

Lobby Poll

What types of strategies are you implementing or have implemented recently?

- Education and Awareness
- Prescription drug disposal programs
- Prescription drug monitoring programs
- Prescribing and dispensing regulations/policies
- Law enforcement actions
- Treatment and follow-up services
- Naloxone access and promotion strategies
- Help-seeking promotion strategies
- Supervised consumption facilities
- Other: Write in Chat Box

What types of strategies are others implementing in your community? (same list of options)

- Education and Awareness
- Prescription drug disposal programs
- Prescription drug monitoring programs
- Prescribing and dispensing regulations/policies
- Law enforcement actions
- Treatment and follow-up services
- Naloxone access and promotion strategies
- Help-seeking promotion strategies
- Supervised consumption facilities
- Other: Write in Chat Box



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Northwest (HHS Region 10)

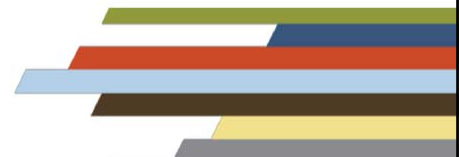
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Preventing Opioid Misuse and Opioid Overdose: Moving Upstream

*Kevin Haggerty, MSW, PhD; Northwest PTTC
Michelle Frye-Spray, MS, CPS; Northwest PTTC
Alyssa O'Hair, MPH, MA, CPS; Pacific Southwest PTTC*



Disclaimer

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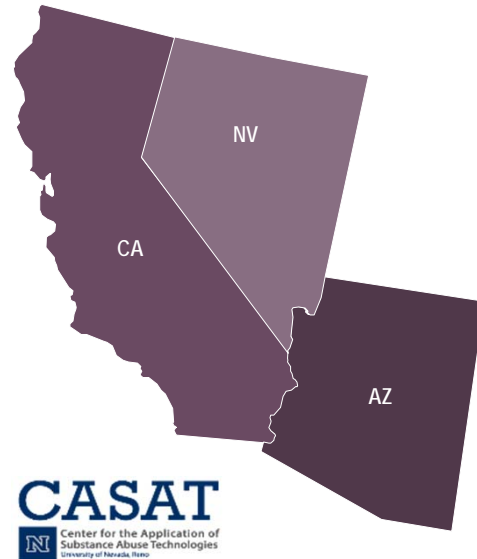
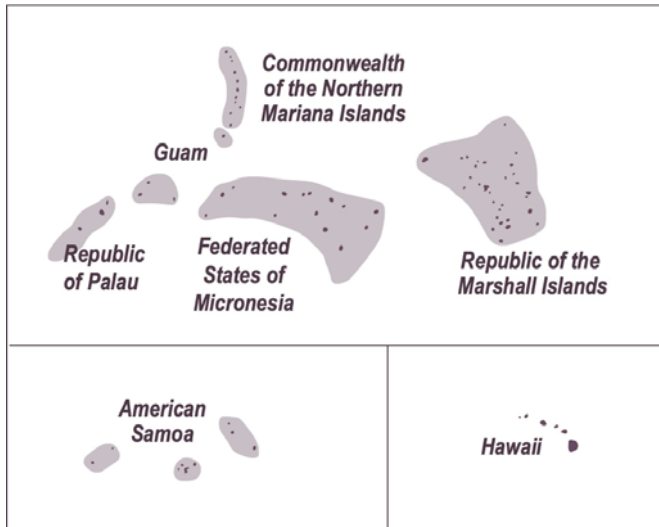
W SCHOOL OF SOCIAL WORK
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Prevention Science
Graduate Program
WASHINGTON STATE UNIVERSITY

CASAT
Center for the Application of
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University of Nevada, Reno

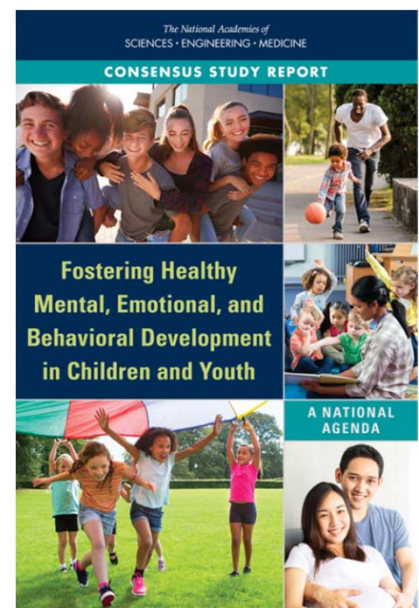
Pacific Southwest



Mark Your Calendars!

Cross-Regional Webinar:

November 26, 2019
3:00 PM – 4:30 PM Pacific



Presenters



Alyssa O'Hair, MPH, MA, CPS, Pacific Southwest PTTC Project Director

Ms. O'Hair is a Senior Manager, Workforce Development at the Center for the Application of Substance Abuse Technologies at the University of Nevada, Reno.



Michelle Frye-Spray, MS, CPS, Northwest PTTC Coordinator

Ms. Frye-Spray is a Project Manager at the Center for the Application of Substance Abuse Technologies at the University of Nevada, Reno.



Kevin P. Haggerty, MSW, PhD, Northwest PTTC Project Director

Dr. Haggerty is a Professor at the UW School of Social Work, and Director of the Social Development Research Group.

Webinar Objectives

- Describe what is known in the research about risk and protective factors associated with opioid misuse
- List a variety of interventions that prevent opioid misuse and overdoses
- Describe the current evidence of effectiveness of these interventions



What are opioids?

- **Prescription Opioids** can be prescribed by doctors to treat moderate to severe pain, but can also have serious risks and side effects.
 - Common types are oxycodone (OxyContin), hydrocodone (Vicodin), morphine, and methadone.
- **Heroin** is an illegal opioid.
- **Fentanyl** is a synthetic opioid pain reliever. It is many times more powerful than other opioids and is approved for treating severe pain, typically advanced cancer pain.
 - Illicitly manufactured fentanyl has been on the rise in several states.

<https://www.cdc.gov/drugoverdose/opioids/index.html>

The Opioid Crisis: Concern and Hope

True or False?

Drug Overdose Deaths
increased between 2015 and
2017



Poll Question

What percentage of drug overdose deaths involved an opioid?

- a) 43%
- b) 59%
- c) 68%
- d) 88%



About **2/3** of Drug Overdose Deaths Involve an Opioid

In 2015: **52,404** overdose deaths; **63.1%** involved an opioid¹

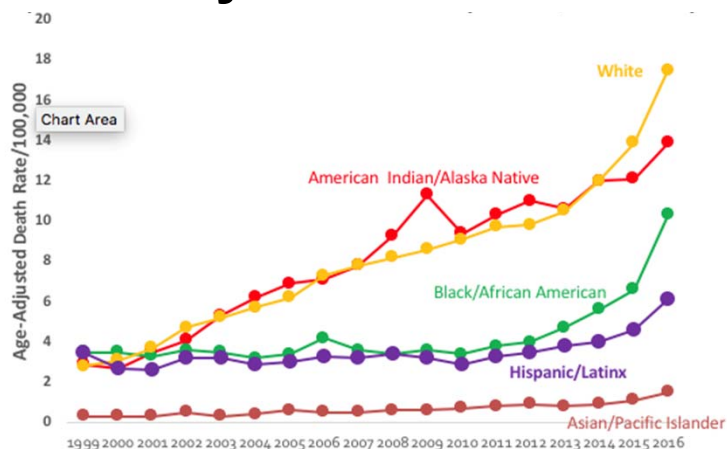
In 2016: **63,632** overdose deaths; **66.4%** involved an opioid²

In 2017: **70,237** overdoses accounted; **67.8%** involved opioids³

On average, 130 Americans die every day after overdosing on opioids⁴

The CDC estimates the total economic burden of prescription opioid misuse alone in the United States is **\$78.5 billion a year**, including the costs of healthcare, lost productivity, substance use disorder treatment, and criminal justice involvement.⁵

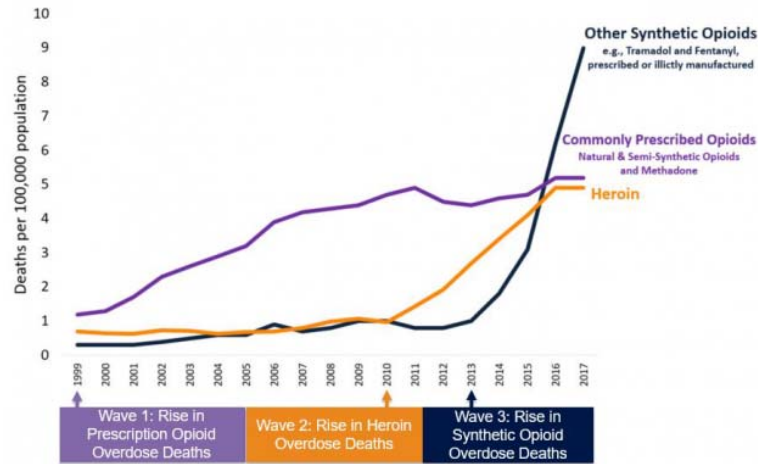
Opioid Overdose Death Rates by Race/Ethnicity⁶



Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html>

1999-2016 Any Opioid

Three Waves of the Rise in Opioid Overdose Deaths⁷



SOURCE: National Vital Statistics System Mortality File.

