Adolescent Opioid Misuse

Peter Ziemkowski, MD, FAAFP

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The content of my material/presentation in this CME activity will include discussion of unapproved or investigational uses of products or devices as indicated: Some medications used for Medication-Assisted are not approved for use below age 16, though are advocated for use by several studies and guidelines. We will review use of buprenorphine, naloxone, naltrexone and methadone in patients down to age 13. The FDA-approved uses will always be noted.

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Dr. Ziemkowski is a graduate of the University of Illinois at Chicago and completed his family medicine residency at the Michigan State University Kalamazoo Center for Medical Studies. He practices family medicine in southwest Michigan, where he is on the faculty of the Western Michigan University Homer Stryker, MD, School of Medicine's Family Medicine Residency Program and serves as associate dean for Student Affairs. He has been teaching for 20 years and maintains a blog for residents. Dr. Ziemkowski is board certified in family medicine, and he is also certified by the American Board of Preventive Medicine (ABPM) in clinical informatics. He seeks to use technology to help educate patients on healthy lifestyles. Other clinical interests include the care of metabolic conditions associated with cardiovascular risk, including hypertension, hyperlipidemia, diabetes, and obesity. He believes that primary prevention of these diseases and their complications will deliver the greatest benefit to the greatest number of patients.

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Learning Objectives

1. Implement a validated tool to screen adolescents for opioid misuse.
2. Identify brief intervention and referral options for adolescents who are misusing opioids.
3. Describe characteristics of adolescent neurobiology and impact on risk for substance abuse.
4. Describe medication assisted therapy options for adolescent patients with opioid use disorders.

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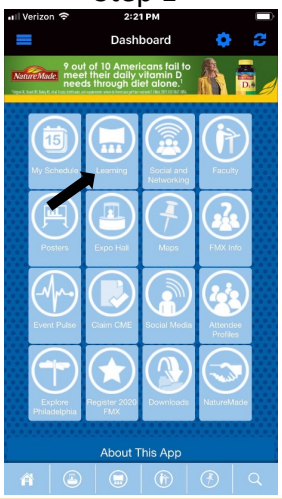
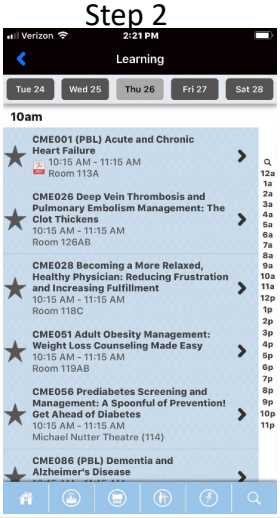
Audience Engagement System

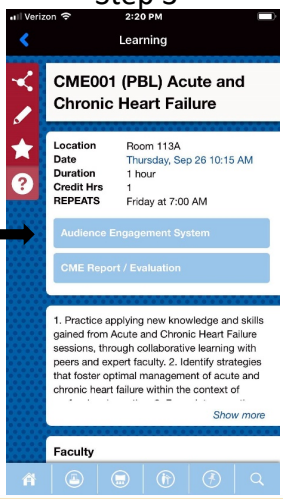
Step 1



Step 2



Step 3



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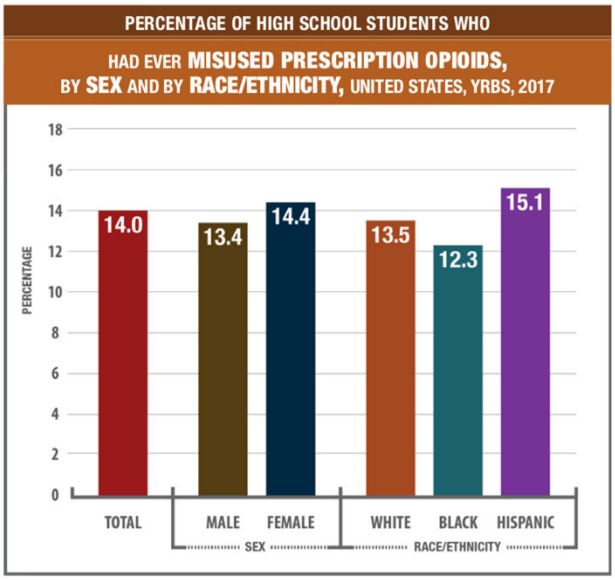
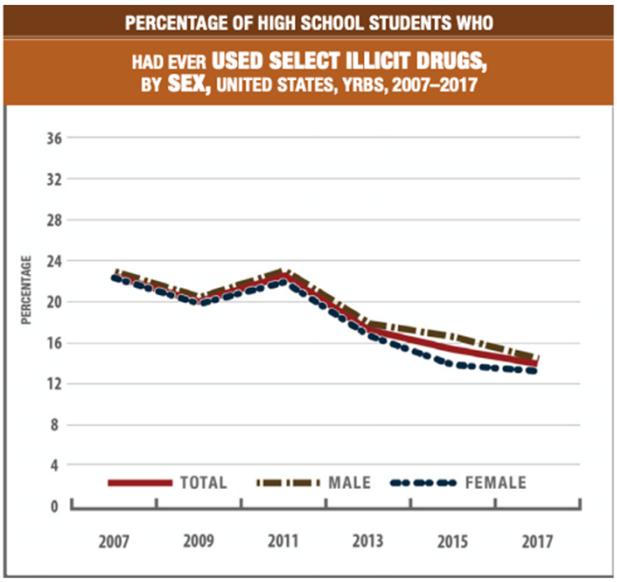
Substance Use Among Teens

