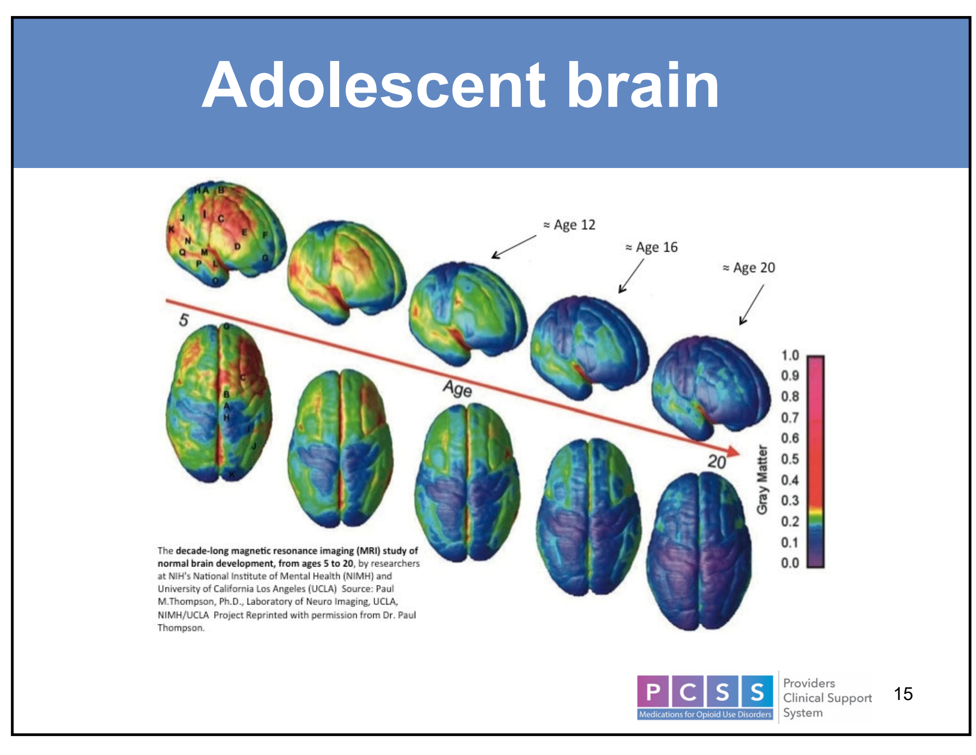
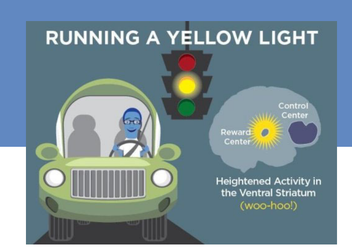
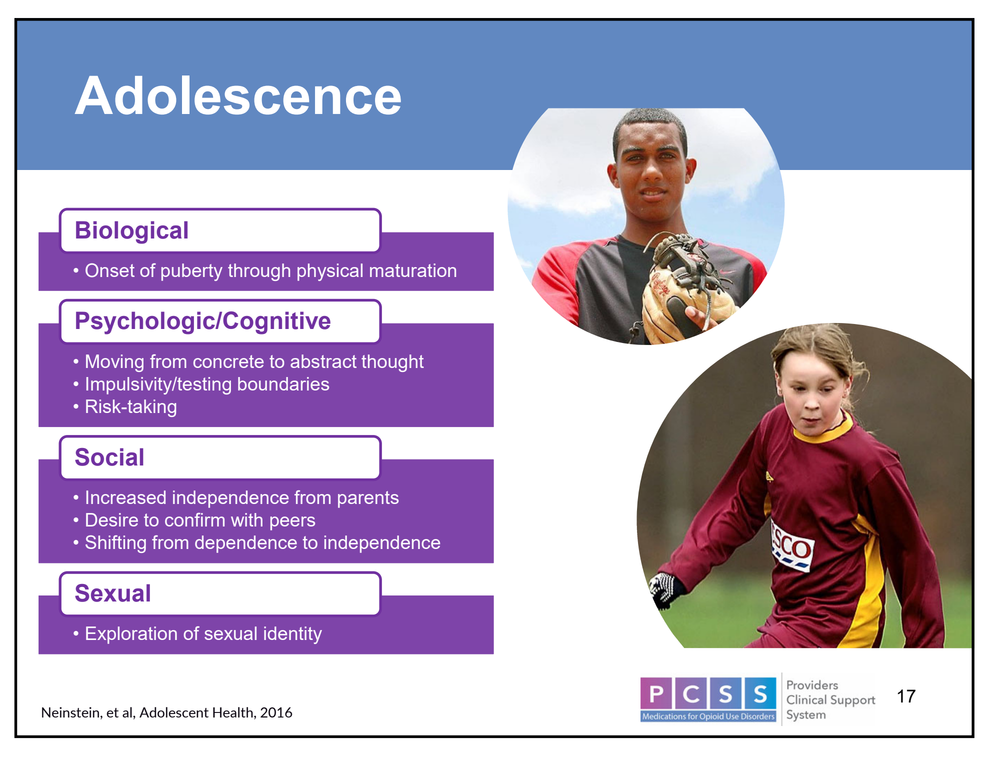
Adolescent brain



The **decade-long magnetic resonance imaging (MRI) study of normal brain development, from ages 5 to 20**, by researchers at NIH's National Institute of Mental Health (NIMH) and University of California Los Angeles (UCLA) Source: Paul M.Thompson, Ph.D., Laboratory of Neuro Imaging, UCLA, NIMH/UCLA Project Reprinted with permission from Dr. Paul Thompson.



- **Fully functioning gas pedal**
  - Amygdala: Process feelings of reward and pain. Matures early.
  - Able to appreciate salience of substance use related rewards
- **Weak brakes**
  - Prefrontal cortex—assess situations, make decisions, control impulses, weigh consequences, plan
  - Limited ability to think through substance use-related consequences
- **End result?**
  - Pursue pleasurable rewards, avoid painful stimuli, limited thought of consequences


Adolescence
Biological
• Onset of puberty through physical maturation
Psychologic/Cognitive
• Moving from concrete to abstract thought
• Impulsivity/testing boundaries
• Risk-taking
Social
• Increased independence from parents
• Desire to confirm with peers
• Shifting from dependence to independence
Sexual
• Exploration of sexual identity
Neinstein, et al, Adolescent Health, 2016
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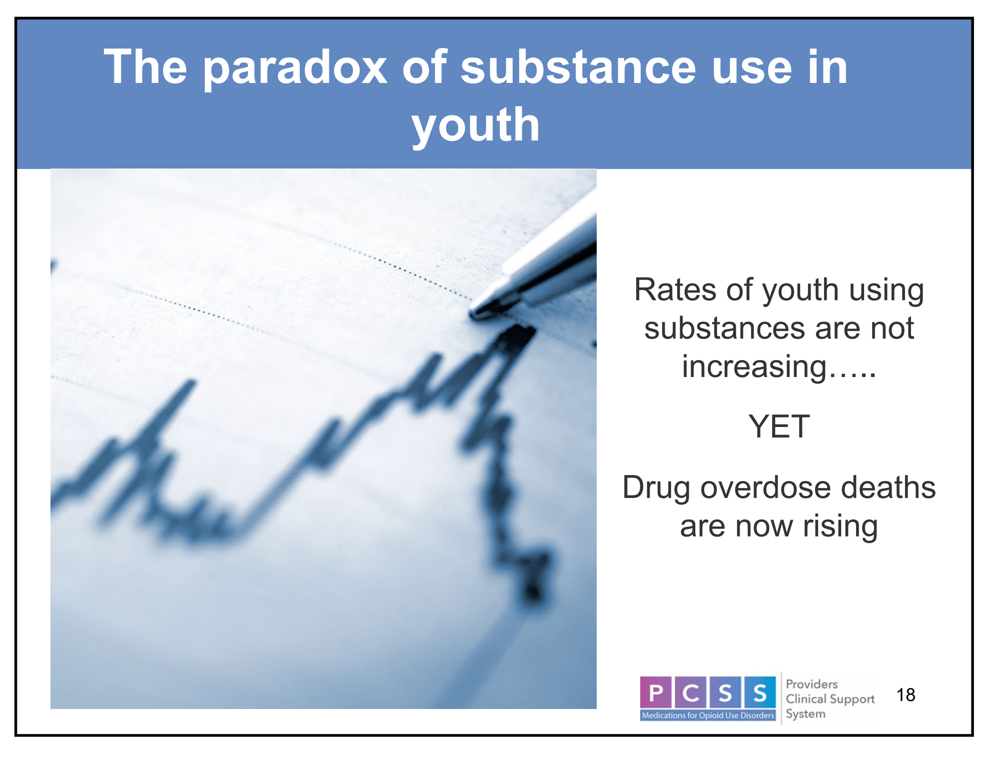
The paradox of substance use in youth
Rates of youth using substances are not increasing…..
YET
Drug overdose deaths are now rising
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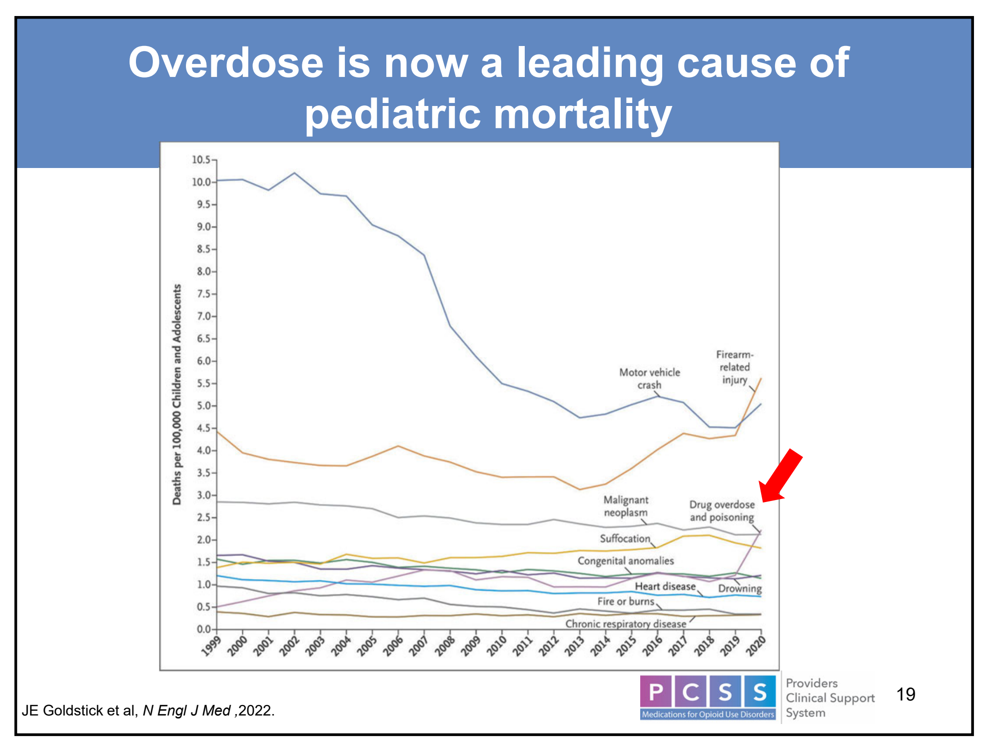