Poll Question

Has opioid misuse/heroin use increased, decreased, or remained stable since 2015?

- a) Increased
- b) Decreased
- c) Remained stable
- d) Not sure

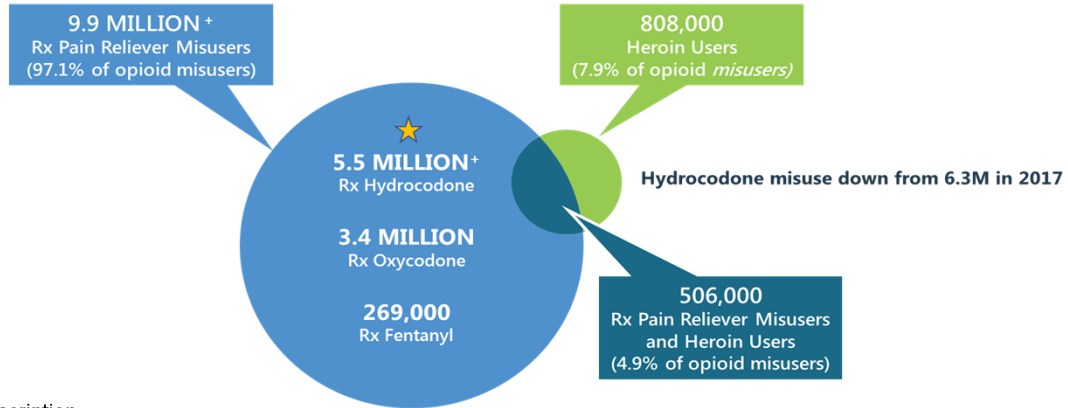


Opioids' Grip Lessening: Prescription Pain Reliever Misuse⁸

★ Significant decrease from 11.4M opioid misusers in 2017

PAST YEAR, 2018 NSDUH, 12+

10.3 MILLION PEOPLE WITH OPIOID MISUSE (3.7% OF TOTAL POPULATION)



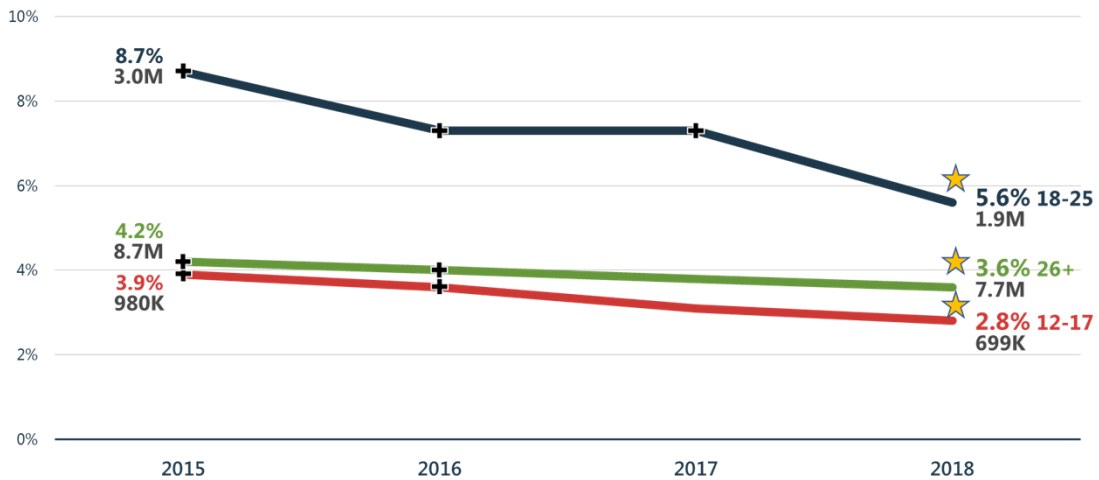
Rx = prescription.

Opioid misuse is defined as heroin use or prescription pain reliever misuse.

+ Difference between this estimate and the 2017 estimate is statistically significant at the .05 level.

Opioid Misuse⁸

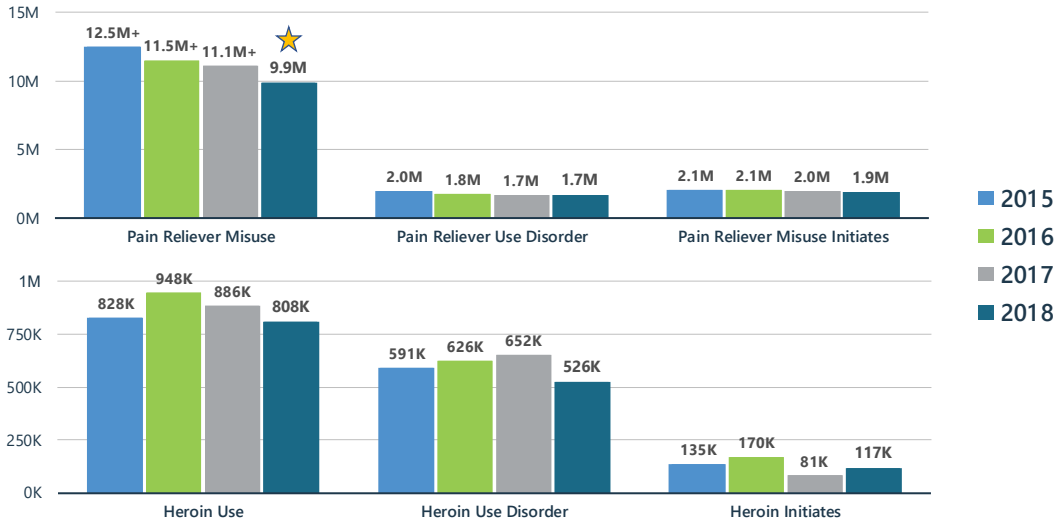
PAST YEAR, 2015-2018 NSDUH, 12+



+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Prescription Pain Reliever Misuse and Heroin Use⁸

