Substance Use and Misuse: Primary Care and Prevention for the Substance Abuse Patient

Valerie Carrejo, MD, FAAFP

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Valerie Carrejo, MD, FAAFP

Associate Professor/Medical Director, University of New Mexico North Valley Center for Family and Community Health, Albuquerque; Program Director, Addiction Medicine Fellowship, University of New Mexico, Albuquerque

Dr. Carrejo earned her medical degree at the University of New Mexico (UNM) School of Medicine, Albuquerque, and completed her residency with the Department of Family and Community Medicine at UNM in 2007. Following residency, she practiced community-based health care at a federally qualified health center (FQHC) for several years. In 2010, she became board certified in addiction medicine due to an expanding interest in treating patients who have substance abuse issues. She joined the faculty at the UNM Department of Family and Community Medicine in 2012 to be more involved in education and to help develop the treatment of addiction by primary care physicians, an ever-expanding need in New Mexico. She still practices full-spectrum family medicine, including obstetrics, and serves as an associate professor, and she is the medical director of the UNM North Valley Center for Family and Community Health. Additionally, she is program director of the new Accreditation Council for Graduate Medical Education (ACGME)-accredited Addiction Medicine Fellowship at UNM.
Learning Objectives

1. Describe current drug use trends across the country, including emerging trends and new substances of misuse.

2. Use evidence-based strategies to establish appropriate screening protocols to help identify potentially risky drug and alcohol use/misuse.

3. Develop evidence-based strategies to educate patients on the safe use of prescribed medications that have addictive potential (for example opioid pain medications, stimulants prescribed for ADHD and benzodiazepines).

4. Describe the diagnostic criteria for substance use disorder, and compare that to the definition of substance misuse.

5. Formulate plans to orchestrate care for patients who require referral to or treatment from sub-specialists, and community-based support services for substance use disorders.

Audience Engagement System

Step 1

Step 2

Step 3
Substance Abuse and Addiction

It's not always illicit drugs
National Survey on Drug Use and Health 2018 survey

• National report summarizes key findings from the 2018 National Survey on Drug Use and Health (NSDUH) for indicators of substance use and mental health among people aged 12 years old or older in the civilian, noninstitutionalized population of the United States.

Past Month Substance Use among People Aged 12 or Older: 2018

Rx = prescription.

Note: The estimated numbers of current users of different substances are not mutually exclusive because people could have used more than one type of substance in the past month.
What is a standard alcoholic drink?

12 fl oz regular beer = 8 - 9 fl oz malt liquor (shown in a 12 oz glass) = 5 fl oz table wine = 1.5 fl oz shot of 90-proof spirits (hard liquor - whiskey, gin, rum, vodka, tequila, etc.)

<table>
<thead>
<tr>
<th>Alcohol</th>
<th>Alcohol by Volume (alcohol) varies by beverage.</th>
</tr>
</thead>
<tbody>
<tr>
<td>about 5% alcohol</td>
<td>about 7% alcohol</td>
</tr>
</tbody>
</table>

The percent of "pure" alcohol expressed here as alcohol by volume (alcohol) varies by beverage.
Past Month Tobacco Use among People Aged 12 or Older: 2018

Note: The estimated numbers of current users of different tobacco products are not mutually exclusive because people could have used more than one type of tobacco product in the past month.

Daily Cigarette Use among Past Month Cigarette Smokers Aged 12 or Older and Smoking of One or More Packs of Cigarettes per Day among Current Daily Smokers: 2018

Note: Current daily smokers with unknown data about the number of cigarettes smoked per day were excluded from the pie graph on the right.
E-Cigarette Use in Adults

• 2.8% of adults 18 and older
• E-cigarette use among adults is high, especially in those who have used other tobacco products
• Research so far
  • e-cigarettes are less harmful than cigarettes when ADULTS who regularly smoke switch to them as a complete replacement.
  • e-cigarettes can still damage a person's health!

E-Cigarette Use in Teens

**Teens are more likely to use e-cigarettes than cigarettes.**

• Past-month use of cigarettes
  • 3.6 percent among 8th graders
  • 6.3 percent among 10th graders
  • 11.4 percent among 12th graders.