Overdose is now a leading cause of pediatric mortality
Deaths per 100,000 Children and Adolescents
Motor vehicle crash
Firearm-related injury
Malignant neoplasm
Drug overdose and poisoning
Suffocation
Congenital anomalies
Heart disease
Drowning
Fire or burns
Chronic respiratory disease
JE Goldstick et al, N Engl J Med ,2022.
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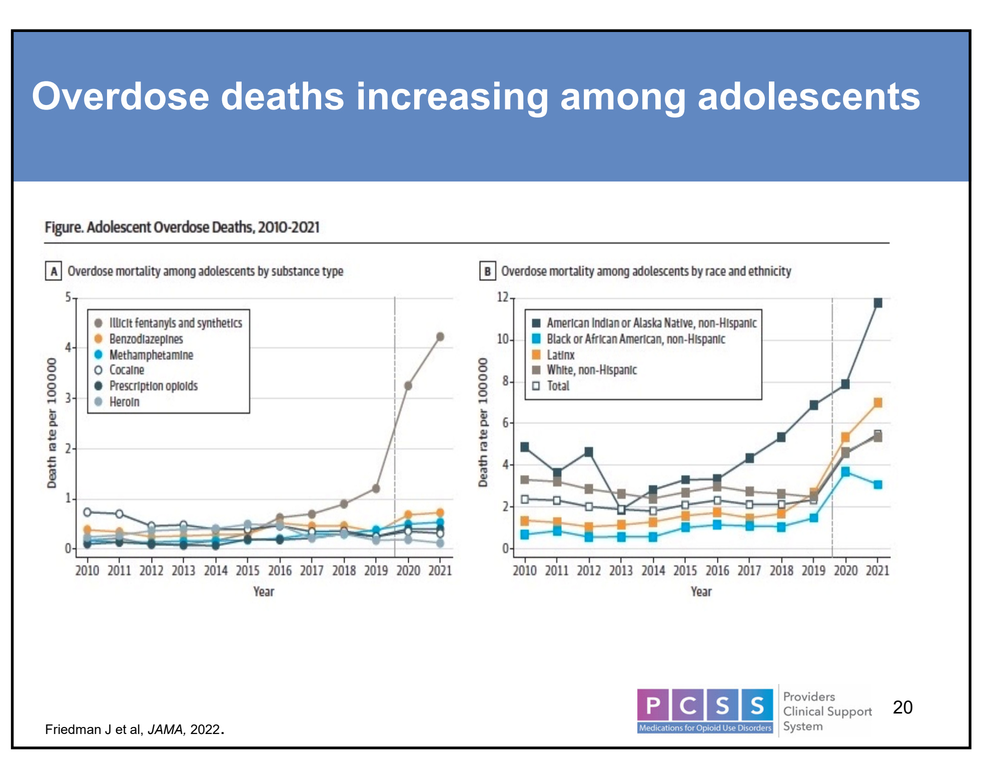

Overdose deaths increasing among adolescents
Figure. Adolescent Overdose Deaths, 2010-2021
A Overdose mortality among adolescents by substance type
Illicit fentanyls and synthetics
Benzodiazepines
Methamphetamine
Cocaine
Prescription opioids
Heroin
Death rate per 100000
Year
B Overdose mortality among adolescents by race and ethnicity
American Indian or Alaska Native, non-Hispanic
Black or African American, non-Hispanic
Latinx
White, non-Hispanic
Total
Friedman J et al, JAMA, 2022.
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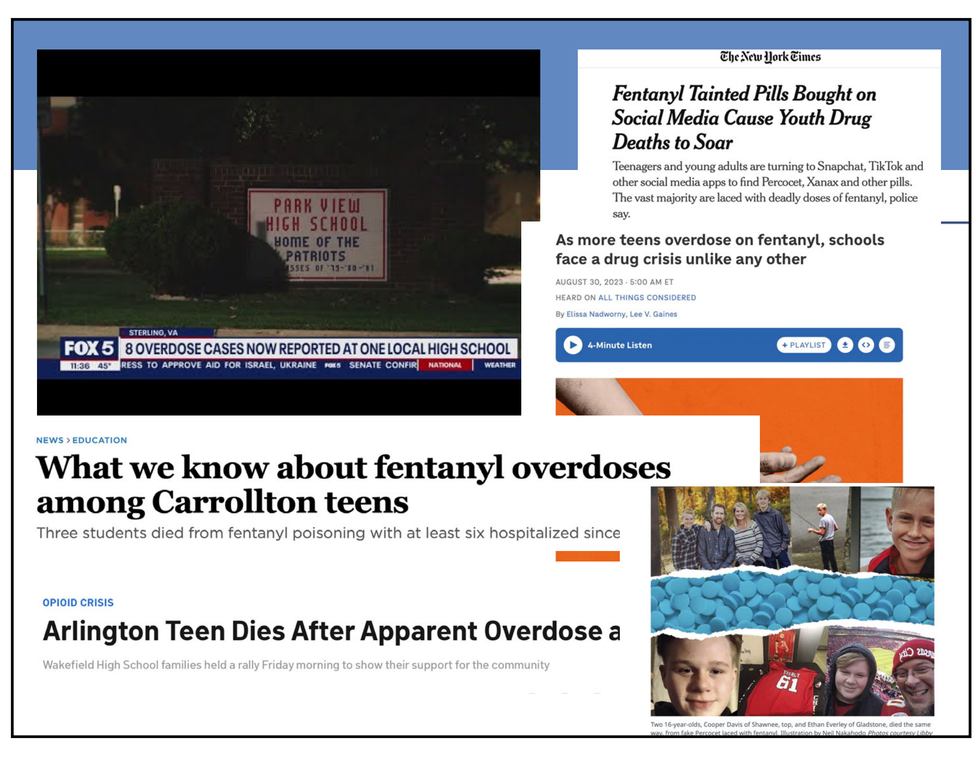
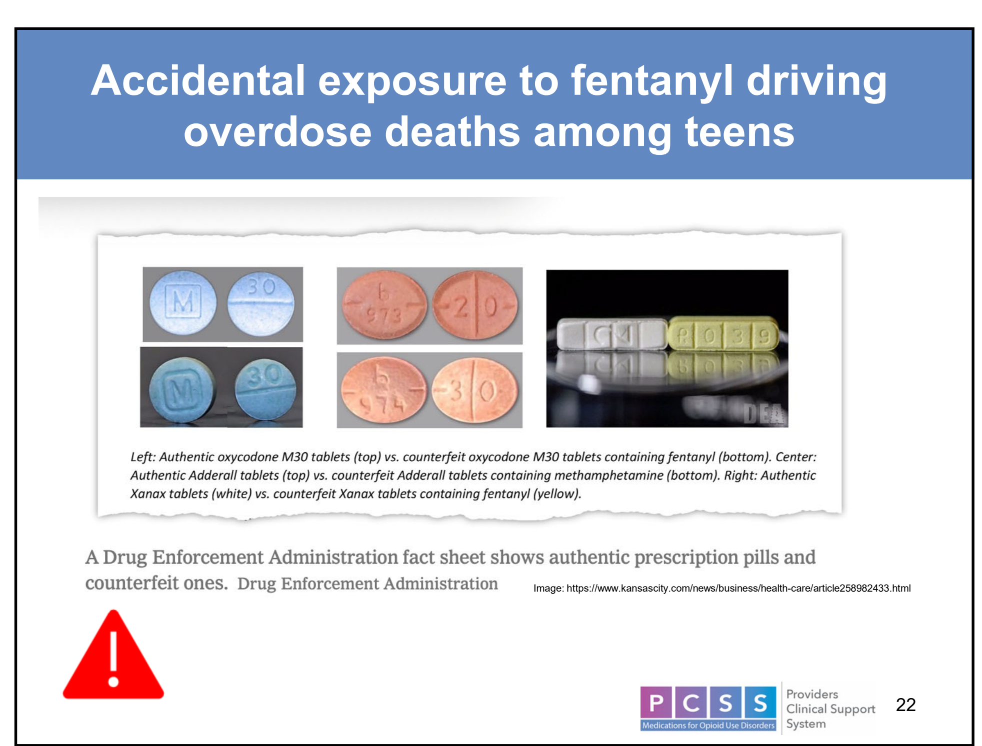