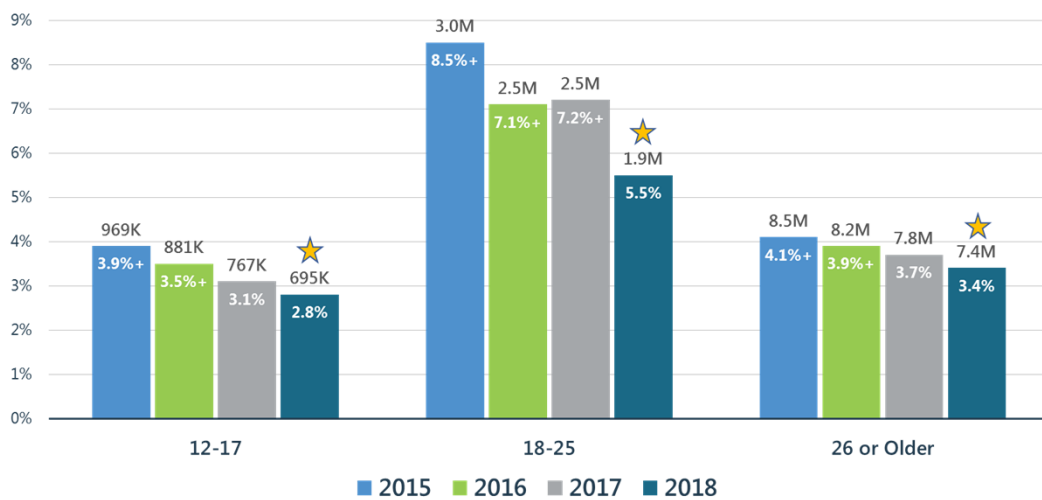
PAST YEAR, 2015-2018 NSDUH, 12+



+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

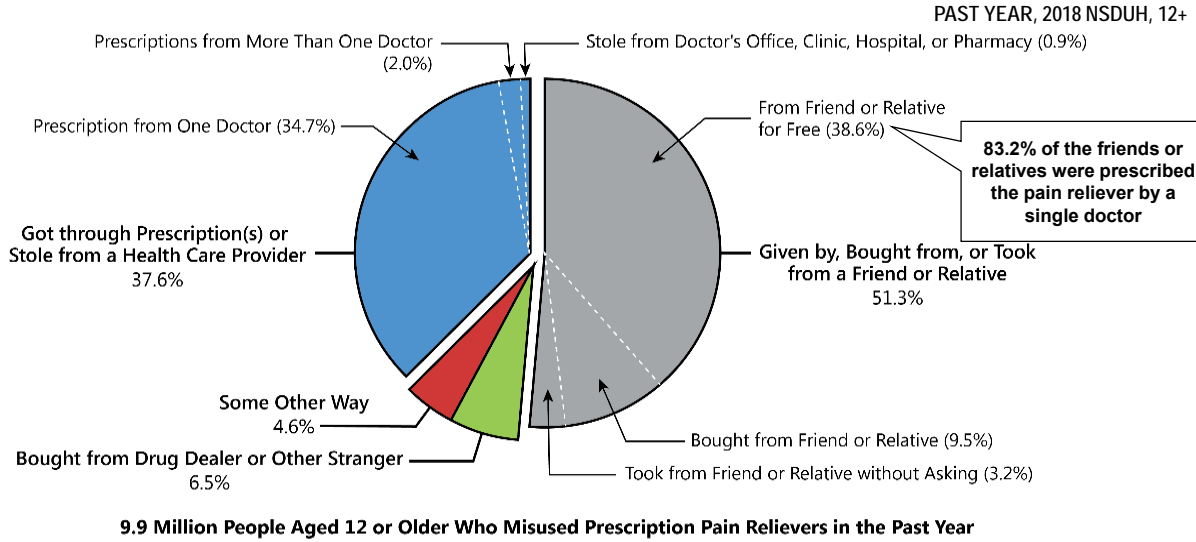
Prescription Pain Reliever Misuse⁸

PAST YEAR, 2015-2018 NSDUH, 12+

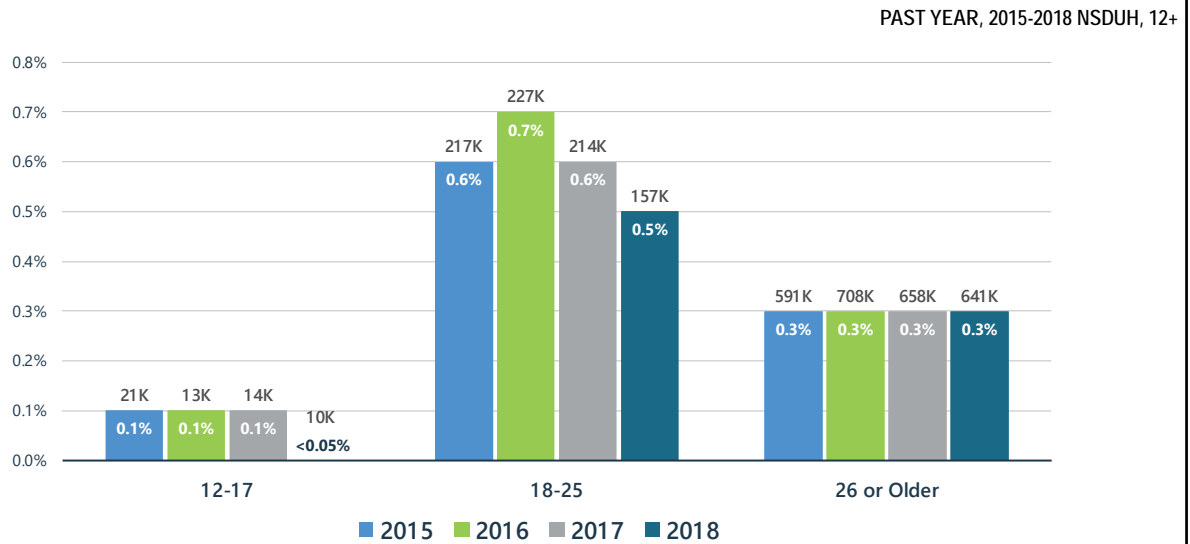


+ Difference between this estimate and the 2018 estimate is statistically significant at the .05 level.

Source Where Pain Relievers Were Obtained for Most Recent Misuse among People Aged 12 or Older Who Misused Prescription Pain Relievers in the Past Year: Percentages, 2017⁸



Heroin Use: Declining in 18-25 Year Olds⁸



No differences between prior year estimates and the 2018 estimates are statistically significant at the .05 level.

Rising Number of People Initiating with Heroin⁹

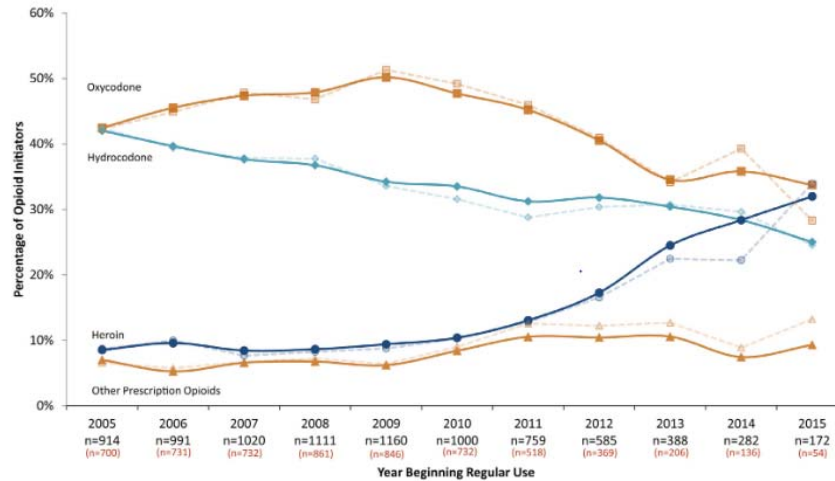
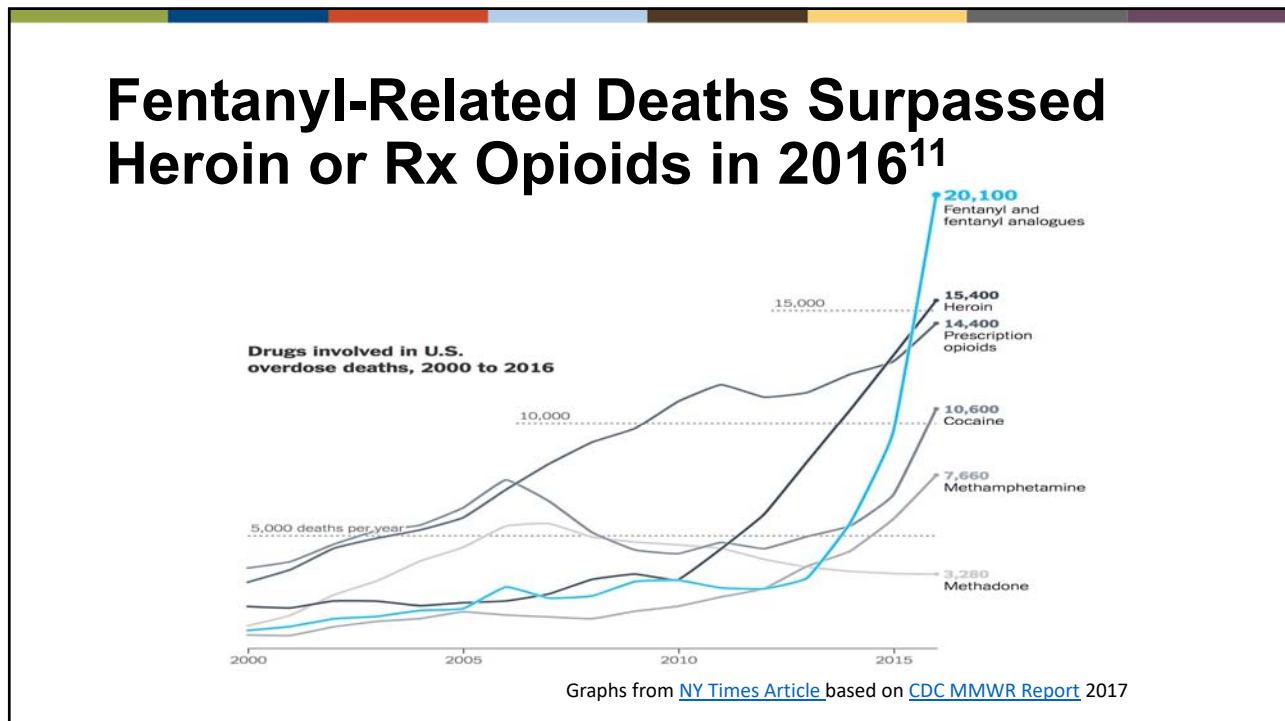
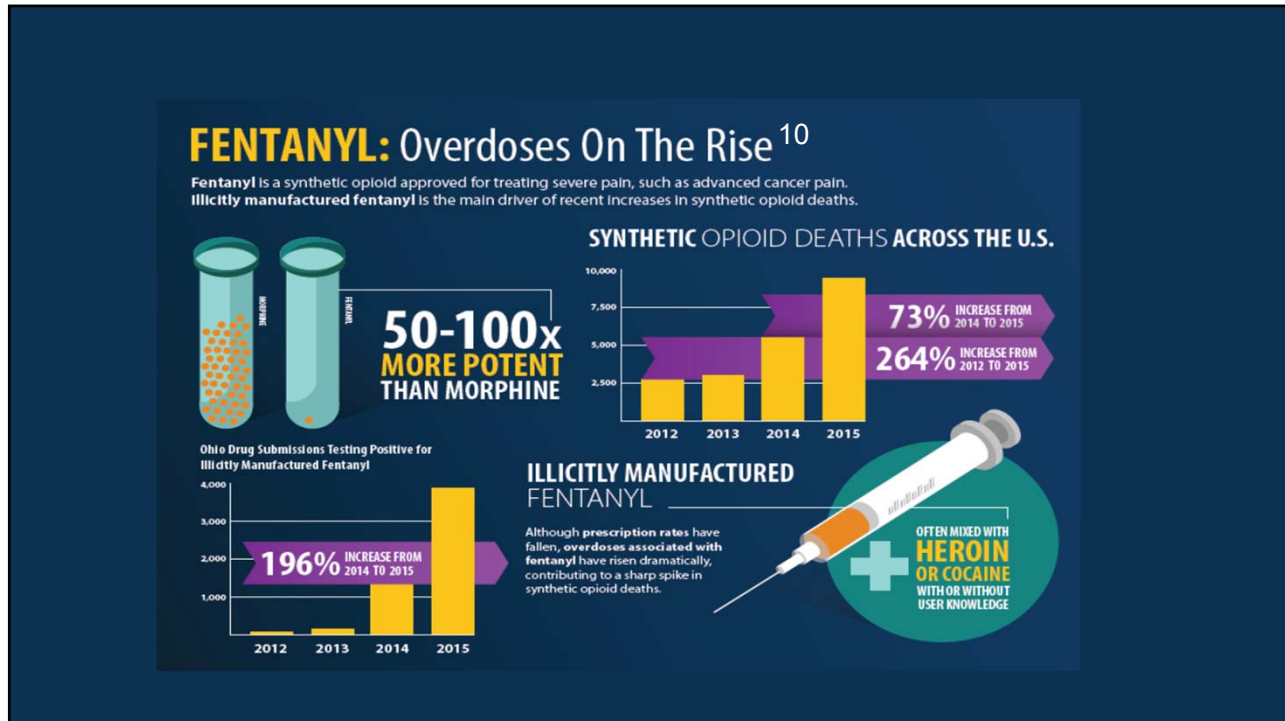


Fig. 1. First opioid of regular abuse among opioid initiators from 2005 to 2015 (N = 8382).