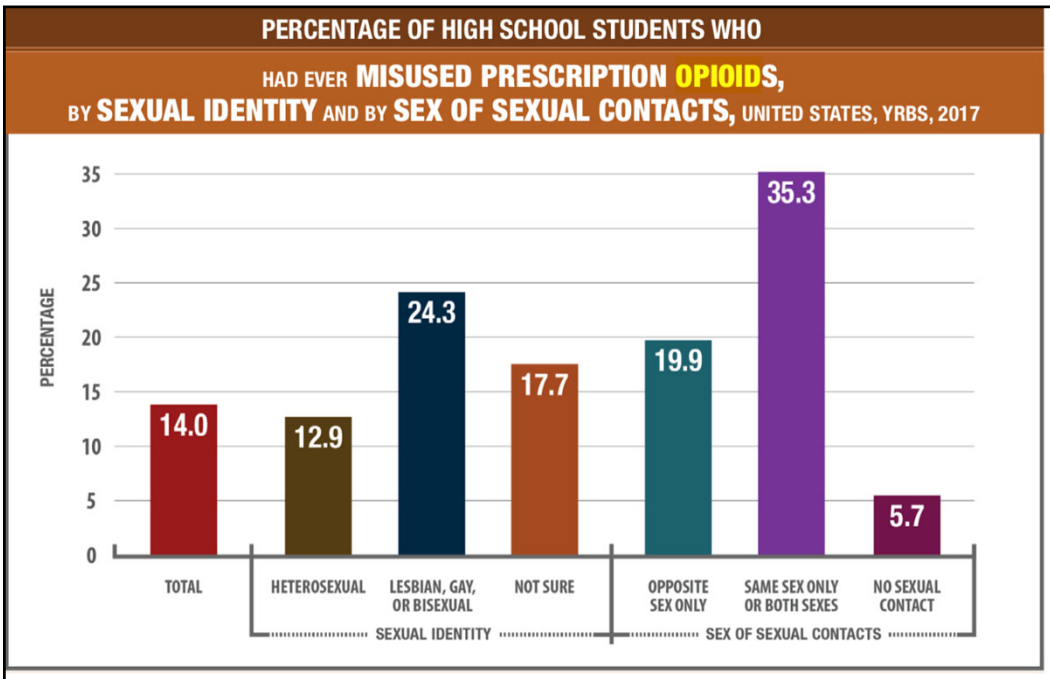
- The CDC Reports:
  - Alcohol, marijuana, and tobacco are substances most commonly used by adolescents.
  - By 12th grade, about two-thirds of students have tried alcohol.
  - About half of 9th through 12th grade students reported ever having used marijuana.
  - About 4/10 9th through 12th grade students reported having tried cigarettes.
  - **Among 12th graders, close to 2/10 reported using prescription medicine without a prescription.**
  - 12 to 20 years of age consume about one-tenth of all alcohol consumed in the United States.

CDC. Teen Substance Use & Risks [Internet]. Centers for Disease Control and Prevention. 2019 [cited 2019 Jun 10]. Available from: https://www.cdc.gov/features/teen-substance-use/index.html

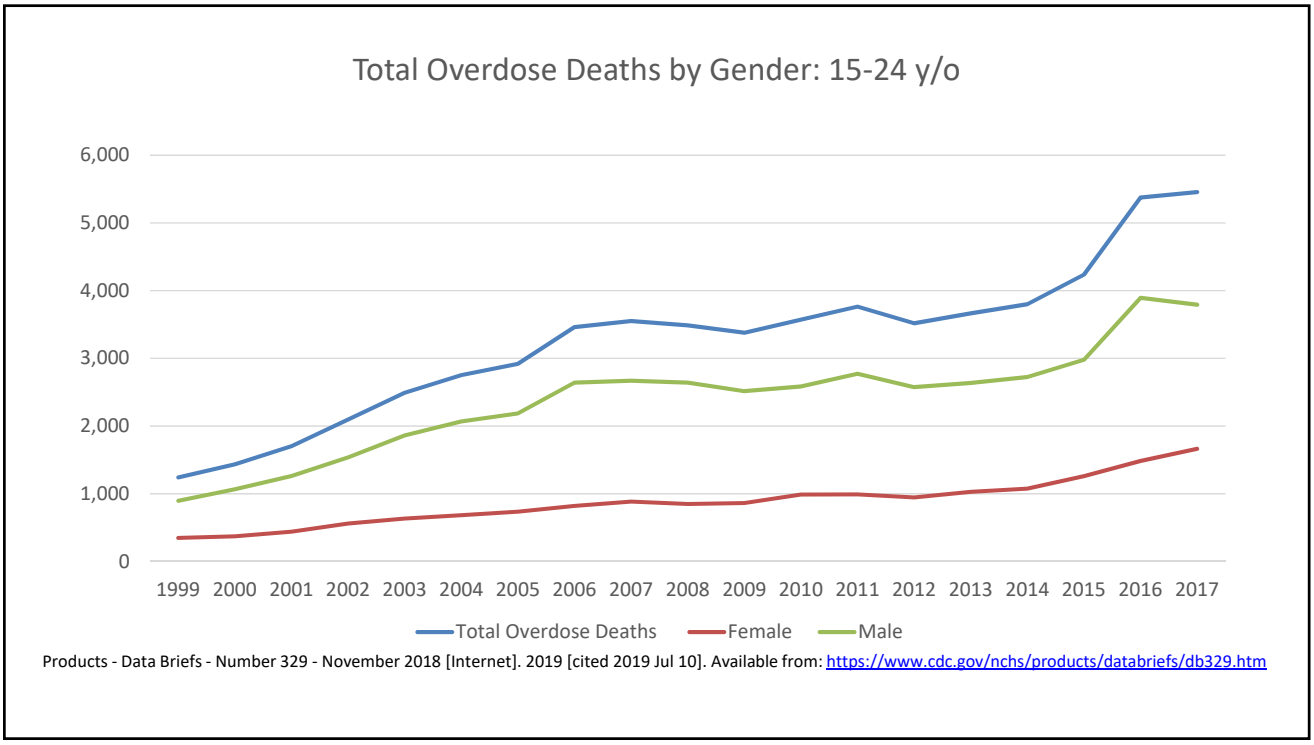




Centers for Disease Control and Prevention. 2017 Youth Risk Behavior Survey Data. Available at: www.cdc.gov/yrbs . Accessed on April 2, 2019



Centers for Disease Control and Prevention. 2017 Youth Risk Behavior Survey Data. Available at: www.cdc.gov/yrbs . Accessed on April 2, 2019

