Preventing Overdoses in Adolescents: Clinical and Public Health Approaches

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Objectives

At the conclusion of the presentation, participants should be able to:

- 1. Understand the scope and driving forces of drug overdose deaths among adolescents in the United States.
- 2. Describe public health approaches to reduce overdose deaths in the community.
- 3. Describe elements of screening, treatment and harm reduction that clinicians can implement to reduce the risk of overdose for your patients.



Agenda



Overdose Epidemiology



Youth Substance Use and Overdose

Public Health Approaches

Overdose Prevention in Clinical Practices

Overdose Epidemiology

Three Waves of Opioid Overdose Deaths



Drug overdose deaths at historic levels in the United States -

Percentage change in 12 month-ending predicted provisional counts (November 2021-October 2022)



107,689 predicted overdose deaths in 12 months ending **October 2022 -**53% increase relative to **October of** 2019

Ahmad FB, Cisewski JA, Rossen LM, Sutton P. Provisional drug overdose death counts. National Center for Health Statistics. 2022

Synthetic opioids are the largest driver of overdose deaths in the United States –





CDC SUDORS, 32 Jurisdictions - Overdose Deaths, 2020





 Opioids with stimulants
 Opioids without stimulants
 Stimulants without opioids
 Neither opioids nor stimulants 82% of overdose deaths

involved opioids

73% involved illicitly manufactured fentanyl

40% involved both opioids and stimulants

OVERDOSE DEATHS

Per 100,000 People

27

26 25

17

3

2019

39 Black/Non-Hispanic
36 American Indian, Alaska Native/ Non-Hispanic
31 White/Non-Hispanic

21 Hispanic

3 Asian, Pacific Islander/ Non-Hispanic

CDC Vital Signs https://www.cdc.gov/vitalsigns/overdose-death-disparities/index.html

Youth Substance Use and Overdose Trends





Substance use, including opioids and psychostimulants, can begin in adolescence

Risks of early initiation:

 Risky sexual behaviors and early initiation of sexual behaviors

□ Increased risk of STI

□ Pregnancy

Interpersonal violence

Monasterio, E. Adolescent Substance Involvement use and abuse. Primary Care: Clinics in Office Practice, 2014 41:567-585.

Proportion of inpatient admissions for substance use disorder by age of initiation



Proportion of inpatient admissions for substance use disorder by age of initiation and substance



Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. Treatment Episode Data Set (TEDS): 2017.

Pain relief is the most frequent reason adolescents misuse prescription opioids

Reported motivations for prescription opioid misuse in adolescents – 2005 and 2016





Boyd et al. Adolescents' Motivations to Abuse Prescription Medications. Pediatrics 2006 Vol. 118 Issue 6 Pages 2472-2480

2016

Groenewald, Cornelius B et al. Correlates and motivations of prescription opioid use among adolescents 12 to 17 years of age in the United States. *Pain* vol. 161,4 (2020): 742-748

2021 YRBS - While substance use trends are improving, use among high school students remains persistently high

The Percentage of High School Students Who:*	2011 Total	2013 Total	2015 Total	2017 Total	2019 Total	2021 Total	Trend
Currently drank alcohol	39	35	33	30	29	23	
Currently used marijuana	23	23	22	20	22	16	
Currently used an electronic vapor product [†]	-	-	24	13	33	18	\diamond
Ever used select illicit drugs	19	16	13	13	13	13	
Ever misused prescription opioids [‡]	-	-	-	14	14	12	
Currently misused prescription opioids [§]	-	-	-	-	7	6	\diamond

Youth Risk Behavior Survey Data Summary & Trends Report: 2011-2021 (cdc.gov)

 13% ever misused select illicit drugs[†]

• 1 in 8 ever misused prescription opioids

• 1 in 17 currently misusing prescription opioids

⁺Cocaine, inhalants, heroin, methamphetamines, hallucinogens, or ecstacy

Co-occurring substance use is common among adolescents who misuse prescription opioids



Jones CM, Clayton HB, Deputy NP, et al. Prescription Opioid Misuse and Use of Alcohol and Other Substances Among High School Students

- Youth Risk Behavior Survey, United States, 2019. MMWR Suppl 2020;69(Suppl-1):38-46.