Chat

If Rx Opioid misuse and heroin use in some populations are **decreasing**, why are drug overdose rates that involve opioids **increasing**?

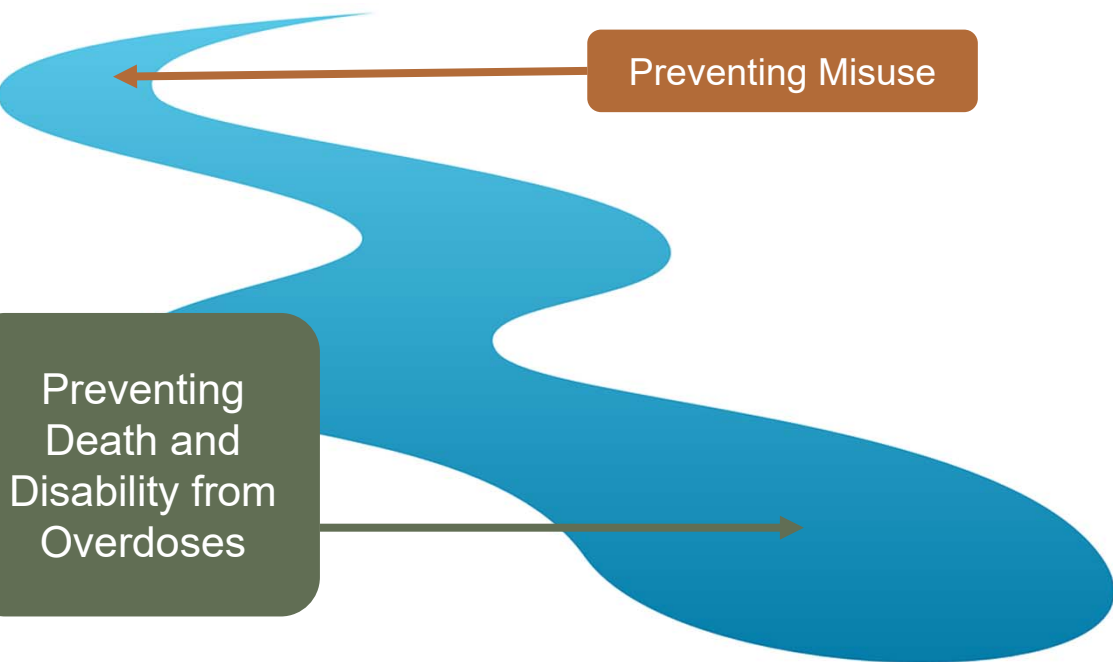




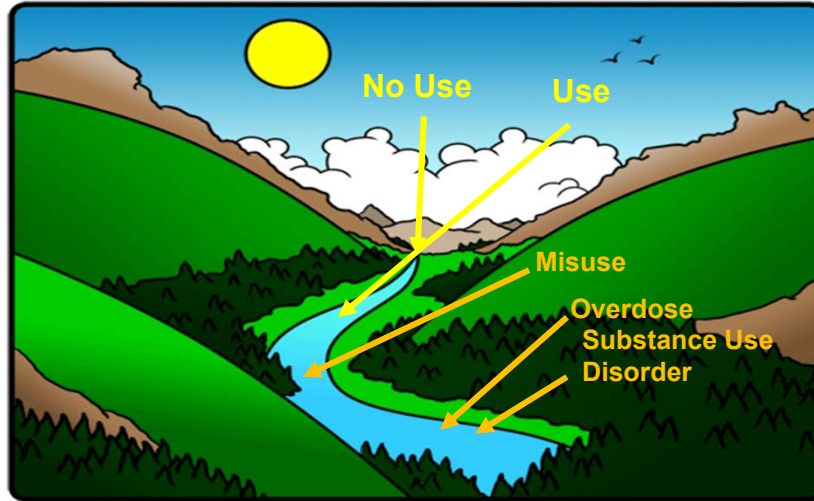
Chat Box Question

What about this data concerns you?

What brings you hope?

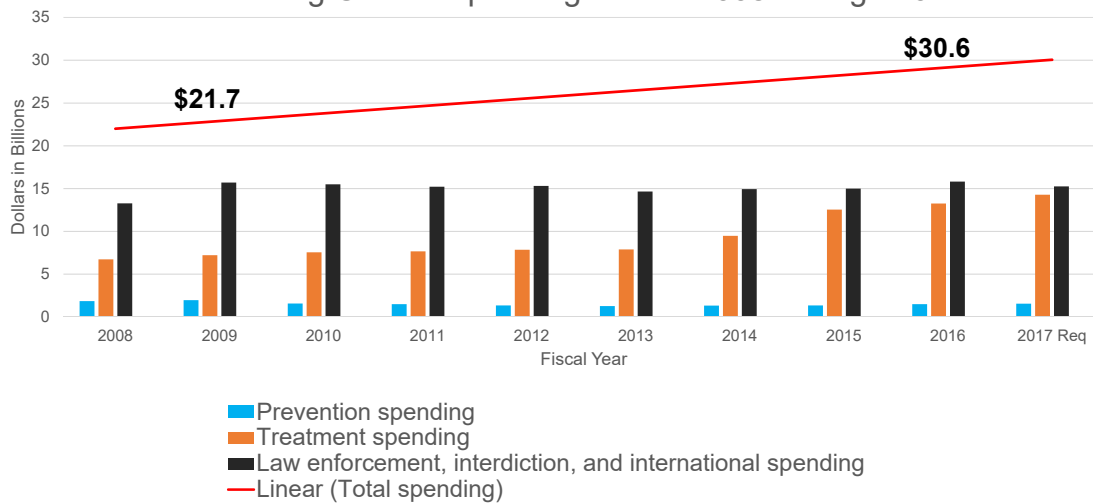


Upstream and Downstream Approaches



Despite the Evidence We Continue to Invest Little in Prevention¹²

Federal Drug Control Spending For FY 2008 through 2017

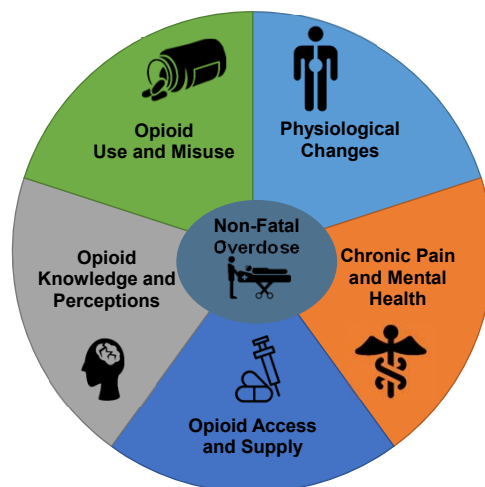


Chat

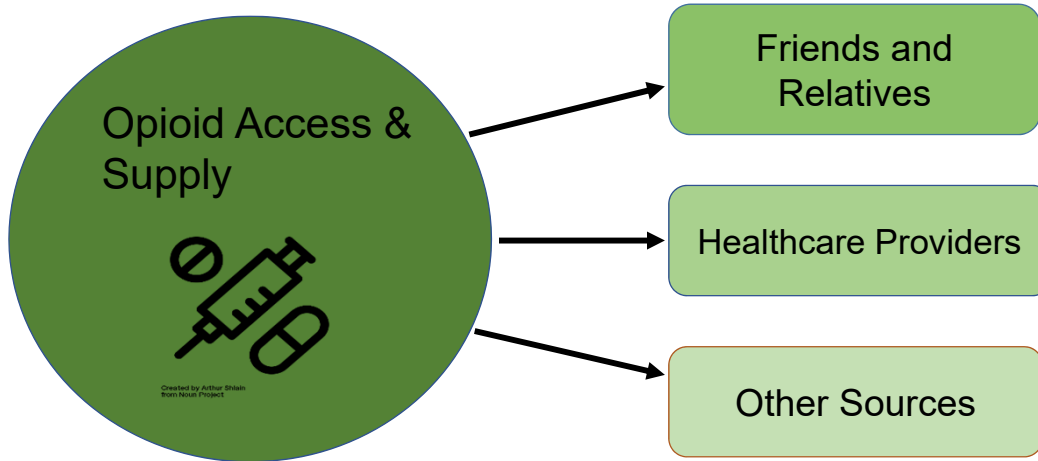
- How can we better advocate for the use of prevention dollars upstream?