The New York Times
Fentanyl Tainted Pills Bought on Social Media Cause Youth Drug Deaths to Soar
Teenagers and young adults are turning to Snapchat, TikTok and other social media apps to find Percocet, Xanax and other pills. The vast majority are laced with deadly doses of fentanyl, police say.
PARK VIEW HIGH SCHOOL
HOME OF THE PATRIOTS
FOX 5
STERLING, VA
8 OVERDOSE CASES NOW REPORTED AT ONE LOCAL HIGH SCHOOL
As more teens overdose on fentanyl, schools face a drug crisis unlike any other
AUGUST 30, 2023 · 5:00 AM ET
HEARD ON ALL THINGS CONSIDERED
By Elissa Nadworny, Lee V. Gaines
4-Minute Listen
NEWS › EDUCATION
What we know about fentanyl overdoses among Carrollton teens
Three students died from fentanyl poisoning with at least six hospitalized since
OPIOID CRISIS
Arlington Teen Dies After Apparent Overdose a
Wakefield High School families held a rally Friday morning to show their support for the community



Accidental exposure to fentanyl driving overdose deaths among teens
Left: Authentic oxycodone M30 tablets (top) vs. counterfeit oxycodone M30 tablets containing fentanyl (bottom). Center: Authentic Adderall tablets (top) vs. counterfeit Adderall tablets containing methamphetamine (bottom). Right: Authentic Xanax tablets (white) vs. counterfeit Xanax tablets containing fentanyl (yellow).
A Drug Enforcement Administration fact sheet shows authentic prescription pills and counterfeit ones. Drug Enforcement Administration
Image: https://www.kansascity.com/news/business/health-care/article258982433.html
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Characteristics of drug overdose deaths among persons aged 10-19 years from July 2091-December 2021

Evidence of overdose circumstances	Total (N=2231)
Involved fentanyl	1871 (83.9%)
Potential bystander	1252 (66.9%)
No documented OD response by bystander	849 (67.8%)
Naloxone administered	563 (30.3%)

Adapted from: Tanz, et al., *MMWR: Centers for Disease Control and Prevention,* 2022.

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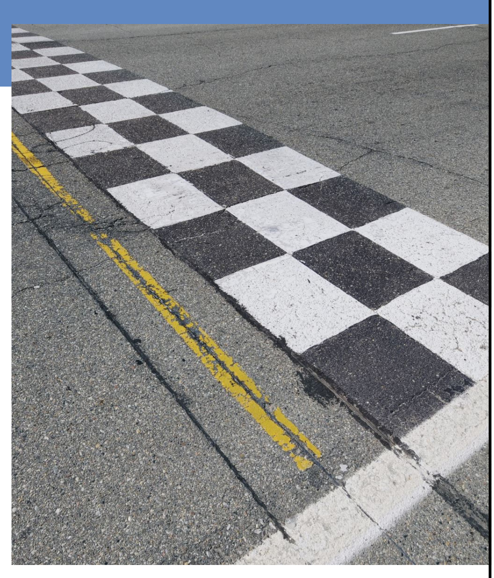
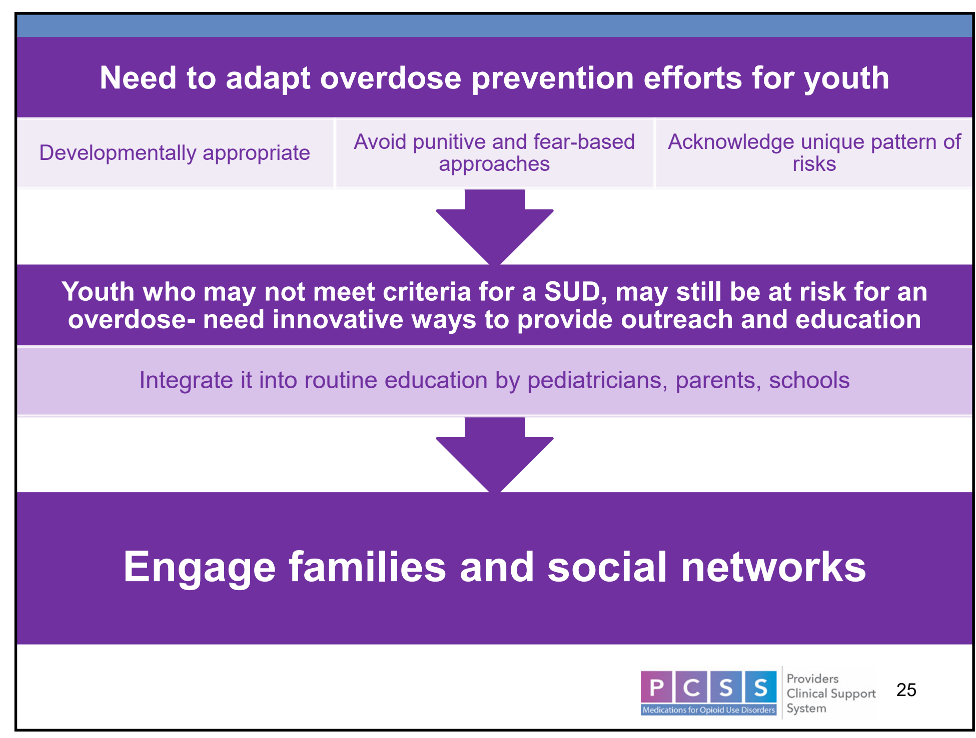
As a starting point…

- Recognizing that we have two populations of youth at-risk
  - Young people at risk of overdose because of toxic drug supply
  - Young people intentionally using opioids who may have opioid use disorder





Think about universal precautions

TABLE 1 Anticipatory Guidance for Overdose Prevention for Adolescents and Their Family Members

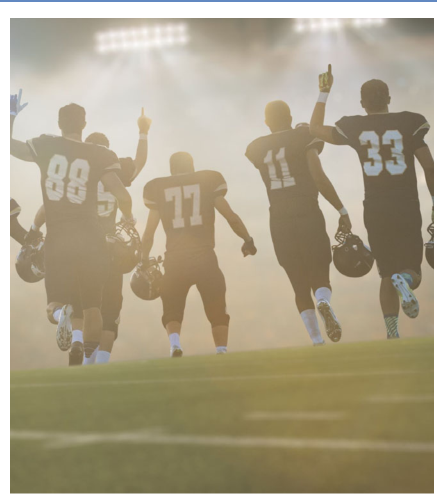
Concept	Sample Statements to an Adolescent and/or Family Member
Initiate conversation	"It's important that we talk about safety. As you might know, the number of teen drug overdoses has been increasing. I now talk all my teen patients and their families about how to prevent and respond to an overdose."
Provide education about fentanyl	"What do you know about fentanyl?" "Fentanyl is a potent opioid that is causing a record number of teen overdoses. Most of the prescription pills that people sell—including on social media—are fake and contain fentanyl, and can cause someone to overdose. If a medication isn't prescribed by a doctor and provided by a pharmacy, it's likely to be fake"
Review signs of overdose	"Do you know what an overdose looks like? Have you seen one?" "Someone who is having an overdose looks sleepy, or might even be unconscious. Their breathing is slow, or they might have stopped breathing altogether. They often look pale, and might be blue around their lips or fingertips."
Review how to respond to an overdose	"How would you respond if you thought someone was having an overdose?" "If you suspect someone has overdosed, immediately call 911. Then, if you have naloxone nasal spray, use it. If the person is not breathing and you know how to give rescue breaths, do so."
Discuss naloxone and how to find it	"What do you know about naloxone? Do you have any? "I recommend everyone carry naloxone with them and have it in their home. Naloxone can save someone's life. And it's safe to use even if someone isn't having an overdose. I can prescribe it to you today. You can also buy it over-the-counter—though it's more expensive this way—and it's often available at school or in the community."
Confidentially assess previous fentanyl use/exposure	Discussed confidentially with adolescent only: "In our practice, we ask every teen about their use of drugs and alcohol. Thanks for completing the screening questionnaire. To your knowledge, have you ever used fentanyl?" "Do you have any friends who use pills that might not have been prescribed by a doctor or filled by a real pharmacy? Have you ever used a pill that someone gave or sold you? Have you ever been approached in real life or on social media to buy one?"