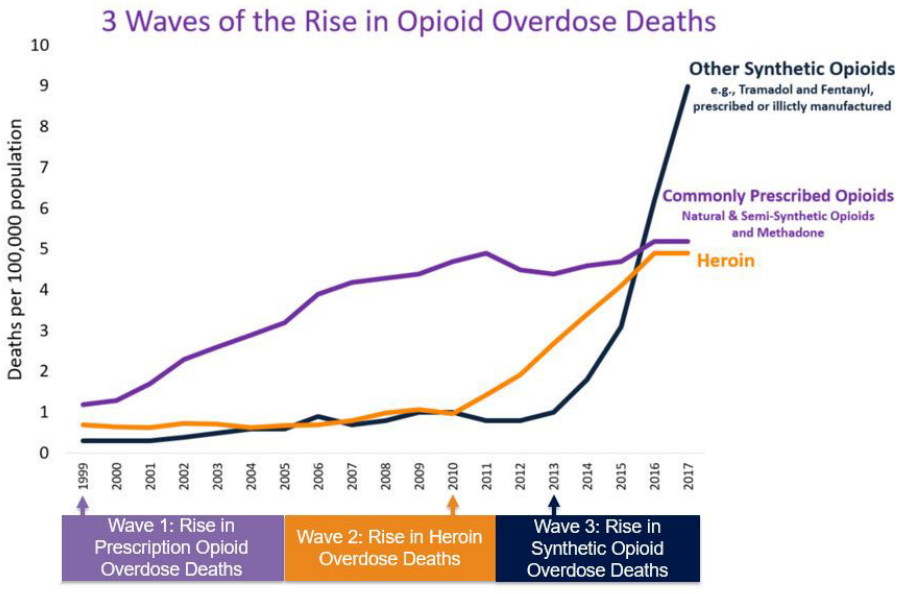


Products - Data Briefs - Number 329 - November 2018 [Internet]. 2019 [cited 2019 Jul 10]. Available from: https://www.cdc.gov/nchs/products/databriefs/db329.htm

AES Question #1

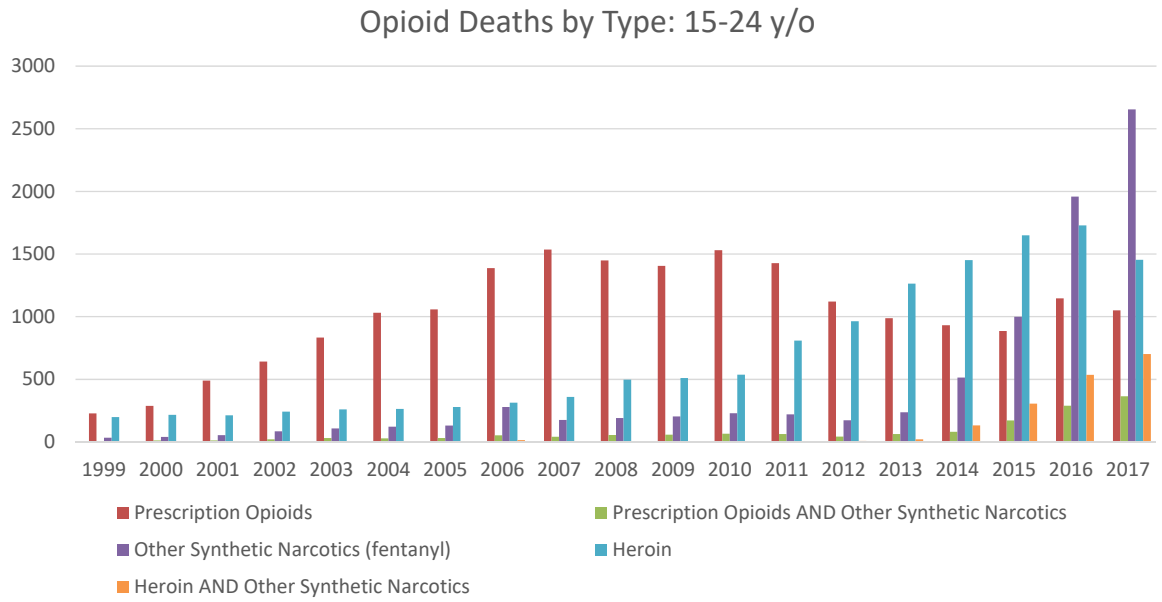
Which of the following types of opioids has lead to the greatest number of overdose deaths among those ages 15 to 24 over the last 5 years for which date is available? (2012-2017)

A. Prescription Opioids
B. Prescription Opioids mixed with Synthetic Narcotics
C. Heroin
D. Heroin mixed with Synthetic Narcotics
E. Other Synthetic Narcotics (fentanyl)



SOURCE: National Vital Statistics System Mortality File.

Understanding the Epidemic | Drug Overdose | CDC Injury Center [Internet]. 2018 [cited 2019 Jul 25]. Available from: https://www.cdc.gov/drugoverdose/epidemic/index.html



Products - Data Briefs - Number 329 - November 2018 [Internet]. 2019 [cited 2019 Jul 10]. Available from: https://www.cdc.gov/nchs/products/databriefs/db329.htm

Slang

- "Sizzurp, Lean, Purple Drank"
  - Codeine/promethazine cough syrup + soft drink (+/- hard candy)
  - Popularized by hip-hop in 90's
    - at least 4 hip-hop star deaths
  - Many death/hospitalizations

https://commons.wikimedia.org/wiki/Category:Purple_drank#/media/File:Purple_Drank.jpg

Sources

- SAMHSA
  - Substance Abuse and Mental Health Services Administration
    - www.samhsa.gov
- NIH:NIDA
  - National Institute on Drug Abuse
    - www.drugabuse.gov

Opioid Use Disorder (OUD)

- What is OUD?
  - OUD is defined in the DSM-5 as a problematic pattern of opioid use leading to clinically significant impairment or distress.
  - OUD was previously classified as Opioid Abuse or Opioid Dependence in DSM-IV.