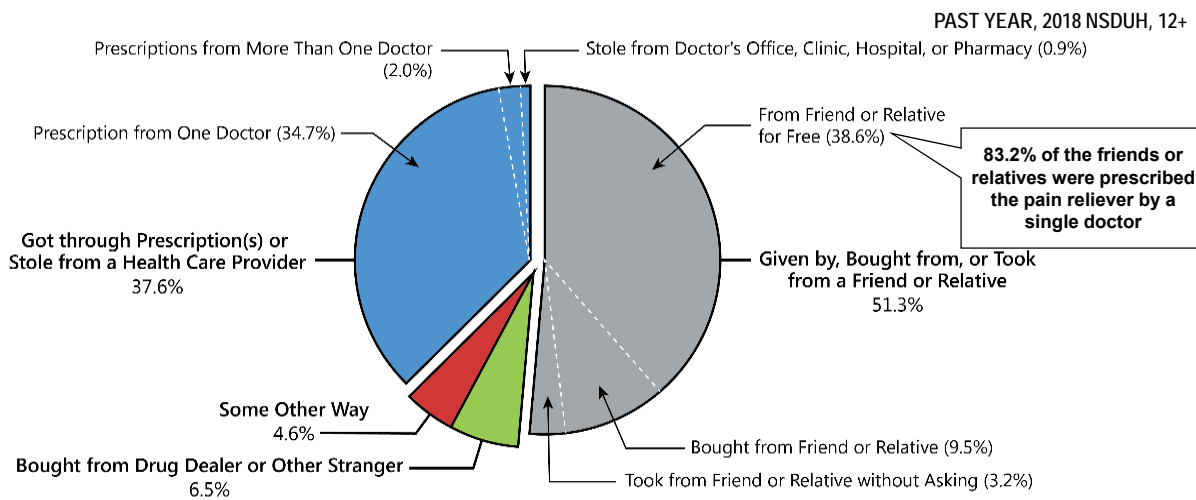
Factors Associated with Opioid Overdose



How are individuals obtaining opioids?^{13,14}



Source Where Pain Relievers Were Obtained for Most Recent Misuse among People Aged 12 or Older Who Misused Prescription Pain Relievers in the Past Year: Percentages, 2017⁸



9.9 Million People Aged 12 or Older Who Misused Prescription Pain Relievers in the Past Year

Nonmedical Prescription Opioid Users Are Multiple Drug Users¹⁵

20 year old suburban sample	None	<10x/yr	>10x/yr
Alcohol	82.6	98.9	100.0
Tobacco	42.2	88.6	91.7
Marijuana	45.1	92.6	96.4
Cocaine	4.6	38.3	72.6
Psychedelics	6.1	45.1	64.3
Ecstasy	6.5	41.1	64.3
Amphetamines	3.4	26.9	63.1
Sedatives	0.8	20.6	45.2
Heroin	0.2	4.6	17.9
Any illicit drug	45.7	94.9	96.4
Any illicit drug excluding marijuana	11.7	68.6	85.7
Mean number of illicit drugs including marijuana	0.67	2.69	4.23

Binge Drinking and Prescription Opioid Misuse¹⁶

- According to the CDC, more than half of the 4.2 million people who misuse prescription opioids in the U.S. also binge drink. (www.cdc.gov/alcohol)
- Drinking alcohol while using opioids increases the risk of overdose and death
- Widespread use of effective community-based strategies for preventing binge drinking—such as regulating the number of places that sell alcohol in any given neighborhood—could reduce opioid misuse and overdoses involving alcohol.

Chat

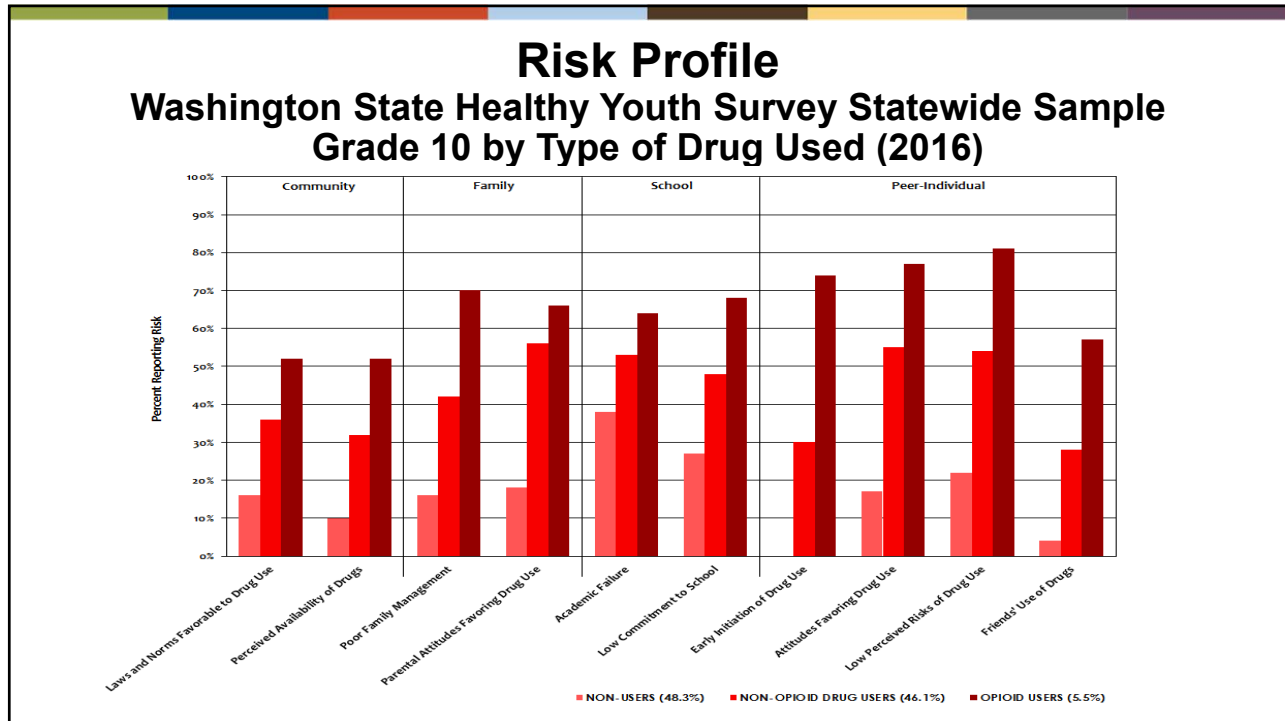
- Are you making the link with binge drinking, polysubstance use, and opioid overdose death prevention in your community? If so, how?



Adolescent Substance Use and Young Adult Substance Use: Example Risk Factors¹⁷

Table 3.1: Risk Factors for Adolescent and Young Adult Substance Use

Risk Factors	Definition	Adolescent Substance Use	Young Adult Substance Use
Individual/Peer			
Early initiation of substance use ^{46,47}	Engaging in alcohol or drug use at a young age.	✓	✓
Early and persistent problem behavior ^{48,49}	Emotional distress, aggressiveness, and "difficult" temperaments in adolescents.	✓	
Rebelliousness ^{48,50}	High tolerance for deviance and rebellious activities.	✓	✓
Favorable attitudes toward substance use ^{51,52}	Positive feelings towards alcohol or drug use, low perception of risk.	✓	✓
Peer substance use ^{53,55}	Friends and peers who engage in alcohol or drug use.	✓	✓
Genetic predictors ⁵⁶	Genetic susceptibility to alcohol or drug use.	✓	✓
Family			
Family management problems (monitoring, rewards, etc.) ^{57,60}	Poor management practices, including parents' failure to set clear expectations for children's behavior, failure to supervise and monitor children, and excessively severe, harsh, or inconsistent punishment.	✓	✓
Family conflict ^{61,63}	Conflict between parents or between parents and children, including abuse or neglect.	✓	✓
Favorable parental attitudes ^{64,65}	Parental attitudes that are favorable to drug use and parental approval of drinking and drug use.	✓	✓
Family history of substance misuse ^{66,67}	Persistent, progressive, and generalized substance use, misuse, and use disorders by family members.	✓	✓



Example Risk Factors: Community¹⁷

Risk Factors	Definition	Adolescent Substance Use	Young Adult Substance Use
School			
Academic failure beginning in late elementary school ^{68,69}	Poor grades in school.	✓	✓
Lack of commitment to school ^{70,71}	When a young person no longer considers the role of the student as meaningful and rewarding, or lacks investment or commitment to school.	✓	✓
Community			
Low cost of alcohol ^{70,72}	Low alcohol sales tax, happy hour specials, and other price discounting.	✓	✓
High availability of substances ^{73,74}	High number of alcohol outlets in a defined geographical area or per a sector of the population.	✓	✓
Community laws and norms favorable to substance use ^{75,76}	Community reinforcement of norms suggesting alcohol and drug use is acceptable for youth, including low tax rates on alcohol or tobacco or community beer tasting events.	✓	✓
Media portrayal of alcohol use ^{77,79}	Exposure to actors using alcohol in movies or television.	✓	
Low neighborhood attachment ^{80,81}	Low level of bonding to the neighborhood.	✓	
Community disorganization ^{82,83}	Living in neighborhoods with high population density, lack of natural surveillance of public places, physical deterioration, and high rates of adult crime.	✓	
Low socioeconomic status ^{84,85}	A parent's low socioeconomic status, as measured through a combination of education, income, and occupation.	✓	
Transitions and mobility ^{80,86}	Communities with high rates of mobility within or between communities.	✓	