PEDIATRICS PERSPECTIVES

Anticipatory Guidance to Prevent Adolescent Overdoses

Case 1 : Alex

- A 17 yo who screens positive during the S2BI and reports that he drinks alcohol monthly on weekends
- He occasionally uses ”pain pills” he gets from friend
  - Used three times in the past three months



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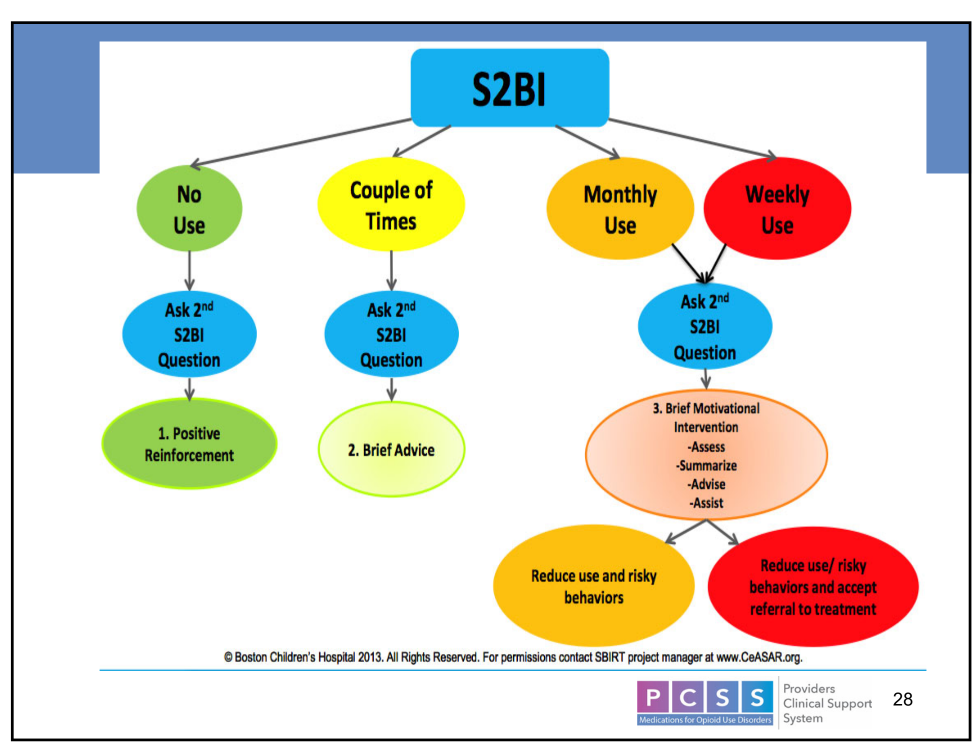
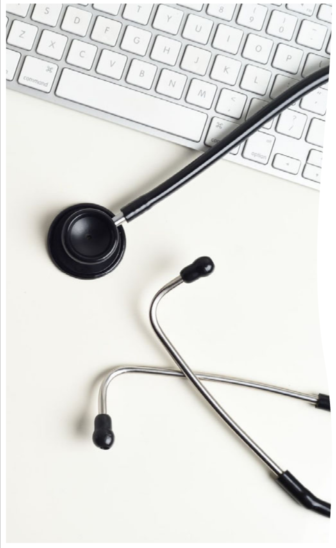


Brief Interventions and Adolescents in General



- 3-5 minutes in routine clinical appointment
- Uses motivational interviewing principles
  - Roll with resistance
  - Harness youth's own motivation
- Pediatric providers effective agents to deliver interventions
- Evidence shows they are effective at:
  - Reducing consumption
  - Reducing associated risky behaviors (e.g. driving while intoxicated)

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Case continues

- Feels like he is using "pain pills" because they are "safer" than other drugs
  - Taking 10-15 mg orally at a time
  - Heard you "can't get addicted if you take orally"
- Gets it from one friend
  - Friend gets it from grandparent
  - If he does not see friend, he does not seek it out
- Feels confident he can stop use, does not feel it is a problem for him
  - Feels he can "take it or leave it"
  - Sometimes will take pills while also drinking alcohol
    - Has driven after use

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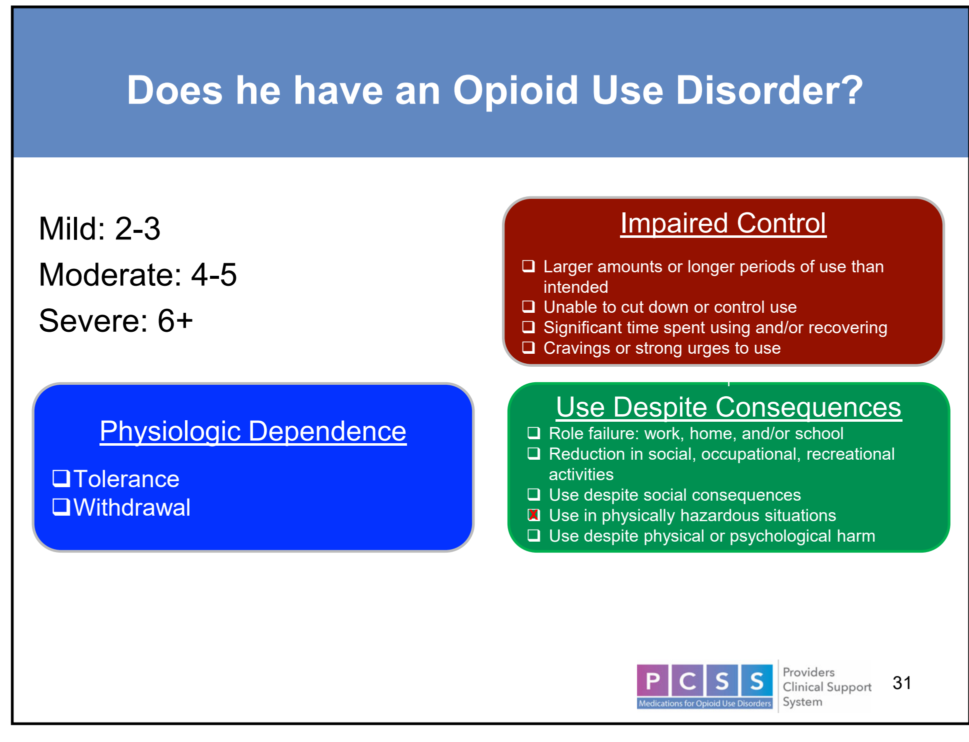

How do you approach counseling on reducing risks?

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Harm Reduction Counseling

Person-centered strategies to reduce risks and promote well-being

So what do you say?

- **Be concrete**
  - Consider developmental stage
  - Use simple language
- **Can start by asking: "Do you think your use of X is causing problems for you?"**
  - Goal is to identify their stage of change

Safer consumption practices

Evidence-based approaches

Abstinence

Stages of Change

Maintenance

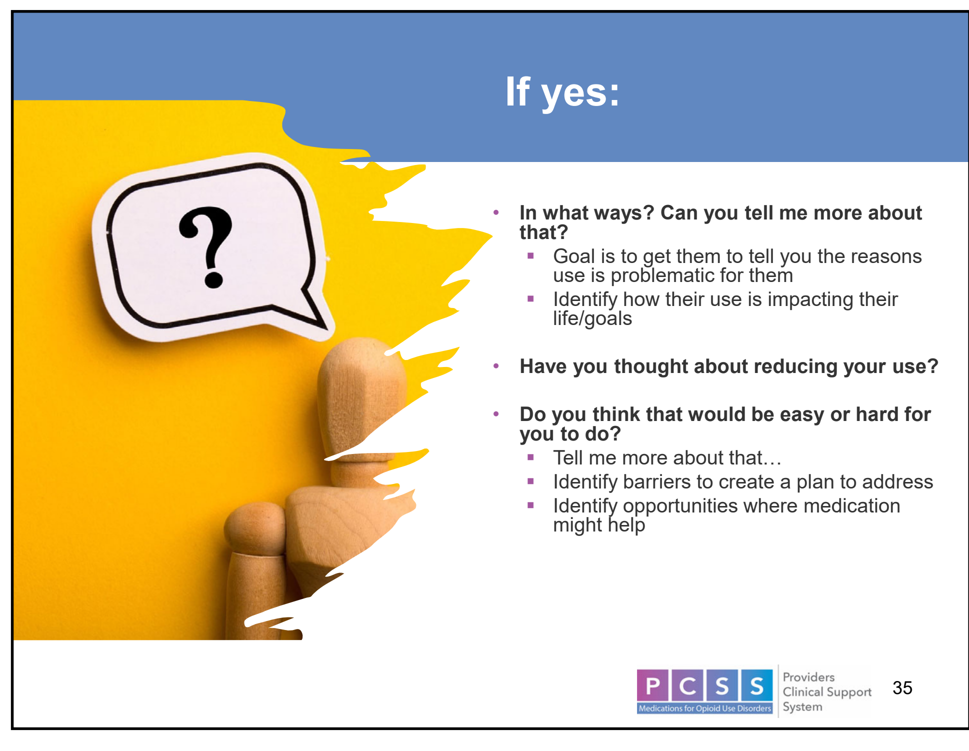
Action

Preparation

Contemplation

Precontemplation

Image: https://blog.micenterforchange.com/just-what-is-the-relationship-between-stages-of-change-motivational-interviewing/