Module 5: Assessing and Addressing Opioid Use Disorder (OUD) [Internet]. [cited 2019 Jul 21]. Available from: https://www.cdc.gov/drugoverdose/training/oud/accessible/index.html

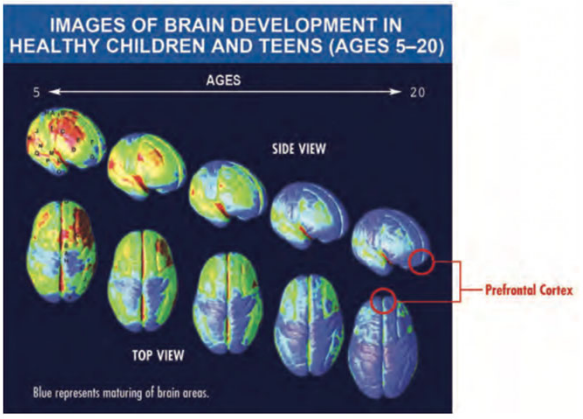
DSM-5 Diagnostic Criteria for OUD

- In order to confirm a diagnosis of OUD, at least two of the following should be observed within a 12-month period:
  - Opioids are often taken in larger amounts or over a longer period than was intended.
  - There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
  - A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
  - Craving, or a strong desire or urge to use opioids.
  - Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home.
  - Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
  - Important social, occupational, or recreational activities are given up or reduced because of opioid use.
  - Recurrent opioid use in situations in which it is physically hazardous.
  - Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
  - Exhibits tolerance.
  - Exhibits withdrawal.

Module 5: Assessing and Addressing Opioid Use Disorder (OUD) [Internet]. [cited 2019 Jul 21]. Available from: https://www.cdc.gov/drugoverdose/training/oud/accessible/index.html

Adolescent Neurobiology

"The adolescent brain is often likened to a car with a fully functioning gas pedal (the reward system) but weak brakes (the prefrontal cortex)"



The brain continues to develop through early adulthood. Mature brain regions at each developmental stage are indicated in blue. The prefrontal cortex (red circles), which governs judgment and self-control, is the last part of the brain to mature.

NIDA. Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide. National Institute on Drug Abuse website. https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide. January 14, 2014. Accessed July 8, 2019.

Adolescent Neurobiology

- More vulnerable to temptation
  - Reward pathways develop before prefrontal cognition
- Sustained substance use affect neuropsychological functioning
  - Results in attention deficits, memory problems and decreased cognitive flexibility

Kulak JA, Griswold KS. Adolescent Substance Use and Misuse: Recognition and Management. Am Fam Physician. 2019 Jun 1;99(11):689–96.

"While many social and cultural factors affect drug use trends, when young people perceive drug use as harmful, they often reduce their level of use."

NIDA. (2018, July 20). Drugs, Brains, and Behavior: The Science of Addiction. Retrieved from https://www.drugabuse.gov/publications/drugs-brains-behavior-science-addiction on 2019, July 9

Screening Tools

- “81% of patients seeking SUD treatment had been seen by a primary care physicians the previous year.”

Kulak JA, Griswold KS. Adolescent Substance Use and Misuse: Recognition and Management. Am Fam Physician. 2019 Jun 1;99(11):689–96.

SBIRT

- Screening,
- Brief Intervention,
- Referral to Treatment
- = SBIRT

Single Question Screening

- "How many times in the past year have you used an illegal drug or used a prescription medication for nonmedical reasons?"
  - Nonmedical = "For instance, because of the experience or feeling it caused."

Shapiro B, Coffa D, McCance-Katz EF. A primary care approach to substance misuse. Am Fam Physician. 2013 Jul 15;88(2):113–21.

Drug Abuse Screening Test

- DAST
  - 10 questions or 20 questions
  - Scored Yes=1/No=0
    - (except Q 3 = 1 point for No)
- DAST-10 Scoring
  - 0 points = low risk
  - 1-3 points = moderate risk
    - Monitor/reassess
  - > 3 points = substance abuse/dependence
- Sensitivity = 90% to 100%
- Specificity = 77%

Shapiro B, Coffa D, McCance-Katz EF. A primary care approach to substance misuse. Am Fam Physician. 2013 Jul 15;88(2):113–21.

DAST-10

1. Have you used drugs other than those required for medical reasons?
2. Do you abuse more than one drug at a time?
3. Are you always able to stop using drugs when you want to? (If never use drugs, answer “Yes”)
4. Have you had "blackouts" or "flashbacks" as a result of drug use?
5. Do you ever feel bad or guilty about your drug use? (If never use drugs, choose “No”)
6. Does your spouse (or parents) ever complain about your involvement with drugs?
7. Have you neglected your family because of your use of drugs?
8. Have you engaged in illegal activities in order to obtain drugs?
9. Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?
10. Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?

From: https://www.integration.samhsa.gov/clinical-practice/DAST_-_10.pdf Accessed: July 10, 2019

A Primary Care Approach

- Hazardous Use
  - Infrequent
  - Risks health/dependence
- Substance abuse
  - Consequences from use
- Substance dependence
  - Chronic relapsing illness

Shapiro B, Coffa D, McCance-Katz EF. A primary care approach to substance misuse. Am Fam Physician. 2013 Jul 15;88(2):113–21.

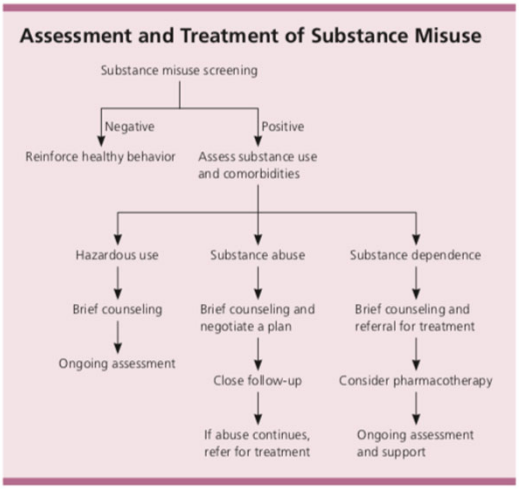


Figure 1. Algorithm for management of substance misuse in primary care.