• Past-month use of e-cigarettes
  • 9.5 percent among 8th graders
  • 14.0 percent among 10th graders
  • 16.2 percent among 12 graders.
E-cigarette Use in Teens

- Teen e-cig users are more likely to start smoking. 30.7 percent of e-cig users started smoking within 6 months while 8.1 percent of non users started smoking.
- Smoking includes combustible tobacco products (cigarettes, cigars, and hookahs).

Past Year Illicit Drug Use among People Aged 12 or Older: 2018

Rx = prescription.
Note: The estimated numbers of past year users of different illicit drugs are not mutually exclusive because people could have used more than one type of illicit drug in the past year.
Illicit Drug Use: Marijuana Most Used Drug

Past Year Opioid Misuse among People Aged 12 or Older: 2018

- 9.9 Million People with Pain Reliever Misuse (97.1% of Opioid Misusers)
- 506,000 People with Pain Reliever Misuse and Heroin Use (4.9% of Opioid Misusers)
- 808,000 People with Heroin Use (7.9% of Opioid Misusers)
- 9.4 Million People with Pain Reliever Misuse Only (92.1% of Opioid Misusers)
- 302,000 People with Heroin Use Only (2.9% of Opioid Misusers)
- 10.3 Million People Aged 12 or Older with Past Year Opioid Misuse

Note: The percentages do not add to 100 percent due to rounding.
People Aged 12 or Older with a Past Year Substance Use Disorder (SUD): 2018

Note: The estimated numbers of people with substance use disorders are not mutually exclusive because people could have use disorders for more than one substance.

Figure 4. Trends in substance use disorder in the past year among adults aged 18 or older, by selected types of substances: 2002 to 2014

* Difference between this estimate and the 2014 estimate is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2002 to 2005, 2006 to 2010 (revised March 2012), and 2011 to 2014.
What else is out there?

- **Hallucinogens**
  - Ayahuasca, ketamine, LSD, mescaline, PCP, psilocybin, salvia, DMT, Khat, Kratom, MDMA

- **Inhalants**
  - glues, nail polish remover, lighter fluid, spray paints, deodorant and hair sprays, whipped cream canisters, and cleaning fluids

- **Synthetic drugs**
  - Cannabinoids (K2, Spice)
  - Cathinones (Bath salts)

- **Counterfeit and synthetic opioids**
  - Contaminated with fentanyl and rat poison
Cost of substance abuse in the US

• “Abuse of tobacco, alcohol, and illicit drugs is costly to our Nation, exacting more than $740 billion annually in costs related to crime, lost work productivity and health care”

Poll Question 1

Which of the following substances of abuse is the most costly and deadly to Americans?

A. Alcohol  
B. Cocaine  
C. Hallucinogens  
D. Opioids (heroin, opioid pain medications)  
E. Tobacco

Cost of substance abuse in the U.S.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Health Care</th>
<th>Overall</th>
<th>Year Estimate Based On</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobacco</td>
<td>$168 billion</td>
<td>$300 billion</td>
<td>2010</td>
</tr>
<tr>
<td>Alcohol</td>
<td>$27 billion</td>
<td>$249 billion</td>
<td>2010</td>
</tr>
<tr>
<td>Illicit Drugs</td>
<td>$11 billion</td>
<td>$193 billion</td>
<td>2007</td>
</tr>
<tr>
<td>Prescription Opioids</td>
<td>$26 billion</td>
<td>$78.5 billion</td>
<td>2013</td>
</tr>
</tbody>
</table>
Tobacco

• Cigarette smoking is the leading cause of preventable disease and death in the United States, accounting for more than 480,000 deaths every year, or 1 of every 5 deaths.

• More than 16 million Americans live with a smoking-related disease.
Current Trends

Figure 1. National Drug Overdose Deaths
Number Among All Ages, by Gender, 1999-2017

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

Figure 2. National Drug Overdose Deaths
Number Among All Ages, 1999-2017

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018
Figure 3. National Drug Overdose Deaths Involving Any Opioid, Number Among All Ages, by Gender, 1999-2017

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

Figure 4. National Drug Overdose Deaths Involving Prescription Opioids, Number Among All Ages, 1999-2017

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018
Other correlates with substance use

- Substance use disorders are more common in males than in females
- Rates decrease with age
- Genetics play a significant role
- Impact of employment and education results are conflicting
- Stable marriages have lower prevalence
  - Stressful marriage may increase substance use
Race and Ethnicity- Complex

• African Americans and Hispanics have lower prevalence
  • When disorder develops, can be more severe and medical and social consequences are higher
• Asian Americans have lowest prevalence
• Native Americans have highest prevalence

How can the family doctor help?

how can I help?
Poll Question 2

I regularly screen for substance use in my practice using an evidence-based screening protocol to help identify patients at risk.