If no:

- **Are you interested in learning ways to be safer while you use?**
- **Goal is to help move people from more to less harmful behaviors**
  - Where do you get the pills?
  - How do you take them? Do you take them with alcohol?
  - Any driving or sex while impaired?
  - Do you take them alone?
- **The goal is to create tailored messages that focus on reducing *your patient's* specific risks**

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Overdose prevention

Offer overdose prevention for every patient with *any* opioid or illicit drug use exposure

Overdose prevention includes:

1. **Education to reduce risk**

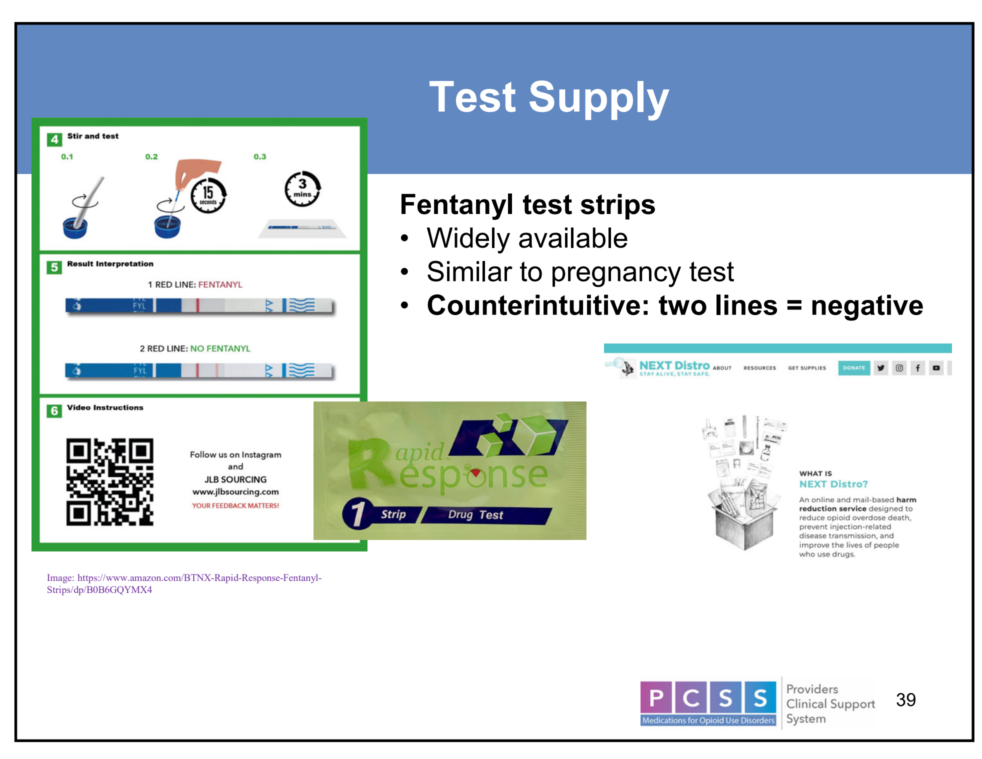
2. **Naloxone prescription**

Offer education to reduce risks like:

- **Use in safe place**
  - Never use alone—hotline/app/with friends
  - Make sure naloxone is available and people know how to use it

- **Test supply—substances are HEAVILY contaminated**
  - Fentanyl test strips to test ”any pills” or illicit substances

- **If new supplier/supply or interruption in use**
  - Go-slow
  - Give test dose before using ”typical amount”


Test Supply
Fentanyl test strips
• Widely available
• Similar to pregnancy test
• Counterintuitive: two lines = negative
4 Stir and test
5 Result Interpretation
1 RED LINE: FENTANYL
2 RED LINE: NO FENTANYL
6 Video Instructions
Follow us on Instagram and JLB SOURCING www.jlbsourcing.com
YOUR FEEDBACK MATTERS!
Rapid Response
1 Strip Drug Test
NEXT Distro
WHAT IS NEXT Distro?
An online and mail-based harm reduction service designed to reduce opioid overdose death, prevent injection-related disease transmission, and improve the lives of people who use drugs.
Image: https://www.amazon.com/BTNX-Rapid-Response-Fentanyl-Strips/dp/B0B6GQYMX4
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Naloxone for overdose reversal
Naloxone is:
• Opioid antagonist that blocks opioid receptor
• Short-acting (30 minutes)
NARCAN NASAL SPRAY 4 mg
Two Pack
https://www.narcan.com
PRESCRIBE TO PREVENT
Prescribe Naloxone, Save a Life
PRESCRIBERS PHARMACISTS PATIENT EDUCATION RESEARCH & LEGAL ADVOCACY FAQ
ABOUT US CONTACT US ENDORSEMENT
Online Continuing Education Program
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Distributing to youth directly

- **Pharmacy distribution**
  - Recently made naloxone available OTC
  - Existing standing orders at state or jurisdiction level
  - Pharmacists with direct authority
  - Challenging implementation
    - Limited availability
    - Inaccurate knowledge on access for teens
    - Out-of-pocket costs

Family/Home

Weiner, et al., An LDI/CHERISH Issue Brief, 2019; Abouk, Pacula, Powell, JAMA Internal Medicine,2019; Jimenez, et al. J Adolescent Health, 2019; Puzantian and Gasper, JAMA, 2018; Graves, et al, Journal of Addiction Medicine, 2018

School-based settings

- Naloxone tool-kits for schools
- Train staff and students
- Supported by: National Association of School Nurses (NASN)

- National Association of School Nurses, Positio... Analysis and Public Analysis Association, Naloxone access, summary state laws, 2020

Family-based distribution

- Educate families on risks
  - Overdose prevention at home
  - Naloxone in the home
  - Engaging youth in conversations about OD risks
- Safe storage and disposal of prescription opioids (including MOUD)

Case continues

- After you discuss risks around the "pain pills," he says he is not planning on using them anymore. He feel like this will be easy for him to do.
- You still give him fentanyl test strips and encourage him to test the pills if he were to decide to use them again. You also make sure he has naloxone and feels comfortable using it.
- You make plans to see him back in two weeks.
- He misses that appointment, but when he returns in 3 months, he says he started buying pills more 'because I'm really stressed out." He is now using about once a day.
- He has found that on days he does not use, he often thinks about using and is worried he is using it more now than he necessarily wants to. He is spending all his free money on pills.
  - Using 40-50 mg of "oxycodone" per day
- He tested his last supply at home and to his surprise, he realizes they are actually fentanyl. He doesn't want to "get hooked" and worries now that he knows he was using fentanyl
- He tried to stop on his own, but started to get sick, which is why he made this visit.

Does he have an Opioid Use Disorder?

Mild: 2-3

Moderate: 4-5

Severe: 6+

Impaired Control

- Larger amounts or longer periods of use than intended
- Unable to cut down or control use
- Significant time spent using and/or recovering
- Cravings or strong urges to use

Physiologic Dependence

- Tolerance
- Withdrawal

Use Despite Consequences

- Role failure: work, home, and/or school
- Reduction in social, occupational, recreational activities
- Use despite social consequences
- Use in physically hazardous situations
- Use despite physical or psychological harm

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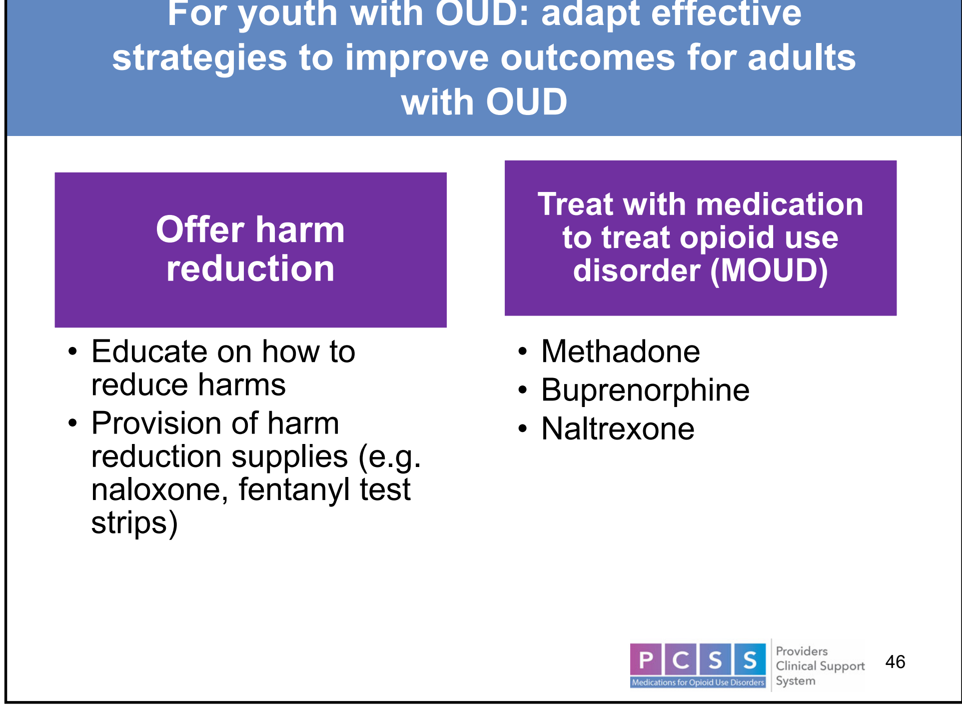