A Primary Care Approach

- Brief Counseling
  - "Motivational Interviewing has been show to decrease quantity and frequency of drug and alcohol use."
  - Elicit patients own reasons for change

Shapiro B, Coffa D, McCance-Katz EF. A primary care approach to substance misuse. Am Fam Physician. 2013 Jul 15;88(2):113–21.

CRAFFT Screening Test

- 6 questions:
  - Car, Relax, Alone, Forget, Friends, Trouble
- For under age 21
  - American Academy of Pediatrics' Committee on Substance Abuse recommended
- Screens for simultaneous risky alcohol and other drug use disorders

From: https://www.integration.samhsa.gov/clinical-practice/sbirt/CRAFFT_Screening_interview.pdf, Accessed: July 10, 2019

The CRAFFT Screening Interview

Begin: "I'm going to ask you a few questions that I ask all my patients. Please be honest. I will keep your answers confidential."

Part A

During the PAST 12 MONTHS, did you:	No	Yes
1. Drink any alcohol (more than a few sips)? (Do not count sips of alcohol taken during family or religious events.)	☐	☐
2. Smoke any marijuana or hashish?	☐	☐
3. Use anything else to get high? ("anything else" includes illegal drugs, over the counter and prescription drugs, and things that you sniff or "huff")	☐	☐

For clinic use only: Did the patient answer "yes" to any questions in Part A?

No ☐ → **Ask CAR question only, then stop**

Yes ☐ → **Ask all 6 CRAFFT questions**

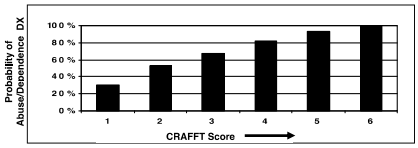
Part B

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

SCORING INSTRUCTIONS: FOR CLINIC STAFF USE ONLY

CRAFFT Scoring: Each "yes" response in **Part B** scores 1 point.
A total score of 2 or higher is a positive screen, indicating a need for additional assessment.

Probability of Substance Abuse/Dependence Diagnosis Based on CRAFFT Score[1,2]



DSM-IV Diagnostic Criteria[3] (Abbreviated)

Substance Abuse (1 or more of the following):
- Use causes failure to fulfill obligations at work, school, or home
- Recurrent use in hazardous situations (e.g. driving)
- Recurrent legal problems
- Continued use despite recurrent problems

Substance Dependence (3 or more of the following):
- Tolerance
- Withdrawal
- Substance taken in larger amount or over longer period of time than planned
- Unsuccessful efforts to cut down or quit
- Great deal of time spent to obtain substance or recover from effect
- Important activities given up because of substance
- Continued use despite harmful consequences

References:
1. Knight JR, Shrier LA, Bravender TD, Farrell M, Vander Bilt J, Shaffer HJ. A new brief screen for adolescent substance abuse. Arch Pediatr Adolesc Med 1999;153(6):591-6.
2. Knight JR, Sherritt L, Shrier LA, Harris SK, Chang G. Validity of the CRAFFT substance abuse screening test among adolescent clinic patients. Arch Pediatr Adolesc Med 2002;156(6):607-14.
3. American Psychiatric Association, Diagostic and Statistical Manual of Mental Disorders, fourth edition, text revision. Washington DC, American Psychiatric Association, 2000.

From: https://www.integration.samhsa.gov/clinical-practice/sbirt/CRAFFT_Screening_interview.pdf, Accessed: July 10, 2019

Screening Tools

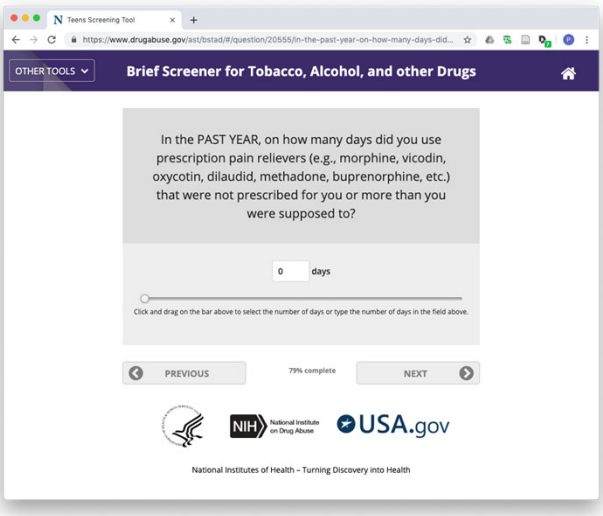
- POSIT
  - Problem Oriented Screening Instrument for Teenagers
    - Age 12-19
    - Questionnaire, 139 yes/no questions, 20-30 minutes
- NIH: National Institute on Drug Abuse (NIDA)
  - Screening and Assessment Tools Chart
    - https://www.drugabuse.gov/nidamed-medical-health-professionals/screening-tools-resources/chart-screening-tools

NIH: NIDA Tools for Adolescents

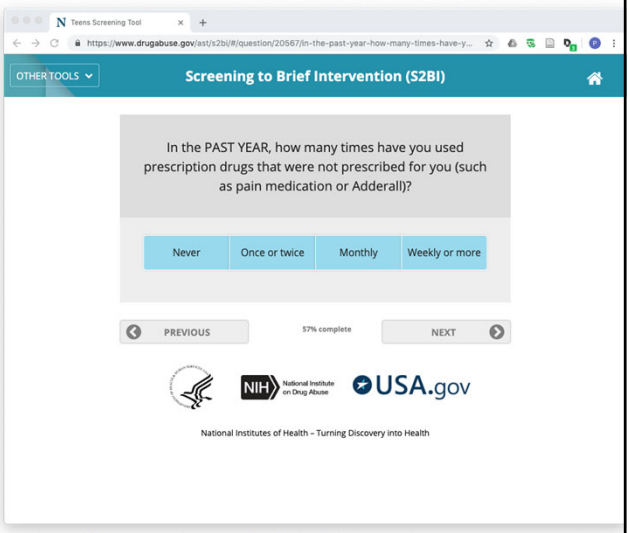
- Online tools for ages 12-17
- Take less than 2 minutes each
- Validated in adolescents
- Very similar
- Suggest you use the one best suited to your practice
  1. BSTAD:
     Brief Screener for Tobacco, Alcohol and other Drugs
     https://www.drugabuse.gov/ast/bstad/#/
  2. S2BI:
     Screening to Brief Intervention
     https://www.drugabuse.gov/ast/s2bi/#/