A. I regularly screen for tobacco use  
B. I regularly screen for alcohol use  
C. I regularly screen for substance use  
D. Both A and B  
E. A, B, and C

Screening for Tobacco

• Adults, non-pregnant  
  • The USPSTF recommends that clinicians ask all adults about tobacco use, advise them to stop using tobacco, and provide behavioral interventions and U.S. Food and Drug Administration (FDA)–approved pharmacotherapy for cessation to adults who use tobacco. (Grade A)

• Pregnant women  
  • The USPSTF recommends that clinicians ask all pregnant women about tobacco use, advise them to stop using tobacco, and provide behavioral interventions for cessation to pregnant women who use tobacco. (Grade A)
Screening for Tobacco
School Aged Children and Adolescents

• The USPSTF recommends that primary care clinicians provide interventions, including education or brief counseling, to prevent initiation of tobacco use among school-aged children and adolescents. (Grade B)

Screening for Alcohol

• Adults
  • The USPSTF recommends that clinicians screen adults aged 18 years or older for alcohol misuse and provide persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce alcohol misuse (Grade B)

• Adolescents
  • The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening and behavioral counseling interventions in primary care settings to reduce alcohol misuse in adolescents. (Grade I)
Poll Question 3

The USPSTF recommends screening for illicit drug use in adults and adolescents

A. True
B. False
<table>
<thead>
<tr>
<th>TOOL</th>
<th>Substance Type</th>
<th>Patient Age</th>
<th>How tool is administered</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIDA Drug Use Screening Tool</td>
<td>Alcohol Drugs</td>
<td>Adults</td>
<td>Self or Clinician</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adolescents- adapted</td>
<td></td>
</tr>
<tr>
<td>CRAFFT Part A</td>
<td>Alcohol Drugs</td>
<td>Adolescents</td>
<td>Self or Clinician</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>Alcohol Use Disorders Identification (AUDIT-C)</td>
<td>Alcohol</td>
<td>Adults</td>
<td>Self or Clinician</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brief Screener for Alcohol, Tobacco and other Drugs (BSTAD)</td>
<td>Alcohol Drugs</td>
<td>Adolescents</td>
<td>Self or Clinician</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screening to Brief Intervention (S2BI)</td>
<td>Alcohol Drugs</td>
<td>Adolescents</td>
<td>Self or Clinician</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug Abuse Screening Test (DAST)</td>
<td>Drugs</td>
<td>Adults</td>
<td>Self</td>
</tr>
</tbody>
</table>

**NIDA Drug Use Screening Tool**

In the past year, how often have you used the following
- Alcohol
- Tobacco
- Prescription drugs for non-medical reasons
- Illegal drugs

**Answer**: Never/Once or twice/Monthly/Weekly/Daily or most days

- Positive screen if answer is not never
  - Counsel on healthy alcohol use
  - All other positives– move onto more history
Help Prevent Prescription Misuse and Dependence

Preventing misuse/abuse of high-risk drugs

• Talk to your patients who are taking higher risk drugs
  • Stimulants
  • Benzodiazepines
  • Opioids

• Use appropriate risk screening tools
  • Opioid Risk Tool
When Prescribing Opioids

- CDC Guideline for Prescribing Opioids for Chronic Pain
  - 12 key recommendations
- Non-opioid therapy is preferred for chronic pain
- When opioids are used, the lowest effective dose should be prescribed to reduce risk of opioid use disorder and opioid overdose
- Clinicians should exercise caution when prescribing opioids and monitor patients closely

Preventing misuse/abuse of prescription drugs

- Use controlled substance agreements
- Recommend lock box for storage
- Educate patients
  - Correct doses
  - Risks of abuse, misuse, dependence, overdose
  - Proper disposal of leftover medication
Preventing misuse/abuse of prescription drugs

- Screen for aberrant behavior
  - PMP reports
  - Urine drug screens
  - Monitor for signs of misuse or movement toward a substance use disorder

Terminology Updates

- Substance Misuse
- Substance Use Disorder
- No longer use the term substance abuse or dependence
- Addiction is not a diagnosis
Substance Misuse

• The illegal or illicit drug taking or alcohol consumption which leads a person to experience social, psychological, physical or legal problems related to intoxication or regular excessive consumption and/or dependence.