Protective Factors¹⁷

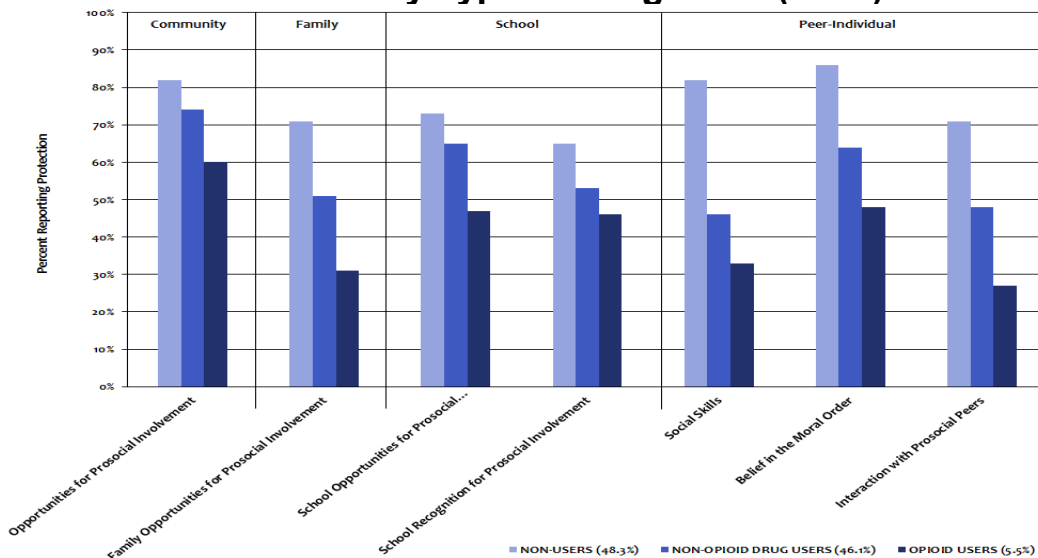
Table 3.2: Protective Factors for Adolescent and Young Adult Substance Use

Protective Factors	Definition	Adolescent Substance Use	Young Adult Substance Use
Individual			
Social, emotional, behavioral, cognitive, and moral competence ^{87,88}	Interpersonal skills that help youth integrate feelings, thinking, and actions to achieve specific social and interpersonal goals.	✓	✓
Self-efficacy ^{89,90}	An individual's belief that they can modify, control, or abstain from substance use.	✓	✓
Spirituality ^{91,92}	Belief in a higher being, or involvement in spiritual practices or religious activities.	✓	✓
Resiliency ⁹³	change and stressful events in healthy and flexible ways.	✓	✓
Family, School, and Community			
Opportunities for positive social involvement ^{93,94}	Developmentally appropriate opportunities to be meaningfully involved with the family, school, or community.	✓	✓
Recognition for positive behavior ⁵¹	Parents, teachers, peers and community members providing recognition for effort and accomplishments to motivate individuals to engage in positive behaviors in the future.	✓	✓
Bonding ^{95,97}	Attachment and commitment to, and positive communication with, family, schools, and communities.	✓	✓
Marriage or committed relationship ⁹⁸	Married or living with a partner in a committed relationship who does not misuse alcohol or drugs.		✓
Healthy beliefs and standards for behavior ^{51,99}	Family, school, and community norms that communicate clear and consistent expectations about not misusing alcohol and drugs.	✓	✓

Note: These tables present some of the key risk and protective factors related to adolescent and young adult substance initiation and misuse.

(See Surgeon General's Report: *Facing Addiction*, 2016)

Protective Profile Washington State Healthy Youth Survey Statewide Sample Grade 10 by Type of Drug Used (2016)



*Additionally, policies and programs have been developed that are effective in preventing alcohol and drug misuse, and reducing its negative effects. **Addressing risk and protective factors for individuals and communities can help prevent opioid misuse.***

--Surgeon General¹⁷

Spectrum of Mental, Emotional, and Behavioral Health Interventions¹⁸

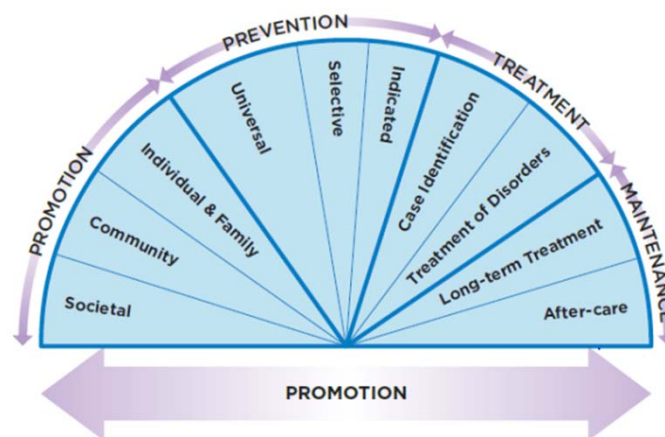


FIGURE 1-3 2019 update of the spectrum of MEB interventions.

The Prevention Paradox

Is it better to provide intervention for a selective group most at risk for a problem or a universal intervention for an entire population?

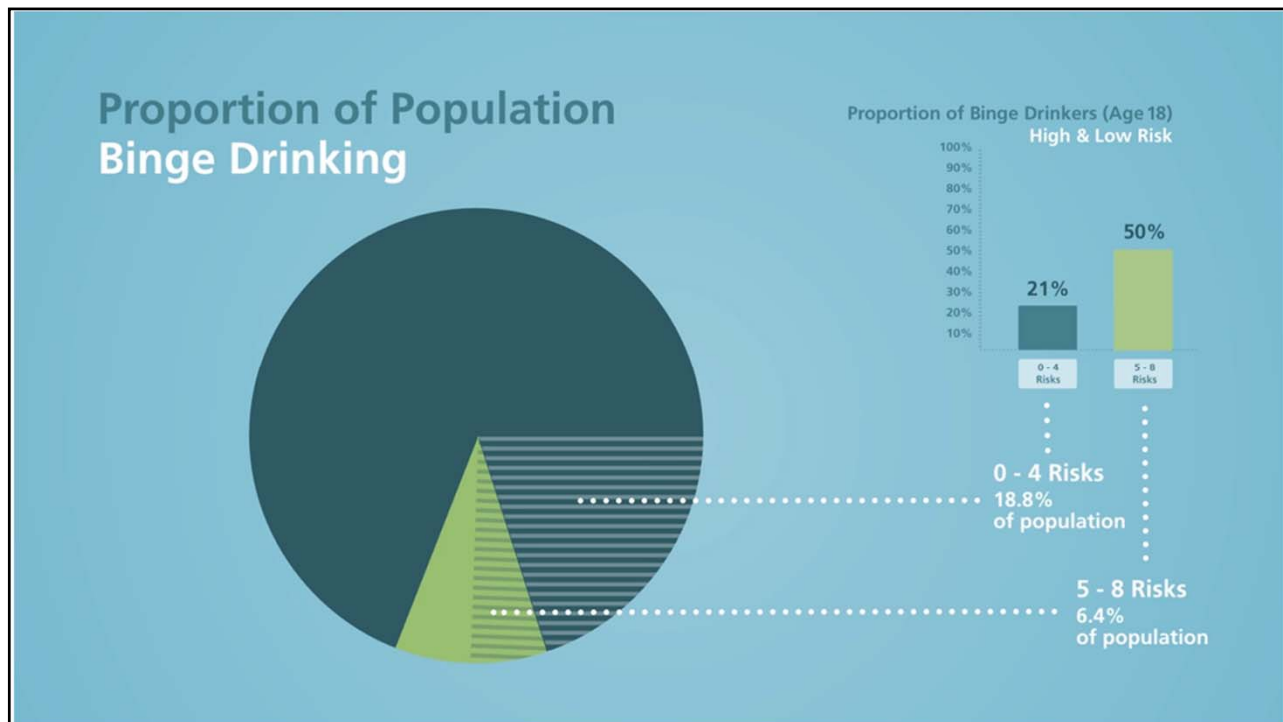


Prevention Paradox: Rose's Theorem¹⁹

A large number of people exposed to a small risk may generate many more cases than a small number of people exposed to high risk.

--(Rose, 1992, pg 24)





Chat

How can we better communicate the value of prevention and the prevention paradox to our stakeholders?



And there is hope...



Effective Prevention Programs Surgeon General's Report (SGR)¹⁷

- Its never too early or too late
- Effective prevention programs have reduced substance misuse:
 - Community-based
 - Family-based
 - School-based
 - Brief motivational interventions in colleges and emergency rooms
 - Workplace
 - Primary care

U.S. Department of Health and Human Services (HHS), Office of the Surgeon General, *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*. Washington, DC: HHS, November 2016.