– 3 questions about frequency of:
  - Tobacco
  - Alcohol
  - Marijuana
– Those reporting use of any of these 3 are then asked about additional substance use.
– Divided into 3 categories
  - No reported use / Lower risk / Higher risk

From: https://www.drugabuse.gov/nidamed-medical-health-professionals/screening-tools-resources/screening-tools-for-adolescent-substance-use
Accessed: July 20, 2019



From: https://www.drugabuse.gov/ast/bstad/#/, Accessed: July 20, 2019



From: https://www.drugabuse.gov/ast/s2bi/#/, Accessed: July 20, 2019

Confidentiality

- Confidentiality in adolescent health visit is predictor of the number and subject of issues discussed
- Split-visit model
  - Parents in clinical visits for limited time
  - Offer exams and counseling separately as well.
  - Must explain benefits to both, clarify boundaries.

Kulak JA, Griswold KS. Adolescent Substance Use and Misuse: Recognition and Management. Am Fam Physician. 2019 Jun 1;99(11):689–96.

- "The AAFP believes that adolescents' access to confidential healthcare is important for their health and well-being, while also recognizing the benefit of supportive parental involvement."

From: https://www.aafp.org/about/policies/all/adolescent-confidentiality.html
Accessed: July 20, 2019

Principles of Treatment

- Behavioral approach
- Family-based approach
- Addiction Medications
  - Buprenorphine
  - Methadone
  - Naltrexone
- Recovery Support Services

NIDA. Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide. National Institute on Drug Abuse website. https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide. January 14, 2014. Accessed July 8, 2019.

The best treatment programs provide a combination of therapies and other services to meet the needs of the individual patient.

Principles of Treatment

1. Adolescent substance use needs to be identified and addressed as soon as possible
2. Adolescents can benefit from a drug abuse intervention even if they are not addicted to a drug.
3. Routine annual medical visits are an opportunity to ask adolescents about drug use.
4. Legal interventions and sanctions or family pressure may play an important role in getting adolescents to enter, stay in, and complete treatment.
5. Substance use disorder treatment should be tailored to the unique needs of the adolescent.

NIDA. Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide. National Institute on Drug Abuse website. https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide. January 14, 2014. Accessed July 8, 2019.

Principles of Treatment

6. Treatment should address the needs of the whole person, rather than just focusing on his or her drug use.
7. Behavioral therapies are effective in addressing adolescent drug use.
8. Families and the community are important aspects of treatment.
9. Effectively treating substance use disorders in adolescents requires also identifying and treating any other mental health conditions they may have.
10. Sensitive issues such as violence and child abuse or risk of suicide should be identified and addressed.

NIDA. Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide. National Institute on Drug Abuse website. https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide. January 14, 2014. Accessed July 8, 2019.

Principles of Treatment

11. It is important to monitor drug use during treatment.
12. Staying in treatment for an adequate period of time and continuity of care afterward are important.
13. Testing adolescents for sexually transmitted diseases like HIV, as well as hepatitis B and C, is an important part of drug treatment.

NIDA. Principles of Adolescent Substance Use Disorder Treatment: A Research-Based Guide. National Institute on Drug Abuse website. https://www.drugabuse.gov/publications/principles-adolescent-substance-use-disorder-treatment-research-based-guide. January 14, 2014. Accessed July 8, 2019.

AES Question #2

What percentage of diagnosed Opioid Use Disorder patients younger than 18 received Medication-Assisted Treatment?

A. <2%
B. 5%
C. 10%
D. 25%

MAT in Adolescents

- AAP Policy Statement
  - Medication-Assisted Treatment of Adolescents with Opioid Use Disorders
    - "Opioid use disorder is a leading cause of morbidity and mortality among US youth. Effective treatments, both medications and substance use disorder counseling, are available but underused, and access to developmentally appropriate treatment is severely restricted for adolescents and young adults. Resources to disseminate available therapies and to develop new treatments specifically for this age group are needed to save and improve lives of youth with opioid addiction."

COMMITTEE ON SUBSTANCE USE AND PREVENTION. Medication-Assisted Treatment of Adolescents With Opioid Use Disorders. PEDIATRICS. 2016 Sep 1;138(3):e20161893–e20161893. (Available at: http://pediatrics.aappublications.org/cgi/doi/10.1542/peds.2016-1893)

AAP Policy Statement-Recommendations

1. Opioid addiction is a chronic relapsing neurological condition.
   - Rates of spontaneous recovery are low
   - Outcomes can be improved with MAT
   - AAP advocates for resources to improve access to MAT.
2. AAP recommends offering or referring to MAT for adolescents and young adults.
3. AAP supports further research on developmentally appropriate treatment for substance use disorders.

COMMITTEE ON SUBSTANCE USE AND PREVENTION. Medication-Assisted Treatment of Adolescents With Opioid Use Disorders. PEDIATRICS. 2016 Sep 1;138(3):e20161893–e20161893. (Available at: http://pediatrics.aappublications.org/cgi/doi/10.1542/peds.2016-1893)

American Society of Addiction Medicine

1. Clinicians should consider treating adolescents who have opioid use disorder using the full range of treatment options, including pharmacotherapy.
2. Opioid agonists (methadone and buprenorphine) and antagonists (naltrexone) may be considered for treatment of opioid use disorder in adolescents. Age is a consideration in treatment, and federal laws and US FDA approvals need to be considered for patients under the age 18. Buprenorphine is US FDA-approved for adolescents aged 16 years and above.
3. Psychosocial treatment is recommended in the treatment of adolescents with opioid use disorder.
4. Concurrent practices to reduce infection (eg, sexual risk reduction interventions) are recommended as components of comprehensive treatment for the prevention of sexually transmitted infections and blood-borne viruses.
5. Adolescents may benefit from treatment in specialized treatment facilities that provide multidimensional services.