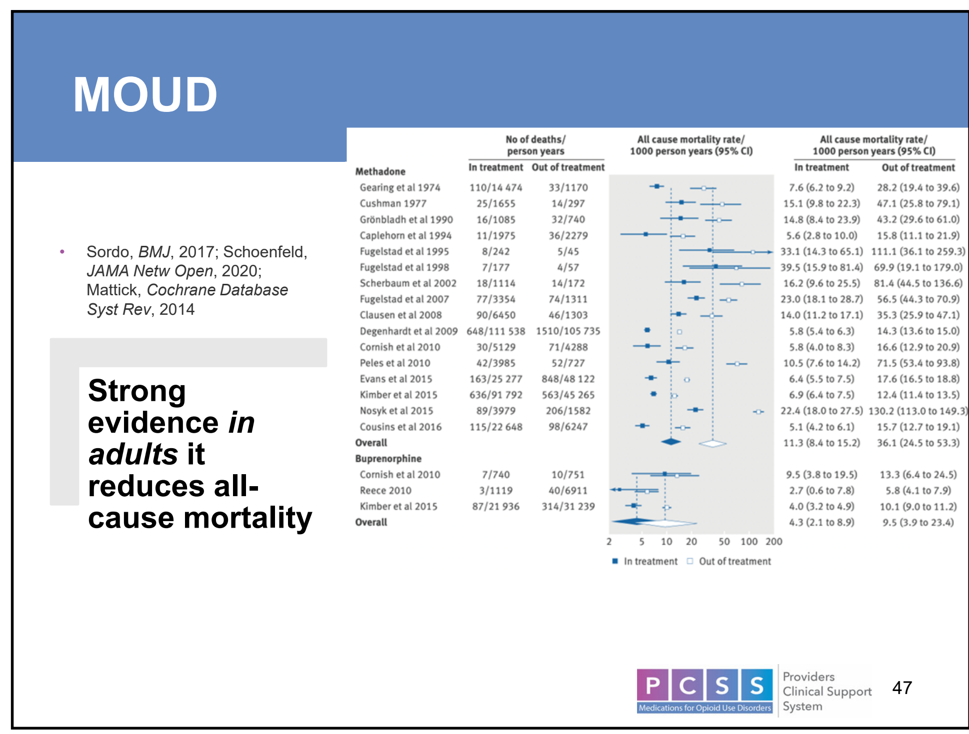

	No of deaths/ person years		All cause mortality rate/ 1000 person years (95% CI)	
	In treatment	Out of treatment	In treatment	Out of treatment
Methadone				
Gearing et al 1974	110/14 474	33/1170	7.6 (6.2 to 9.2)	28.2 (19.4 to 39.6)
Cushman 1977	25/1655	14/297	15.1 (9.8 to 22.3)	47.1 (25.8 to 79.1)
Grönbladh et al 1990	16/1085	32/740	14.8 (8.4 to 23.9)	43.2 (29.6 to 61.0)
Caplehorn et al 1994	11/1975	36/2279	5.6 (2.8 to 10.0)	15.8 (11.1 to 21.9)
Fugelstad et al 1995	8/242	5/45	33.1 (14.3 to 65.1)	111.1 (36.1 to 259.3)
Fugelstad et al 1998	7/177	4/57	39.5 (15.9 to 81.4)	69.9 (19.1 to 179.0)
Scherbaum et al 2002	18/1114	14/172	16.2 (9.6 to 25.5)	81.4 (44.5 to 136.6)
Fugelstad et al 2007	77/3354	74/1311	23.0 (18.1 to 28.7)	56.5 (44.3 to 70.9)
Clausen et al 2008	90/6450	46/1303	14.0 (11.2 to 17.1)	35.3 (25.9 to 47.1)
Degenhardt et al 2009	648/111 538	1510/105 735	5.8 (5.4 to 6.3)	14.3 (13.6 to 15.0)
Cornish et al 2010	30/5129	71/4288	5.8 (4.0 to 8.3)	16.6 (12.9 to 20.9)
Peles et al 2010	42/3985	52/727	10.5 (7.6 to 14.2)	71.5 (53.4 to 93.8)
Evans et al 2015	163/25 277	848/48 122	6.4 (5.5 to 7.5)	17.6 (16.5 to 18.8)
Kimber et al 2015	636/91 792	563/45 265	6.9 (6.4 to 7.5)	12.4 (11.4 to 13.5)
Nosyk et al 2015	89/3979	206/1582	22.4 (18.0 to 27.5)	130.2 (113.0 to 149.3)
Cousins et al 2016	115/22 648	98/6247	5.1 (4.2 to 6.1)	15.7 (12.7 to 19.1)
Overall			11.3 (8.4 to 15.2)	36.1 (24.5 to 53.3)
Buprenorphine				
Cornish et al 2010	7/740	10/751	9.5 (3.8 to 19.5)	13.3 (6.4 to 24.5)
Reece 2010	3/1119	40/6911	2.7 (0.6 to 7.8)	5.8 (4.1 to 7.9)
Kimber et al 2015	87/21 936	314/31 239	4.0 (3.2 to 4.9)	10.1 (9.0 to 11.2)
Overall			4.3 (2.1 to 8.9)	9.5 (3.9 to 23.4)

MOUD

- Mitchell, *J Subst Abuse Treat*, 2021; Fishman et al, *Addiction*, 2010.

Strong evidence *in adults* it reduces all-cause mortality

Naltrexone is feasible and acceptable for youth

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MOUD

- Mitchell, *J Subst Abuse Treat*, 2021; Fishman et al, *Addiction*, 2010.

Strong evidence *in adults* it reduces all-cause mortality

Naltrexone is feasible and acceptable for youth

- Observational & pilot trials
- Monthly extended-release naltrexone:
- Well-tolerated
- Feasible to administer
- If adherent, appears effective in reducing opioid use
- Acceptable to families

MOUD

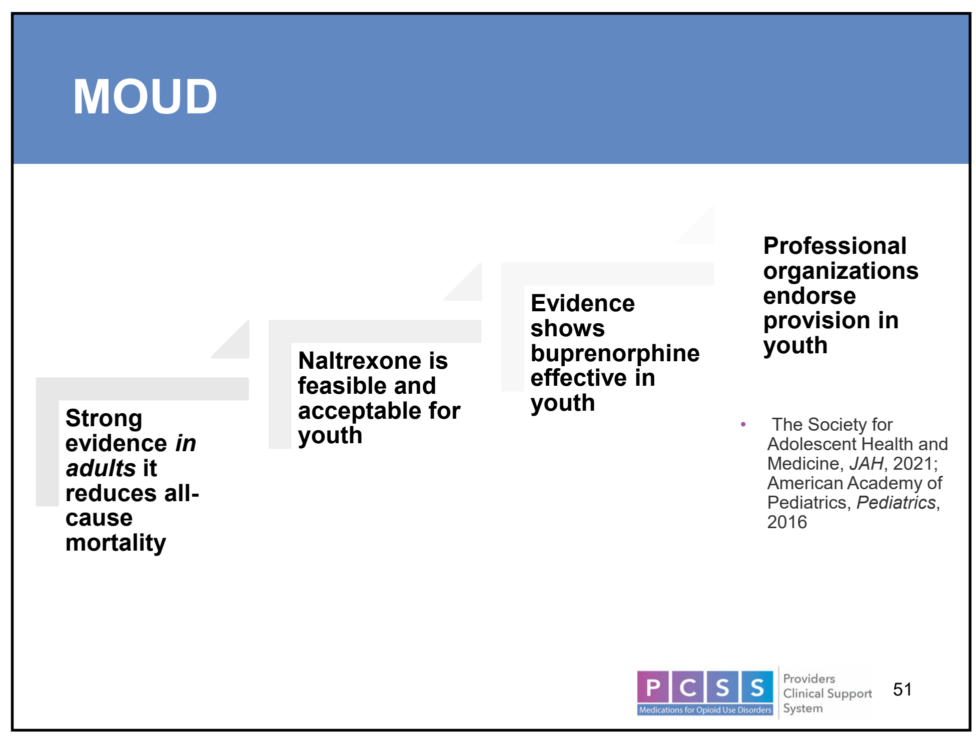
Strong evidence *in adults* it reduces all-cause mortality

Naltrexone is feasible and acceptable for youth

Evidence shows buprenorphine effective in youth

- **FDA-approved for ≥ 16**
- **Rigorous experimental trials show**:
  - Increases retention in treatment
  - Decreases substance use
  - Improves functioning

