

Screening for Unhealthy Drug Use

US Preventive Services Task Force Recommendation Statement

US Preventive Services Task Force

IMPORTANCE An estimated 12% of adults 18 years or older and 8% of adolescents aged 12 to 17 years report unhealthy use of prescription or illegal drugs in the US.

OBJECTIVE To update its 2008 recommendation, the USPSTF commissioned reviews of the evidence on screening by asking questions about drug use and interventions for unhealthy drug use in adults and adolescents.

POPULATION This recommendation statement applies to adults 18 years or older, including pregnant and postpartum persons, and adolescents aged 12 to 17 years in primary care settings. This statement does not apply to adolescents or adults who have a currently diagnosed drug use disorder or are currently undergoing or have been referred for drug use treatment. This statement applies to settings and populations for which services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred.

EVIDENCE ASSESSMENT In adults, the USPSTF concludes with moderate certainty that screening by asking questions about unhealthy drug use has moderate net benefit when services for accurate diagnosis of unhealthy drug use or drug use disorders, effective treatment, and appropriate care can be offered or referred. In adolescents, because of the lack of evidence, the USPSTF concludes that the benefits and harms of screening for unhealthy drug use are uncertain and that the balance of benefits and harms cannot be determined.

RECOMMENDATION The USPSTF recommends screening by asking questions about unhealthy drug use in adults 18 years or older. Screening should be implemented when services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred. (Screening refers to asking questions about unhealthy drug use, not testing biological specimens.) (B recommendation) The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for unhealthy drug use in adolescents. (I statement)

JAMA. 2020;323(22):2301-2309. doi:10.1001/jama.2020.8020

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Group Information: The US Preventive Services Task Force (USPSTF) members are listed at the end of this article.

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Summary of Recommendations

The USPSTF recommends screening by asking questions about unhealthy drug use in adults age 18 years or older. Screening should be implemented when services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred. (Screening refers to asking questions about unhealthy drug use, not testing biological specimens.)	B recommendation
The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for unhealthy drug use in adolescents.	I statement

See the Figure for a more detailed summary of the recommendations for clinicians. See the "Practice Considerations" section for suggestions for practice regarding the I statement. USPSTF indicates US Preventive Services Task Force.

Importance

Many people in the US experience problems related to unhealthy drug use, defined in this recommendation statement as the use of illegal drugs and the nonmedical use of prescription psychoactive medications (ie, use of medications for reasons, for duration, in amounts, or with frequency other than prescribed or use by persons other than the prescribed individual). In 2018, an estimated 12%

of US residents 18 years or older reported current unhealthy drug use in a national survey.¹ Unhealthy drug use is more commonly reported by young adults aged 18 to 25 years (24%) than by older adults (10%) or adolescents aged 12 to 17 years (8%). In 2018, an estimated 5.4% of pregnant persons aged 15 to 44 years reported unhealthy drug use in the last month. Adults 18 years or older (10.5%) and adolescents aged 12 to 17 years (8.0%) more commonly reported cannabis use in the last month than nonmedical use of psychotherapeutic medications, including pain relievers (2.1% and 1.3%,

respectively) and opioids (1.2% and 0.7%, respectively).¹ In both age groups, less than 1% reported use of heroin, cocaine, hallucinogens, inhalants, or methamphetamines in the last month.

An estimated 8 million persons 12 years or older met diagnostic criteria for drug dependence or abuse of drugs in the past year.¹ Drug use is one of the most common causes of preventable death, injuries, and disability.^{2,3} In 2017, unhealthy drug use caused more than 70 000 fatal overdoses.⁴ Drug use can cause many serious health effects that vary by drug type, administration mode, amount, and frequency of use, as well as pregnancy status.⁵ Opioid use can cause drowsiness, slowed breathing, constipation, coma, and fatal overdose. Stimulants such as cocaine can cause arrhythmias, myocardial infarction, seizures, and other complications. Marijuana use is associated with slowed reaction time; problems with balance, coordination, learning, and memory; and chronic cough and frequent respiratory infections.⁵ Injection drug use may result in blood-borne viral and bacterial infections.^{2,5} Drug use during pregnancy can increase risk of obstetric complications such as placental abruption, preeclampsia, and third trimester bleeding, as well as adverse fetal and infant outcomes such as spontaneous abortion, abnormal brain growth, preterm delivery, low birth weight, and neonatal abstinence syndrome.⁶ Drug use is also associated with violence, criminal activity, incarceration, impaired school and work performance, interpersonal dysfunction, and other social and legal problems.⁷