Kampman K, Jarvis M. American Society of Addiction Medicine (ASAM) National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use: Journal of Addiction Medicine. 2015 Oct;9(5):358–67.

Medication–Assisted Treatment

- Opioid Agonists
  - Methadone
  - Buprenorphine
- Opioid Antagonist
  - Naltrexone
  - (Naloxone – used w/ Buprenorphine)

- **Not FDA approved for pediatric use!**
  - Adolescent buprenorphine use based on two studies
  - Naltrexone used off-label in adolescents
  - Methadone programs usually restricted to 18 or older

Medication Assisted Treatment (MAT)

- *Do not just replace one drug for another!*
  - *Relieve withdrawal symptom and psychological cravings*
  - *At proper dose, have no effect on intelligence, mental capacity, physical functioning, or employability.*
- All medications used in Medication-Assisted Treatment (MAT) are prescribed as part of a comprehensive treatment plan that includes counseling and participation in social support programs.

AES Question #3

James is a 16 y/o male high school student who is seen for a sports physical. His S2BI screening notes that he is at Higher Risk of Drug Use. Further evaluation notes that he meets the criteria for Opioid Use Disorder. He finds it difficult to avoid taking opioids for more than a few days. Appropriate behavioral therapies are initiated and it's decided to start Medication-Assisted Treatment. What is the best option to consider for MAT for James?

A. Naloxone
B. Naltrexone
C. Buprenorphine
D. Buprenorphine/Naloxone
E. Methadone

Methadone

- Full opioid agonist
  - Pain relief=4-8 hours
  - half-life = 24-55 hours
- Less euphoria, blocks withdrawal from other opioids
- Can only be dispensed through SAMHSA-approved Opioid Treatment Programs
  - Limited access
- Long-established effective treatment for opioid addiction
  - But
- Most methadone programs prohibit patients under 18!

Buprenorphine

- Partial opioid agonist
  - Less euphoria/respiratory depression
  - Long-acting/once-daily dosing
  - Effects level off despite dose increases
    - "Ceiling effect"
- **First opioid dependency treatment prescribed or dispensed in physician offices!**
- Compared to non-pharmcologic treatment of OUD, MAT w/ Buprenorphine is more effective in:
  - Reducing opioid use
  - Retaining patients in treatment
  - Reducing risk of overdose death

Naltrexone / (Naloxone)

- Non-selective/competitive opioid antagonists
  - Blocks the euphoric / sedating effects of other opioids
- Naloxone
  - Very poor oral and GI tract absorption
- Naltrexone
  - Oral or IM
  - Reported to reduce opioid cravings
  - On relapse, prevents feeling of “getting high”
    - but reduces tolerance to opioids.

Naltrexone

- Must be opioid free for 7-10 days prior to starting treatment
- Consider ”challenge test” if risk of withdrawal
  - Measures symptoms
  - Give small dose of naloxone (0.2-0.8 mg IM)
  - Observe for withdrawal
- Dosing:
  - PO naltrexone (ReVia)
    - 25 mg PO
      - Observe for 1 hour, if no withdrawal, give another 25 mg
    - then 50 mg/day
  - IM (Vivitrol)
    - 380 mg once a month

- "Be Prepared. Get Naloxone. Save a Life."
  - "You have an important role to play in addressing this public health crisis."

VADM Jerome M. Adams, MD, MPH
U.S. Surgeon General's Advisory on Naloxone and Opioid Overdose
April 2018
https://www.hhs.gov/surgeongeneral/priorities/opioids-and-addiction/naloxone-advisory/index.html#ftn6

Surgeon General's Report

- Patients/Public
  - Talk to your doctor about getting Naloxone
  - Learn signs of opioid overdose
  - Get trained to administer in suspected overdose
  - Resources:
    - Prevent & Protect:
      - www.prevent-protect.org
- Prescribers/Pharmacists
  - Identify patients at high risk for overdose
  - Follow CDC Guideline for Prescribing Opioids for Chronic Pain
  - Utilize state PDMP
  - Find out whether Rx needed in your state
  - Rx Naloxone to those at risk/friends & family
  - Prescribe to Prevent
    - www.prescribetoprevent.org

AES Question #4

Jean is a 17 y/o female high school student who is seen at 10 weeks gestation for an initial OB visit. Her S2BI screening notes that she is at Higher Risk of Drug Use. Further evaluation notes that she meets the criteria for Opioid Use Disorder with frequent misuse of Prescription opioids. Appropriate behavioral therapies are initiated and it's decided to start Medication-Assisted Treatment. What is the best option to consider for MAT for Jean?

A. Naloxone
B. Naltrexone
C. Buprenorphine
D. Buprenorphine/Naloxone
E. Methadone

Buprenorphine/Naloxone

- Offset the risk of Buprenorphine abuse
- Taken Orally
  - Buprenorphine effect predominates
- Crushed and Injected
  - Naloxone effect predominates
  - Can bring on withdrawal
- Combination preferred
  - Less likely to be abused/diverted
- Buprenorphine alone in pregnant or lactating women

Available forms/brands

	Buprenorphine	Buprenorphine/Naloxone
Sublingual tab	buprenorphine-generic (previously Subutex)	Zubsolv
Sublingual film	Belbuca (for pain)	Generic, Suboxone, Bunavail
Patch	Butrans	
Injection (IM/IV) – pain tx	Buprenex (not MAT)	
Injection-Extended Release	Sublocade	
Implant	Probuphine	