Lifetime Use of Illicit Opioids Other Than Heroin – High School Seniors



Illicit opioid use is declining among youth

From 2001-2014, diagnosis of opioid use disorder in adolescents has increased nearly

6-fold



Hadland SE, et al. Trends in Receipt of Buprenorphine and Naltrexone for Opioid Use Disorder Among Adolescents and Young Adults, 2001-2014. *JAMA Pediatr.* 2017;171(8):747–755.

Overdose mortality in adolescents has risen dramatically in recent years, driven by synthetic opioids including illicitlymanufactured fentanyl

Overdose mortality among youth aged 10-19 years, State Unintentional Drug Overdose Reporting System, 32 Jurisdictions, July 2019-December 2021



Tanz, et al. Drug overdose deaths among persons aged 10-19 years – United States, July 2019-December 2021. MMWR, December 16 2022. <u>Drug Overdose Deaths Among Persons Aged 10–19 Years — United States,</u> July 2019–December 2021 (nih.gov)

Overdose deaths associated with polysubstances are now more prevalent than deaths involving opioids alone



Lim J, et al. Polysubstance involvement in opioid overdose deaths in adolescents and young adults 1999-2018. *JAMA Pediatr.* 2021;175(2):194-196

AI/AN adolescents and Latino adolescents have higher overdose mortality rates relative to White adolescents than among the population as a whole

Wide racial disparities in overdose death rates among adolescents in the United States



Friedman J, Godvin M, Shover CL, Gone JP, Hansen H, Schriger DL. Trends in Drug Overdose Deaths Among US Adolescents, January 2010 to June 2021. *JAMA*. 2022;327(14):1398–1400.

Nonfatal suspected opioid overdoses are prevalent among youth.

Suspected stimulantinvolved overdoses are rising.



Roehler DR, et al. Suspected Nonfatal drug-related overdoses among youth in the US: 2016-2019. Pediatrics, 2021;147(1)

Nonfatal Opioid Overdoses Among Youth 0-24 Years



Nonfatal Stimulant Overdoses Among Youth 0-24 Years



Public Health Approaches



CDC's Guiding Principles



CDC's Strategic Priorities





Support Providers, Health Systems, Payors, and Employers







Promotion of Safer Opioid Prescribing through Health System and Clinician Support

CDC's Clinical Practice Guideline for Prescribing Opioids for Pain—2022
 Information technology (IT) tools for safer prescribing
 Health system implementation of quality improvement efforts
 Address barriers to treatment for substance use disorders (SUD)

Linking People with Opioid Use Disorder to Medication Treatment

Compilation of promising strategies to support linkage to care for OUD

"Every door is the right door"

- □ Primary care
- □ Emergency departments
- Inpatient hospitalization
- Syringe services programs
- Prenatal and postpartum care
- Outpatient mental health and behavioral health care
- Healthcare settings during incarceration and community supervision

Linking People with Opioid Use Disorder to Medication Treatment:

> A Technical Package of Policy, Programs, and Practices

https://www.cdc.gov/drugoverdose/pdf/pubs/Linkage-to-Care_Edited-PDF_508-3-15-2022.pdf B

Build State, Tribal, Local and Territorial Capacity





Preventing and reducing substance use among youth 18 and younger

700+ COMMUNITY COALITIONS



www.cdc.gov/drugoverdose/drugfree-communities/index.html

CADCA



Overdose Data to Action (OD2A)

CONTROL AND PREVENTION

- \$300M per year for 4 years (2019 - 2023)
- Seamless integration of data and prevention programs
- 66 jurisdictions funded including 47 states and 16 hard hit cities and counties
- At least twenty percent of state funds go to the local level as well to spur innovation and multisector collaboration.









PDMPs



Health System



Public Safety



Linkage to Care



Consumers



Local Response



Youth-Centered Activities by OD2A-Funded Jurisdictions

Naloxone

- School-based curriculum development
- Stigma reduction campaigns
- Community naloxone training
- First responder training

Fentanyl Awareness

Fentanyl education in school curriculaFunding fentanyl test strip distribution in the community

Linkage to Care and Treatment

- Partnerships with first responders
- Development of community outreach teams
- Expanding access to medications for opioid use disorder (MOUD)

Raise Public Awareness and Reduce Stigma





Prescription opioids can be addictive and dangerous.