• Drug misuse is therefore drug taking which causes harm to the individual, their significant others or the wider community.

DSM V Substance Use Disorder

• A problematic pattern of substance use leading to clinically significant impairment or distress as manifested by at least two of the following occurring in a 12-month period:
Substance Use Disorders

**Impaired Control:**
- Using larger amounts or for longer time than intended
- Persistent desire or unsuccessful attempts to cut down or control use
- Great deal of time obtaining, using, or recovering
- Craving or strong desire or urge to use

**Social Impairment:**
- Fail to fulfill major roles (work, school, home)
- Persistent social or interpersonal problems caused by substance use
- Important social, occupational, recreational activities given up or reduced

*Risky Use of the Substance:*
- Use in physically hazardous situations
- Use despite physical or psychological problems caused by use
Substance Use Disorder

Pharmacological Criteria:
Tolerance as defined by either of the following:
• Need to use an increased amount of a substance in order to achieve the desired effect  OR
• Markedly diminished effect with continued use of the same amount of the substance
Withdrawal as manifested by either of the following:
▪ The characteristic withdrawal syndrome of the substance  OR
▪ The substance is taken to relieve or avoid withdrawal symptoms

Severity and Specifiers

• Severity ranges
  • Mild: 2-3 symptoms
  • Moderate: 4-5 symptoms
  • Severe: 6 or more symptoms

• Specifiers define course of course of the disease
  • In early remission
  • In sustained remission
  • In a controlled environment
  • On maintenance therapy
Substance Classes

- Alcohol
- Caffeine
- Cannabis
- Hallucinogens
- Inhalants
- Gambling
- Opioids
- Sedatives, hypnotics, and anxiolytics
- Stimulants
- Tobacco
- Other

My patient is using...
Keep your patients healthy despite substance use

Screening for infectious disease

- Hepatitis B and C screening
  - Annual screening (SOR B)
- HIV screening
  - Annual screening (SOR A)
- Latent tuberculosis
  - No specific recommended interval (SOR C)

Keep you patients healthy despite substance use

- Screening for gonorrhea, chlamydia and syphilis
  - Recommended for sexually active females younger than 25 years and for females engaged in high risk behaviors
- Screen for intimate partner violence
  - Rates exceed 50% in patients with drug use disorders
Preventive Care Services

Immunizations
• Hepatitis A and B
  • Obtain titers and vaccinate appropriately
• Tetanus vaccine
  • Every 10 years
• 23-valent pneumococcal polysaccharide vaccine (Pneumovax-23)
  • Once between age 19 and 64 years of age with concurrent conditions (heavy alcohol, tobacco, lung or liver disease)

Offer Preventive Treatment Options
• Pre-exposure prophylaxis for HIV
  • Daily use of tenofovir/emtricitabine (Truvada)
• Antiviral treatment for HIV and HCV
  • Active IV drug use is not a contraindication for treatment
• Prescribe naloxone for opioid overdose
• Safer injecting practices
  • Needle exchange programs
  • Use clean water, new filters to prepare drug
Consider Secondary Complications

• Infections
  • Abscess
  • Cellulitis
  • Septic thrombophlebitis

• Pulmonary
  • Pneumonia
  • Tuberculosis
  • Septic pulmonary emboli
  • Bullous emphysema
  • Foreign body granulomatosis
  • Pulmonary edema (opioids)
  • Pulmonary hypertension (stimulants)

• Cardiovascular
  • Endocarditis
  • Septic emboli
  • Cardiomyopathy
  • Dysrhythmias
  • Myocardial ischemia (cocaine)
  • Mycotic aneurysms
  • Vasculitis (cocaine)

• Musculoskeletal
  • Epidural abscess
  • Osteomyelitis
  • Pyomyositis
  • Tetanus
  • Rhabdomyolysis (stimulants)

Treatment Options
Poll Question 4

Which of the following describes your current options for treating patients with opioid use disorder?