OVER 90 EFFECTIVE POLICIES AND PROGRAMS PROVEN TO PREVENT BEHAVIORAL HEALTH PROBLEMS ARE NOW AVAILABLE

Effective programs: www.blueprintsprograms.com; O'Connell, Boat & Warner, 2009.

Effective policies: Anderson et al. 2009; Catalano et al. 2012; Hingson & White 2013; Vuolo et al., 2016, **Surgeon General, 2016.**

Effective prevention saves money: www.wsipp.wa.gov
Washington State Institute for Public Policy Benefit-Cost Results,
May 2017

Effective Prevention Programs (SGR)¹⁷

Ages 0-10:

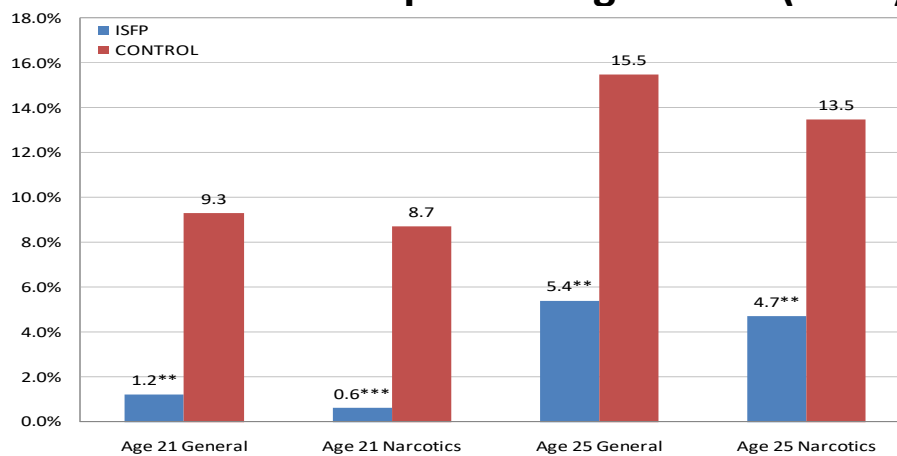
- Nurse Family Partnership
- Raising Healthy Children
- Good Behavior Game
- Classroom Centered Intervention
- Linking the Interests of Teachers and Families
- Fast Track
- Preventive Treatment Program

Effective Prevention Programs (SGR)¹⁷

Ages 10-18:

- Life Skills Training
- School Health and Alcohol Harm Reduction Program
- Preventure/Adventure
- Unplugged
- keepin' it REAL
- Atlas
- **Strengthening Families 10-14**
- Guiding Good Choices
- Strong African American Families
- SODAS City
- I Hear What You are Saying
- Familias Unidas
- Bicultural Competence Skills Training
- Project Chill
- Positive Family Support
- Keep Safe
- Coping Power
- Project Towards No Drug Use

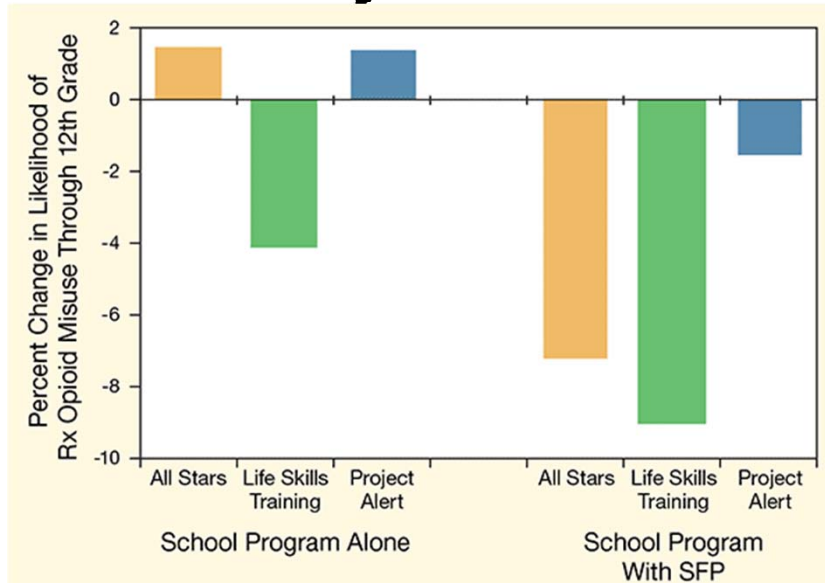
Iowa Strengthening Families 10-14 Young Adult **Outcomes**^{20,21} Lifetime Prescription Drug Misuse (PDM)



p<.01; *p<.001; RRRs = 65-93%

Notes: General=Misuse of narcotics or CNS depressants or stimulants.

Life Skills Training reduced the risk of Opioid Misuse by Grade 12²²



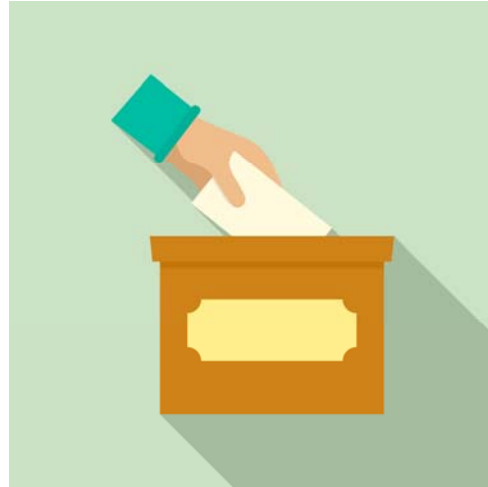
Effective Prevention Programs (SGR)¹⁷

Ages 18+:

- BASICS
- Parent Handbook
- Yale Work and Family Stress Project
- Brief Motivational Intervention in Emergency Departments
- Team Awareness
- Computerized Alcohol-Related Problems Survey
- Project Share

Poll Question

- Who is implementing, or has implemented, any of these examples of Evidence Based Interventions listed in the Surgeon General Report?



Policy Interventions: Alcohol Misuse²³

- Increase Alcohol Taxes
- Regulate Alcohol Outlet Density
- Dram shop (Commercial Host) Liability
- Avoid Further Privatization of Alcohol Sales
- Maintain limits on Days of Sale
- Maintain Limits on Hours of Sale
- Enhanced Enforcement of Laws Prohibiting Sales to Minors
- Electronic Screening and Brief Intervention (e-SBI)

State, Community and Systems-Level Prevention Strategies to Address the Opioid Crisis²⁴

1. State prescribing legislation and regulation
2. Prescription drug monitoring programs (PDMPs)
3. Insurance and pharmacy benefit management
4. Clinical guideline implementation
5. Provider education
6. Clinical health system interventions
7. Naloxone education and distribution
8. Safe storage and disposal
9. Public education
10. Community coalitions
11. Interventions employing public safety and public health collaborations

Putting Prevention Science To Use!

- We know what predicts many problems, including substance use
- We know what works for upstream prevention: programs, policies, and practices (3Ps)
- We know that communities are an effective organizing force

Implications

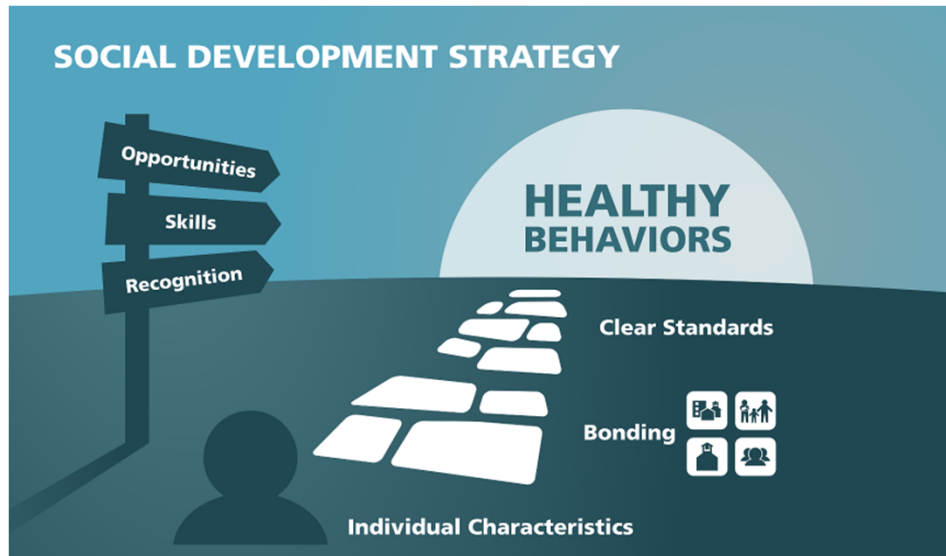
Effective prevention of opioid misuse is within our reach!