It only takes a little to lose a lot.



cdc.gov/RxAwareness

Rx AWARENESS CAMP

The second

There is a way out of addiction. You don't have to do this alone. 77 –David

Stop Overdose (cdc.gov) Rx Awareness | CDC Injury Center

CDC DC

If you're struggling with prescription opioids, there is hope. Recovery is possible.







Turner SS255 Anjoh S Johnš 12556 Dispate 17462 Dispate Dispate Curren Screen

Prevention, Screening & Treatment



Getting Candid – A Messaging Guide for Clinicians



Participating in sports, music, hobbies or other activities can help you build friendships, stay in shape, get into college and receive scholarships, and have fun.

SELF-AFFIRMATION

You respect yourself and want to make decisions that are best for you. Trust yourself and your choice not to use drugs or alcohol.

* Note the difference in how middle and high school youth respond to the relationship messaging. While middle school youth care very much about not disappointing the people in their lives, high school youth respond better to the idea of making the people they care about proud.

PURPOSE

- Equip youth-serving providers with substance use prevention messaging that appeals to a large and broad population of youth
- ❑ Share guidance on how to effectively deploy the messaging with middle and high school age youth (12 18 years)

CONTENT

- Getting grounded in the attitudes and beliefs of young people
- Message framework when communicating with youth
- **Communication pathway**

GETTING CANDID: FRAMING THE CONVERSATION AROUND YOUTH SUBSTANCE USE PREVENTION

A Message Guide for Providers

COUNCIL for Mental Wellbeing



https://www.thenationalcouncil.org/program/getting-candid/

Screening to brief intervention (S2BI) tool



Risk Identification and Linkage to care □ Substance use assessment is recommended by American Academy of Pediatrics for SUD screening Opportunity to link patients to community care

Levy et al. Substance Use Screening, Brief Intervention, and Referral to Treatment. *Pediatrics* July 2016; 138 (1)

Frequency of substance use & accuracy for detecting SUD in adolescents



Levy S, Weiss R, Sherritt L, et al. An Electronic Screen for Triaging Adolescent Substance Use by Risk Levels. JAMA Pediatr. 2014;168(9):822-828. doi:10.1001/jamapediatrics.2014.77

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Sharon Levy, Elissa R. Weitzman, et al. (2021) Sensitivity and specificity of S2BI for identifying alcohol and cannabis use disorders among adolescents presenting for primary care, Substance Abuse, 42:3, 388-395, DOI: <u>10.1080/08897077.2020.1803180</u>

Cascade of care for youth opioid use disorder: Most youth with an OUD do not receive evidence-based care



■ Attained stage

dland, SE. 1 million deaths and counting: Therole of pediatricians in solving the national addiction crisis. Plenary Session, AAP National Convention, Anaheim CA October 10, 2022

Buprenorphine prescriptions dispensed to youth age 0-19 years, 2015-2020

Buprenorphine dispensing rates to adolescents suggest a large unmet treatment need

Buprenorphine dispensing among youth aged ≤19 years in the US: 2015-2020. Pediatrics (2023) 151 (2): e2022058755. https://doi.org/10.1542/peds.2022-058755



What Does Evidence-Based Treatment Look Like?

Medication

- 1. Buprenorphine: Partial opioid agonist
- 2. Naltrexone: Opioid antagonist
- **3. Methadone:** Full opioid agonist

Supported by AAP^a, SAHM^b & ASAM^c; clinical trials show fewer relapses, fewer cravings for opioids, longer retention in care

Behavioral Therapy

- Motivational enhancement
- Cognitive behavioral therapy
- Contingency management

Best modality not known, and a combo may work best; critical component of treatment, since dual diagnoses rule, not exception

^aAmerican Academy of Pediatrics, Medication-Assisted Treatment of Adolescents with Opioid Use Disorders. Pediatrics, 138:2016 ^bSociety for Adolescent Health & Medicine, Medication for Adolescents and Young Adults wth Opioid Use Disorder. Journal of Adolescent Health, 68:2021 ^cAmerican Society of Addiction Medicine, The ASAM National Practice Guideline for the Treatment of Opioid Use Disorder. Journal of Addiction Medicine, 14:2015

Approved Medications for Opioid Use Disorder

	Methadone	Buprenorphine	Naltrexone
Mechanism	Full opioid agonist	Partial opioid agonist	Opioid antagonist
FDA Approval	Limited in ages <pre><18 yrs*</pre>	FDA-approved ≥16 yrs	FDA-approved ≥18 yrs
Dosing frequency	Daily dose	Daily dose (film/tablet); monthly dose (injection)	Daily dose (tablet); monthly dose (injection)
Access	Only administered in person at qualified methadone center	Can be provided by any clinician with a current DEA registration with Schedule III authority	Can be provided by primary care clinician