A. I do not have an “X” waiver
B. I do have an “X” waiver but do not prescribe
C. I have and “X” waiver and treat patients with OUD
D. I do not know what an “X” waiver is

Tobacco Use Disorder

• Nicotine Replacement
  • Patches, inhalers, gum
• Bupropion XL (Zyban)
  • Prescribe 150mg BID
  • Pick quit date in 2 weeks
  • Continue for 12 weeks
• Varenicline (Chantix)
  • Starter pack to titrate up to 1mg BID
  • Pick quit date in 2 weeks
  • Continue for 12 weeks
Alcohol Use Disorder

- Acamprosate (Campral)
  - 333mg capsules
  - Prescribe 2 cap (666mg) TID
- Disulfuram (Antabuse)
  - 250mg to 500mg daily
- Naltrexone
  - Oral 50mg daily
  - Vivitrol 380mg IM monthly

Opioid Use Disorder

- Methadone
  - Can only be done in certified treatment centers
- Buprenorphine
  - Office based treatment
  - Requires provider to have DEA “X” wavier
  - Buprenorphine/naloxone oral daily dosing
  - Long-acting monthly injectable available
- Naltrexone
  - Must be opioid free for 7-10 days prior to starting
  - Oral 50mg daily
  - IM 380mg q 4 weeks
Treatment should include

- Behavioral therapy
- Pharmacologic treatment when available
- Referral to a higher level of care
  - Detoxification
  - Inpatient rehabilitation
  - Intensive outpatient programs
- Ongoing screening for depression and other co-occurring mental health conditions

Other Substances of Abuse

- No medication assisted treatment available for other substances of abuse
- Treatment includes active participation in programs
  - cognitive-behavioral therapy
  - contingency management or motivational incentives—providing rewards to patients who remain substance free
  - therapeutic communities—drug-free residences in which people in recovery from substance use disorders help each other to understand and change their behaviors
  - community based recovery groups, such as 12-step programs
Terminology in Substance Use Disorder

<table>
<thead>
<tr>
<th>USE</th>
<th>DON'T USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person who uses drugs</td>
<td>Drug user</td>
</tr>
<tr>
<td>Person with problematic drug use</td>
<td>Recreational, casual or experimental drug use</td>
</tr>
<tr>
<td>Person with drug dependence, problematic drug use, substance use d/o</td>
<td>Addict, drug/substance abuser, junkie, dope head, pot head, crack head, etc</td>
</tr>
<tr>
<td>Substance use disorder, problematic drug use</td>
<td>Drug habit</td>
</tr>
<tr>
<td>Has “x” use disorder</td>
<td>Drug habit</td>
</tr>
<tr>
<td>Abstinent, stopped using drugs</td>
<td>Clean</td>
</tr>
<tr>
<td>Actively using drugs, +for substance use</td>
<td>Dirty</td>
</tr>
<tr>
<td>Respond, program, address, manage</td>
<td>Fight, combat drugs, counter, combatant language</td>
</tr>
<tr>
<td>Safe consumption facility</td>
<td>Fix rooms</td>
</tr>
<tr>
<td>Person in recovery</td>
<td>Former addict, reformed addict</td>
</tr>
<tr>
<td>Person who injects drugs</td>
<td>IV drug user</td>
</tr>
<tr>
<td>Opioid substitution therapy</td>
<td>Opioid replacement therapy</td>
</tr>
</tbody>
</table>

Utilize Your Community

- Many patients require treatment that we cannot provide in a doctor’s office
- Get to know the resources in your community
- Community based support services
Practice Recommendations

- Rapid screening for substance use and misuse can be performed in the primary care setting using validated screening tools. (SOR C).
- All persons with IVDU should be screened for:
  - Hepatitis B and C (SOR B)
  - HIV (SOR A)
  - Latent TB (SOR C)
- Buprenorphine or methadone should be offered to patients for opioid detoxification and medication-assisted treatment. (SOR A)
- Naloxone should be prescribed to those patients at high risk of opioid overdose. (SOR C)

Contact Information

Valerie Carrejo, MD FAAFP
vcarrejo@salud.unm.edu
University of New Mexico Department of Family and Community Medicine
Addiction Medicine Fellowship Program Director
Questions