- **Preventing substance use uptake of all types is likely to reduce opioid misuse**
- Increase investment in prevention programs and policies proven to work to reduce opioid use
- Combine interventions shown to prevent multiple behavioral health problems including opioid misuse

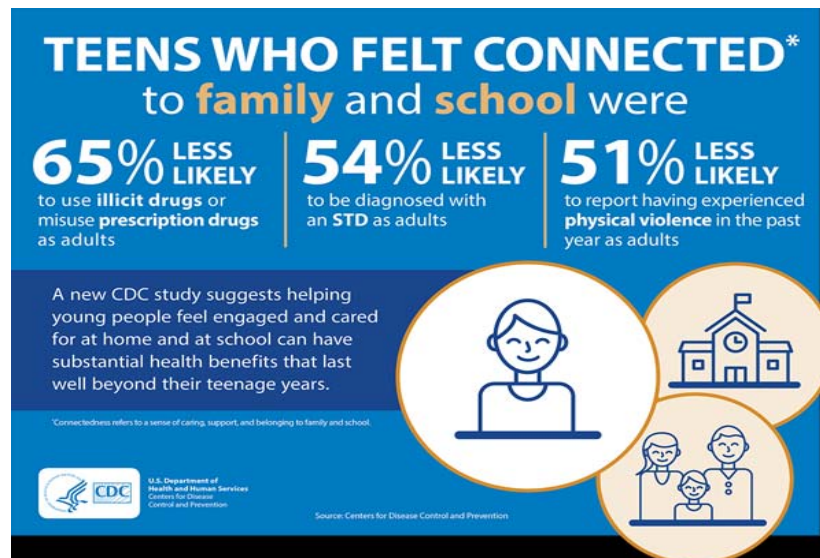
Going to Scale with Evidence-based Prevention

- Communities must select programs appropriate to their risk, protection, and substance use profile
- **Program Delivery/Policy Implementation**
 - **Fidelity**
 - **Program fit/adaptation**
 - **Program reach**
 - **Little research on policy implementation processes**
- Research scaling of programs/policies to learn how to increase fidelity, fit, adaptation and reach

Build Protection!



Connections Matter²⁵



Positive relationships can buffer childhood trauma and toxic stress²⁶

Overall Study Results:

- Positive Childhood Experiences (PCEs) show a dose-response association with adult mental and relational health, analogous to the cumulative effects of multiple ACEs
- Findings suggest that PCEs may have lifelong consequences for mental and relational health despite co-occurring adversities such as ACEs

What resources or training do you think prevention practitioners need from the PTTC in order to make this happen?

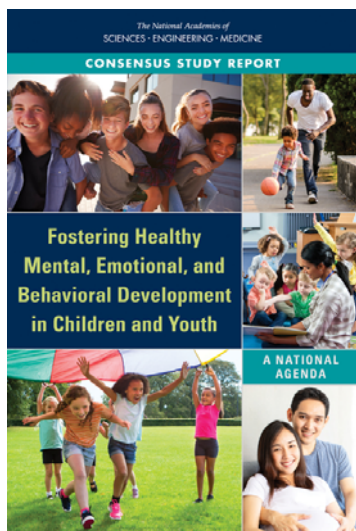


Being a 'Hope Dealer'

- How can you be that 'hope dealer' where you are?
- What can we do to bring prevention more upstream?



Learn More: Upcoming Webinar



- Date: November 26, 2019
- Time: 3:00 PM Pacific

Please Provide Your Feedback!

Region 9 PTTC: <https://ttc-gpra.org/P?s=341195>

Region 10 PTTC: <https://ttc-gpra.org/P?s=747453>



References

- ¹Rudd, R. A., Seth, P., David, F., & Scholl, L. (2016, December 30). Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. *MMWR. Morbidity and Mortality Weekly Report*, 65, 1445-1452.
- ²Seth, P., Scholl, L., Rudd, R. A., & Bacon, S. (2018). Overdose Deaths Involving Opioids, Cocaine, and Psychostimulants — United States, 2015–2016. *MMWR Morb Mortal Wkly Rep*, 67(12): 349–358. doi: [10.15585/mmwr.mm6712a1](https://doi.org/10.15585/mmwr.mm6712a1)
- ³Scholl L, Seth P, Kariisa M, Wilson N, Baldwin G. Drug and Opioid-Involved Overdose Deaths — United States, 2013–2017. *MMWR Morb Mortal Wkly Rep* 2019;67:1419–1427. DOI: [http://dx.doi.org/10.15585/mmwr.mm675152e1](https://doi.org/10.15585/mmwr.mm675152e1)
- ⁴National Institute on Drug Abuse (NIDA). (2019, January). *Opioid Overdose Crisis*. Retrieved from <https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis>
- ⁵Florence, C. S., Zhou, C., Luo, F., & Xu, L. (2016). The Economic Burden of Prescription Opioid Overdose, Abuse, and Dependence in the United States, 2013. *Medical Care*, 54(10), 901-906.
- ⁶Centers for Disease Control and Prevention, National Center for Health Statistics (2017). Multiple cause of death 1999-2016 on CDC WONDER Online Database. Accessed at <http://wonder.cdc.gov/mcd-icd10.html>
- ⁷Centers for Disease Control and Prevention, National Center for Injury Prevention and Control (2018). Opioid Basics: Understanding the Epidemic. <https://www.cdc.gov/drugoverdose/epidemic/index.html#three-waves>
- ⁸Substance Abuse and Mental Health Services Administration. (2018). Key substance use and mental health indicators in the United States: Results from the 2017 National Survey on Drug Use and Health (HHS Publication No. SMA 18-5068, NSDUH Series H-53). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>
- ⁹Cicero, T. J., Kasper, Z. A., & Ellis, m. S. (2017). Increased use of heroin as an initiating opioid of abuse: Further considerations and policy implications. *Addictive Behaviors*, 87, 267-271. doi:10.1016/j.addbeh.2018.05.030

References

- ¹⁰Scholl L., Seth P., Kariisa M., Wilson N., & Baldwin G. (2019). Drug and Opioid-Involved Overdose Deaths — United States, 2013–2017. *Morbidity and Mortality Weekly Report*, 67, 1419–1427. doi: <http://dx.doi.org/10.15585/mmwr.mm675152e1>
- ¹¹CDC MMWR Report 2017
- ¹²ONDCP federal drug control spending for FY 2008 through 2017
- ¹³Yang, Z., Wilsey, B., Bohm, M., Weyrich Roy, K., Ritley, D., Jones, C., & Melnikow, J., (2015). Defining risk of prescription opioid overdose: pharmacy shopping and overlapping prescriptions among long-term opioid users in Medicaid. *Journal of Pain*, 16(5), 445-453. doi: 10.1016/j.jpain.2015.01.475
- ¹⁴Neira-León, M., Barrio, G., Bravo, M. J., Brugal, et al., (2011). Infrequent opioid overdose risk reduction behaviours among young adult heroin users in cities with wide coverage of HIV prevention programmes. *International Journal of Drug Policy*, 22(1), 16-25. <https://doi.org/10.1016/j.drugpo.2010.06.003>
- ¹⁵Catalano, R. F., White, H. R., Fleming, C. B., & Haggerty, K. P. (2011). Is nonmedical prescription opiate use a unique form of illicit drug use? *Addictive Behaviors*, 36(1-2), 79-86. doi:10.1016/j.addbeh.2010.08.028
- ¹⁶Esser, M. B. Guy, G. P., Zhang, K., & Brewer, R. D., (2019). Binge drinking and prescription opioid misuse in the U.S., 2012–2014. *American Journal of Preventive Medicine*, 57(2), 197 – 208. doi: 10.1016/j.amepre.2019.02.025
- ¹⁷U.S. Department of Health and Human Services, Office of the Surgeon General, (2016). *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*. Washington, DC: HHS.
- ¹⁸National Academies of Sciences, Engineering, and Medicine (2019). *Fostering Healthy Mental, Emotional, and Behavioral Development in Children and Youth: A National Agenda*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25201>.
- ¹⁹Rose, G. (1992). *Rose's Strategy of Preventive Medicine*. New York: Oxford University Press.

References

- ²⁰Spoth, R., Trudeau, L., Shin, C., Ralston, E., Redmond, C., Greenberg, M., & Feinberg, M. (2013). Longitudinal effects of universal preventive intervention on prescription drug misuse: three randomized controlled trials with late adolescents and young adults. *American Journal of Public Health*, 103(4): 665-672. doi: 10.2105/AJPH.2012.301209
- ²¹Spoth, R. L., Randall, G. K., Trudeau, L., Shin, C., & Redmond, C., (2008). Substance use outcomes 5½ years past baseline for partnership-based, family-school preventive interventions. *Drug and Alcohol Dependence*, 96(1-2): 57-68. doi: 10.1016/j.drugalcdep.2008.01.023
- ²²NIDA Notes December 2015
- ²³Community Preventive Services Task Force. (2016). Preventing excessive alcohol consumption. The guide to community preventive services: The community guide. Retrieved from <http://www.thecommunityguide.org/alcohol/index.html>. Accessed on April 11, 2016 as cited in Surgeon General Report 2016: <https://addiction.surgeongeneral.gov/>
- ²⁴Haegerich, T., Jones, C., Cote, P., Robinson, A. Ross, L. (2019). Evidence for state community and systems-level prevention strategies to address the opioid crisis. *Drug and Alcohol Dependence*, 204, 107563. doi:10.1016/j.drugalcdep.2019.06.009
- ²⁵Steiner, R. J., Sheremenko, G., Lesesne C, et al. (2019). Adolescent connectedness and adult health outcomes. *Pediatrics*, 144(1):e20183766
- ²⁶Bethell, C., Jones, J., Gombojav, Linkenbach, J., Sege, R. (2019). Positive childhood experiences and adult mental and relational health in a statewide sample associations across adverse childhood experiences levels. *JAMA Pediatrics* doi: 10.1001/jamapediatrics.2019.3007