*While technically FDA approved for adolescents, strict rules for administration limit the use of methadone in youth

ASAM, Principles of Addiction Medicine, 2015

Harm Reduction & Addressing Stigma



Harm Reduction

Remember that addiction is a chronic illness that often has cycles of recovery and recurrence

Even when young people are not interested in eliminating or reducing their substance use, engaging them in services can reduce the harms of substance use

- **Given Screening and treatment for HIV, hepatitis C, sexually transmitted infections**
- Education about safe injection and syringe exchange
- □ Pre-exposure prophylaxis (PrEP)
- Overdose education and naloxone distribution

Engagement in these services allows youth to more easily obtain treatment when they are ready

Winer JM, Yule AM, Hadland SE, Bagley SM. Addressing adolescent substance use with a public health prevention framework: the case for harm reduction. Ann Med. 2022 Dec;54(1):2123-2136. doi: 10.1080/07853890.2022.2104922. PMID: 35900132; PMCID: PMC9341337.

Overdose Prevention and Reversal with Naloxone

To reduce the risk of overdose, youth can:

- Never use alone
- □ Avoid polysubstance use, esp. with sedatives
- □ Call 911 in the event of overdose

Offer naloxone to all youth and families

- Overdose reversal agent (opioid antagonist)
- Different from nal<u>trex</u>one for OUD treatment
- □ Easy-to-use nasal spray
- □ May need multiple administrations to reverse fentanyl overdose
- Given out free from health departments
- Can be prescribed; typically covered by insurance

❑ Narcan[™] approved 3/2023 for over the counter use and will be available soon



Lifesaving Naloxone (cdc.gov) Polysubstance Use Facts (cdc.gov) Stop Overdose (cdc.gov)

Stigma & Language of Addiction





DEDICATED TO THE HEALTH OF ALL CHILDREN™

Recommended Terminology for Substance Use Disorders in the Care of Children, Adolescents, Young Adults, and Families

Rachel H. Alinsky, MD, MPH, FAAP,^a Scott E. Hadland, MD, MPH, MS, FAAP,^b Joanna Quigley, MD, FAAP,^c Stephen W. Patrick, MD, MPH, MS, FAAP,^d COMMITTEE ON SUBSTANCE USE AND PREVENTION

American Academy of Pediatrics Recommended Terminology for Stigma Reduction

Say This

- Substance use disorder
- Intoxicated or in withdrawal
- Using
- Drinking
- Person with an SUD
- Person who injects drugs
- Treatment not effective
- Concerned loved one
- Treatment, medications for addiction treatment
- Remission, recovery

Alinsky, etal. Recommended Terminology for Substance Use Disorders in the Care of Children, Adolescents, Young Adults, and Families. *Pediatrics* June 2022; 149

Not This

- Drug abuse, drug dependence
- Strung out, tweaking, high, drunk
- Getting high
- Getting drunk
- Addict, junkie, user
- Injection drug user
- Non-compliant, failed treatment
- Enabler
- Medication assisted treatment,
 - opioid replacement
- Clean or "Got clean"



Conclusions

Overdose deaths are at historic levels – driven by illicitlymanufactured fentanyl and increasingly psychostimulants

Despite declining drug use in adolescents, overdose mortality among youth has increased

A public health approach to overdose deaths is critical and clinicians can play an important role

Thank you for your participation!



CENTERS FOR DISEASE CONTROL AND PREVENTION For more information, please contact:

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Disclaimer: The findings and conclusions in this presentation are those of the presenter and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

SUPPLEMENTAL SLIDES



Youth Risk Behavior Survey, 2019

nearly 1 in 7 students reported misusing prescription opioids

Schools can:

Nationwide

- Develop substance use prevention programs
- ✓ Implement programs with individual, school and family interventions



Friedman J, Godvin M, Shover CL, Gone JP, Hansen H, Schriger DL. Trends in Drug Overdose Deaths Among US Adolescents, January 2010 to June 2021. *JAMA*. 2022;327(14):1398–1400

*2021 data Based on 6 months of data annualized to an annual rate.