Drug	Formulation	Maintenance Dose	~ Cost*
Buprenorphine (generic)	2 & 8 mg SL tabs	4-24 mg SL qd	$330: 60 8-mg tabs
Probuphine (implant)	74.2 mg subdermal implant	4 implants/6 months (equiv to 8mg SL/day)	$5176: 4-implants** ($1294/month)
Sublocade extended-release IM injection	100 mg/0.5 mg 300 mg/1.5 ml	100 mg IM q month	$1658: 100 mg/0.5 mg
Buprenorphine/naloxone (generic)	*2/0.5, 8/2 mg SL tabs*	*4/1 to 24/6 mg q d*	*$550: 60 8/2-mg tabs*
Bunavail buccal film (w/ naloxone)	*21./0.3, 4.2/0.7, 6.3/1 mg buccal films*	*2.1/0.3 – 12.6/2 mg qd*	*$530: 60 4.2/0.7-mg films*
Suboxone SL film (w/ naloxone)	*2/0.5, 4/1, 8/2, 12/3 mg SL films*	*4/1 – 24/6 mg qd*	*$540: 60 8/2-mg films*
Zubsolv SL tab (w/ naloxone)	*0.7.0.18, 1.4/0.36, 2.9/0.71, 5.7/1.4, 8.6/2.1, 11.4/2.9 mg SL tabs*	*2.9/0.71 – 17.2/4.2 mg qd*	*$530: 30 11.4/2.9-mg tabs*

In general, products are not bioequivalent to each other.
*Approximate cost from goodrx.com unless otherwise noted (Accessed: July 24, 2019)
**Approximate cash cost from drugs.com (Accessed: July 24, 2019)
Adapted from table 2 in: Zoorob R, Kowalchuk A, Mejia de Grubb M. Buprenorphine Therapy for Opioid Use Disorder. Am Fam Physician. 2018 Mar 1;97(5):313–20.

MAT w/ Buprenorphine

- FPs write more opioid Rx by volume than other physicians, but most don't' provide MAT.
- MAT w/ buprenorphine is an effective alternative to methadone and can be provided in primary care offices after obtaining a SAMHSA waiver.

Kowalchuk A, Mejia de Grubb M, Zoorob RJ. Preparations for Treating Opioid Use Disorder in the Office. Fam Pract Manag. 2018 Dec;25(6):21–6.

- Preparing office/team requires:
  - Identify a practice champion.
  - Assess practice readiness
  - Set up office protocols
  - Secure pharmacy, lab and counseling services
  - Establish a clinical workflow

Buprenorphine treatment

- Drug Addiction Treatment Act0f 2000 (DATA 2000) Waiver
  - 8 hour course
  - Contact SAMHSA
    - 1-866-287-2728
    - www.samhsa.gov/medication-assisted-treatment
- Allow physicians to treat increasing # patients **with** SAMHSA application:
  - 30 patients first year
  - 100 patients subsequent year(s)
  - May increase to 275 patients

Buprenorphine treatment

- Equally as effective as moderate methadone dose
- Phases
  1. Induction
  2. Stabilization
  3. Maintenance
- *Approved for age 16 and above!*

- Increased success with:
  - Stable or controlled
    - Medical comorbidities
    - Psychiatric condition
  - Safe, substance free environment
- Otherwise may benefit from specialty care setting.

Zoorob R, Kowalchuk A, Mejia de Grubb M. Buprenorphine Therapy for Opioid Use Disorder. Am Fam Physician. 2018 Mar 1;97(5):313–20.

Buprenorphine Initiation

- Drug testing, informed consent, treatment contract
- Should be in mild withdrawal
  - 8-12 hour abstinence
  - Use clinical scale (COWS)
  - If not, reschedule

- Dose titration in office
  - Monitor at 60-minute intervals until withdrawal symptoms abate
- Close follow-up in 1 day to 1 week
- Consider Clonidine Rx
  - 0.1 mg q 6-8 hours
- Consider Naloxone kit Rx

Zoorob R, Kowalchuk A, Mejia de Grubb M. Buprenorphine Therapy for Opioid Use Disorder. Am Fam Physician. 2018 Mar 1;97(5):313–20.

AES Question #5

James, our 16 y/o patient is started on appropriate MAT. At follow-up visits in the first few months of treatment, he reports occasional relapses. What is the best way to address such relapses?

A. No change to his current treatment.
B. He has failed MAT and it should be stopped immediately.
C. Increased visits/behavioral therapies.
D. Immediate up-titration of his MAT.
E. Change to an alternate medication for his MAT.

Buprenorphine Maintenance

- Drug titration to stable dose
  - Opioid use stops
  - Withdrawal abates
  - Cravings minimized
- Pill/wrapper counts
- Document relapse, cravings, withdrawal
- State Rx database check
- Random drug screen

- Initial occasional opioid use common
  - Increased visits
  - Behavioral tx
    - Cognitive behavioral therapy
    - Contingency management
    - Motivational enhancement
    - Case management

Zoorob R, Kowalchuk A, Mejia de Grubb M. Buprenorphine Therapy for Opioid Use Disorder. Am Fam Physician. 2018 Mar 1;97(5):313–20.

Practice Recommendations

- Consider screening all adolescents for substance use.
  - Simple, quick online tools are available.
- Refer or provide treatment to appropriate patients.
- Consider medication-assisted treatment in those over age 16 (buprenorphine).

Summary

- Adolescents are susceptible to opioid use disorder.
- Simple tools to screen for use/abuse in adolescents are available.
- Treatment can be affective.
- If appropriate, Medication-Assisted Treatment should be considered.
- Medication-Assisted Therapy with Buprenorphine can be provided in the Family Physician office.
- Family physicians are appropriate providers for opioid use disorder treatment.

Questions

FMX

Resources

- SAMHSA
  - SBIRT
    - https://www.integration.samhsa.gov/resource/sbirt-resource-page
  - Screening Tools
    - https://www.integration.samhsa.gov/clinical-practice/screening-tools
- American Academy of Pediatrics
  - Substance Use and Prevention
    - https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Substance-Use-and-Prevention/Pages/home.aspx

Resources

- NIH: (NIDA)
  - Screening and Assessment Tools Chart
    - https://www.drugabuse.gov/nidamed-medical-health-professionals/screening-tools-resources/chart-screening-tools

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