Moore, et al, J *Addict Med,* 2011; Motamed, et al, *J Addict Med*, 2008; Marsch, et al, *Addiction*, 2016; Woody, et al, *JAMA*, 2008;


MOUD
Strong evidence *in adults* it reduces all-cause mortality
Naltrexone is feasible and acceptable for youth
Evidence shows buprenorphine effective in youth
Professional organizations endorse provision in youth
The Society for Adolescent Health and Medicine, *JAH*, 2021; American Academy of Pediatrics, *Pediatrics*, 2016
PCSS
Medications for Opioid Use Disorders
Providers Clinical Support System
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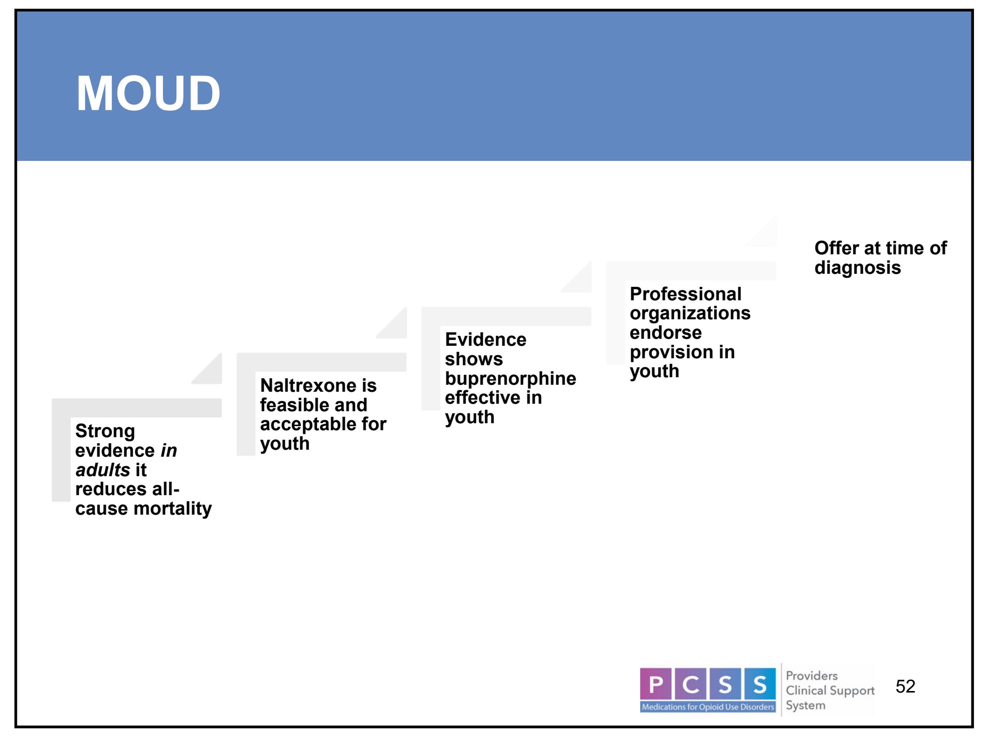
MOUD
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Offer at time of diagnosis
PCSS
Medications for Opioid Use Disorders
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Medications for Opioid Use Disorder

Medication	Formulations	Considerations
Buprenorphine (+/- naltrexone) (1st line)	• Daily pill or film • Weekly or Monthly injectable • Partial agonist	• **X WAIVER No longer required** • FDA approved for SL ≥ 16 years old • Available in office-based settings • Safe in pregnancy
Naltrexone (1st line for right youth)	• Daily pill • Monthly injectable • Antagonist	• FDA-approved for AYA ≥ 18 years old • Less data on efficacy than buprenorphine • Can be used in individuals with polypharmacy (e.g. alcohol or other substance use to help reduce cravings) • May be better in individuals with shorter period of use; more intermittent use • Should be motivated
Methadone	• Daily medication • Pill, liquid, wafer form • Agonist	• <18 years old must have 2 prior failed treatment attempts • Dispensed in DAILY visits to clinic • Wider dosing range easier to titrate in patient highly opioid-dependent • Safe in pregnancy

Discuss treatment options: Adolescent considerations

- **Have conversation about preferences/desires for MOUD**
  - At times both youth and parents may prefer antagonist approaches (like extended-release naltrexone) although there is less data
  - Balance side-effects and preferences for administration
  - Age related challenges (e.g. limitations for people < 18 to access methadone, prior authorization policies that are waived for adults)
- **Consider engaging parents to help inform treatment approaches**
  - Can get parental help in monitoring/administering medications
- **Recognize limitations of current data around buprenorphine**
  - Not great data on length of treatment course for youth
    - Youth may struggle with idea of “life long” medication
  - Not great data on dosing in youth
    - Higher doses seem more effective in adults but—
    - Youth often have shorter periods of use and use in smaller quantities

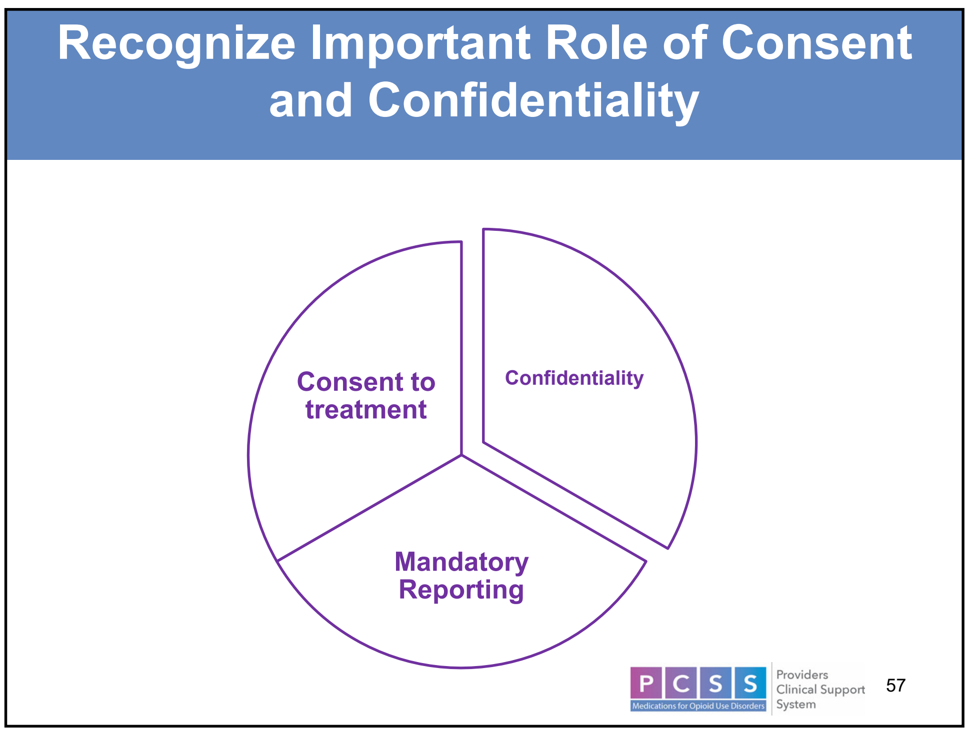
Discuss treatment options: Adolescent logistics

- **Youth using fentanyl may benefit from low dose or "microdosing" approaches**
  - Start with smaller quantities of buprenorphine (e.g. 0.5 mg of buprenorphine-nx and slowly increase)
  - If youth presenting in withdrawal or support from parents, could do traditional home-based induction
  - Depending on developmental needs and home resources, may need additional supports to successfully get "inducted" or started on buprenorphine
- **Although the injection modality may be a barrier, long-acting approaches may overcome some of the adherence challenges faced by youth**
- **Youth typically do better in lower-threshold, trauma-informed clinical settings that acknowledge stage of development**
  - E.g. Texts vs phone calls
  - Easy access to appointments and walk-in scheduling
  - More wrap around supports if needed

Couple MOUD with Evidence-based Behavioral Health Approaches for Adolescents

- Family Based Interventions
- Group Interventions (SMART Recovery, AA, NA)
- Behavioral Therapy
- Cognitive- Behavioral Therapy
- Motivational Enhancement Therapy
- Community Reinforcement Therapy
- Mindfulness and DBT skills
- Motivational Interviewing

Riggs PD, 2003; Marcus MT, Zgrieska A, 2009; Barnett et al. 2012



Case continues

- We discuss importance of disclosing with his parents. Alex brings them in the room and we help disclose together.
- We discuss treatment options, and the family is in agreement to try buprenorphine-nx
  - He prefers a low dose induction (not currently in withdrawal)
    - We give instructions for starting buprenorphine-nx
      - Day 1: 0.5 mg daily
      - Day 2: 0.5 mg BID
      - Day 3: 1 mg BID
      - Day 4 2 mg BID
      - Day 5 3 mg BID
      - Day 6 4 mg BID—then reassess (could increase to 6 mg BID on Day 7 or stay the same)

https://penncamp.org/wp-content/uploads/2023/11/suboxone-self-guided-micro-induction-protocol-with-cross-taper.pdf

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Case continues

- He reports doing well on 4 mg BID
  - He denies any cravings or desire to use on this dose.
  - Last use was on day 4 of induction protocol
- He hates the taste and so wanted to try once daily dosing with 8-2 mg SL bup-nx film
- He was followed closely with weekly and then monthly visits until he graduated from high school

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Case continues

- Alex continued taking 8-2 mg daily until his sophomore year, of college when he decided to taper off
  - He had an increase in cravings, but no return to use
- He opted to switch to extended-release naltrexone as "safety net"
  - He was started on 50 mg daily of naltrexone for one week
  - He then received the 380 mg extended-release naltrexone injection at your office
  - Follows up with monthly injection at his College Health Center

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In summary

- Youth are developmentally vulnerable to effects of substance use
- Even youth who do not meet criteria for a substance use disorder still potentially warrant intervention
- Overdose is now a leading cause of pediatric mortality
- Effective interventions for youth using opioids, include harm reduction approaches, particularly naloxone, overdose prevention education, and fentanyl test strips
- MOUD have strong data in adults and growing data supporting their use in youth
- At the time you make a diagnosis of opioid use disorder in youth, you should ALSO offer MOUD

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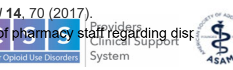

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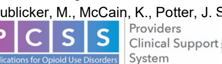

LEARNER CASE DISCUSSION AND QUESTIONS

Katy Basques, APRN & Dr. Deanna Wilson

PCSS-MOUD MENTORING PROGRAM

- PCSS-MOUD Mentor Program is designed to offer general information to clinicians about evidence-based clinical practices in prescribing medications for opioid use disorder.
- PCSS-MOUD Mentors are a national network of providers with expertise in **addictions, pain, and evidence-based treatment including medications for opioid use disorder (MOUD)**.
- 3-tiered approach allows every mentor/mentee relationship to be unique and catered to the specific needs of the mentee.
- No cost.

For more information visit:
https://pcssNOW.org/mentoring/

PCSS-MOUD DISCUSSION FORUM

PCSS Medications for Opioid Use Disorders | Providers Clinical Support System

PCSS-MOUD is a collaborative effort led by the American Academy of Addiction Psychiatry (AAAP) in partnership with:

Addiction Policy Forum	American College of Medical Toxicology
Addiction Technology Transfer Center*	American Dental Association
African American Behavioral Health Center of Excellence	American Medical Association*
American Academy of Addiction Psychiatry*	American Orthopedic Association
American Academy of Child and Adolescent Psychiatry	American Osteopathic Academy of Addiction Medicine*
American Academy of Family Physicians	American Pharmacists Association*
American Academy of Neurology	American Psychiatric Association*
American Academy of Pain Medicine	American Psychiatric Nurses Association*
American Academy of Pediatrics*	American Society for Pain Management Nursing
American Association for the Treatment of Opioid Dependence	American Society of Addiction Medicine*
American Association of Nurse Practitioners	Association for Multidisciplinary Education and Research in Substance Use and Addiction*
American Chronic Pain Association	Coalition of Physician Education
American College of Emergency Physicians*	College of Psychiatric and Neurologic Pharmacists
	Black Faces Black Voices

PCSS Medications for Opioid Use Disorders | Providers Clinical Support System

PCSS-MOUD is a collaborative effort led by the American Academy of Addiction Psychiatry (AAAP) in partnership with:

Columbia University, Department of Psychiatry*	Partnership for Drug-Free Kids
Council on Social Work Education*	Physician Assistant Education Association
Faces and Voices of Recovery	Project Lazarus
Medscape	Public Health Foundation (TRAIN Learning Network)
NAADAC Association for Addiction Professionals*	Sickle Cell Adult Provider Network
National Alliance for HIV Education and Workforce Development	Society for Academic Emergency Medicine*
National Association of Community Health Centers	Society of General Internal Medicine
National Association of Drug Court Professionals	Society of Teachers of Family Medicine
National Association of Social Workers*	The National Judicial College
National Council for Mental Wellbeing*	Veterans Health Administration
National Council of State Boards of Nursing	Voices Project
National Institute of Drug Abuse Clinical Trials Network	World Psychiatric Association
Northwest Portland Area Indian Health Board	Young People In Recovery

Thank you for Attending!

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CME POST-TEST QUESTION #1

Overdose deaths among youth are :

A. Not a common cause of pediatric mortality.
B. The 3rd most common cause of pediatric mortality.
C. The most common cause of pediatric deaths.
D. The 10th most common causse of pediatric mortality.

Rationale: B. Overdose deaths among youth are becoming increasingly more common. Deaths are driven by synthetic opioids and are now the 3rd most common cause of pediatric mortality.

Reference: J.E., Cunningham, R. M., & Carter, P. M. (2022). Current causes of death in children and adolescents in the United States. The New England Journal of Medicine, 386(20), 1955–1956.

CME POST-TEST QUESTION #2

A family asks you for your opinion on the type of MOUD for youth that has the greatest evidence base. You say:

A. Naltrexone has been shown to be feasible, acceptable, and effective in treating youth.
B. Methadone is a great treatment option for teens under age 18 and has substantial data support its use.
C. Buprenorphine has been shown to be effective in youth in decreasing substance use and improving retention in treatment.
D. There is no effective MOUD for youth.

Rationale: C. While there is data supporting feasibility and acceptability of naltrexone in youth, there is no rigorous clinical trial data supporting its effectiveness in youth. Methadone has a substantial amount of data supporting efficacy in adults but little in youth under age 18. There are also logistical concerns that make it difficult to treat youth. Buprenorphine has multiple small, but rigorous clinical trials that support its effectiveness in youth in decreasing substance use and supporting retention in treatment.

Reference: Moore, et al, J *Addict Med,* 2011; Motamed, et al, *J Addict Med*, 2008; Marsch, et al, *Addiction*, 2016; Woody, et al, *JAMA*, 2008; Hadland, et al, 2018; Mitchell, *J Subst Abuse Treat*, 2021; Fishman et al, *Addiction*, 2010.

CME POST-TEST QUESTION #3

Which of the following is not a harm reduction approach?

A. Forced treatment
B. Fentanyl test strips
C. Naloxone
D. Sterile needles and syringes

Rationale: A. Harm reduction is a set of personalized strategies to reduce risks and promote well-being for people engaging in often stigmatized behaviors, such as drug use. It includes a range of practices from treatment oriented approaches, like MOUD, to approaches that reduce risks associated with use, like sterile needles and syringes. Forced treatment removes individual agency and would not align with harm reduction while fentanyl test strips, naloxone, and sterile needles and supplies are all harm reduction tools.

Reference: Hawk, M., Coulter, R.W.S., Egan, J.E. *et al.* Harm reduction principles for healthcare settings. *Harm Reduct J* **14**, 70 (2017).

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CME POST-TEST QUESTION #4

What is common about substance use in youth?

A. The majority of youth ages 12 to 17 report using alcohol in the past year.
B. The majority of youth who report substance use the past year meet criteria for substance use disorder.
C. Youth are more likely to report past year use of alcohol and drugs at younger ages (12-17) than older ages (18-25).
D. While only a minority of youth report past year use of substances, even fewer meet criteria for substance use disorder.

Rationale: D. Only a minority of youth ages 12 to 17 report past year use of alcohol. The majority of youth who report past year use of substances do not meet criteria for substance use disorder (for example, 17.8% of youth ages 12 to 17 report drinking alcohol in past year, but only 3.4% meet criteria for an alcohol use disorder). Youth are more likely to report past year use of alcohol and illicit drug use at older ages than younger ages. While only a minority of youth report past year use of substances, even a smaller percentage meet criteria for a substance use disorder.

Reference: 2021 *National Survey of Drug Use and Health (SAMHSA).*

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CME POST-TEST QUESTION #5

We should offer MOUD to youth :

A. At the time of their opioid use disorder diagnosis.
B. After confirming they have already failed two approaches with abstinence-based treatment first.
C. Only if they agree to never use another opioid or substance in the future.
D. If they have private insurance and we feel like they will be successful in treatment.

Rationale: A. We should offer treatment to all youth at the time of their opioid use disorder diagnosis. Older approaches used to suggest waiting for youth to try non-medication based approaches first, but with the scale of the current opioid crisis and the risk of death associated with fentanyl exposure, we should prescribe MOUD at the time of OUD diagnosis.

Reference: COMMITTEE ON SUBSTANCE USE AND PREVENTION; Medication-Assisted Treatment of Adolescents With Opioid Use Disorders. *Pediatrics* September 2016; 138 (3): e20161893. 10.1542/peds.2016-1893

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CME POST-TEST QUESTION #6

Overdose deaths among youth most commonly occur with:

A. No bystander available; occur with youth alone.
B. A potential bystander present who attempts a documented overdose response.
C. Naloxone administered by a loved one.
D. A Potential bystander available and no documented overdose response.

Rationale: D. A potential bystander available but no documented overdose response. This suggests that these are potentially preventable deaths that could have been prevented with evidence-based overdose prevention strategies, such as lay-person administration of naloxone.

Reference: Tanz, et al. (2022) *MMWR: Centers for Disease Control and Prevention.*

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