USPSTF Assessment of Magnitude of Net Benefit

Adults 18 Years or Older

The USPSTF concludes with moderate certainty that screening by asking questions about unhealthy drug use in adults has **moderate net benefit** when services for accurate diagnosis of unhealthy drug use or drug use disorders, effective treatment, and appropriate care can be offered or referred.

Adolescents Aged 12 to 17 Years

Because of the lack of evidence, the USPSTF concludes that the benefits and harms of screening for any type of unhealthy drug use in adolescents are uncertain and that the **balance of benefits and harms cannot be determined**.

See the **Figure** and the **Table** for more information on the USPSTF recommendation rationale and assessment. For more details on the methods the USPSTF uses to determine the net benefit, see the USPSTF Procedure Manual.⁸

Practice Considerations

Patient Population Under Consideration

This recommendation statement applies to adults 18 years or older, including pregnant and postpartum persons, and adolescents aged 12 to 17 years in primary care settings. This statement does not apply to adolescents or adults who have a currently diagnosed drug use disorder or are currently undergoing or have been referred for drug use treatment. This statement applies to settings and populations for which services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred. The net benefit assessment does not apply to settings and populations for which treatment cannot be provided or the result of screening is punitive.

Definitions

For the purposes of this recommendation, "unhealthy drug use" is defined as the use of substances (not including alcohol or tobacco products) that are illegally obtained or the nonmedical use of prescription psychoactive medications; that is, use of medications for reasons, for duration, in amounts, or with frequency other than prescribed or by persons other than the prescribed individual. These substances are ingested, inhaled, injected, or administered using other methods to affect cognition, affect, or other mental processes; to "get high"; or for other nonmedical reasons. Unhealthy drug use is abbreviated as "drug use" in this recommendation statement.

Screening refers to asking 1 or more questions about drug use or drug-related risks in face-to-face, print, or audiovisual format. It does not refer to testing urine, saliva, blood, or other biological specimens for the presence of drugs.

Assessment of Risk

The USPSTF recommends screening by asking questions in all adults 18 years or older regardless of risk factors for unhealthy drug use. However, some factors are associated with a higher prevalence of unhealthy drug use. These include being aged 18 to 25 years; male sex; having a mental health condition, personality or mood disorder, or nicotine or alcohol dependence; a history of physical or sexual abuse, parental neglect, or other adversity in childhood; or drug or alcohol addiction in a first-degree relative.^{1,9} Factors associated with misuse of prescription drugs include history of other drug use, mental illness, pain, and greater access to prescription drugs.¹⁰ Factors associated with prenatal use of drugs include a mental health disorder, interpersonal violence, and family history of substance use.¹¹

Screening Tools

Several screening tools that ask questions about drug use are available for identifying 1 or more classes of unhealthy drug use, the frequency or severity of use, or drug-related health, social, or legal consequences that characterize unhealthy use or drug use disorders. Interviewer-administered tools and self-administered tools appear to have similar accuracy.¹²

Primary care practices may consider several factors when selecting screening tools. Brief tools (eg, NIDA [National Institute on Drug Abuse] Quick Screen, which asks 4 questions about use of alcohol, tobacco, nonmedical use of prescription drugs, and illegal drugs in the past year) may be more feasible in busy primary care settings, but longer tools (eg, the 8-item ASSIST [Alcohol, Smoking and Substance Involvement Screening Test]) that assess risks associated with unhealthy drug use or comorbid conditions may reveal information signaling the need for prompt diagnostic assessment. Tools with questions about nonmedical use of prescription drugs (eg, TAPS [Tobacco, Alcohol, Prescription Medication, and Other Substance Use]) may be useful when clinicians are concerned about prescription misuse. One study reported that drug use questions in the PRO (Prenatal Risk Overview) risk assessment tool were reasonably accurate for identifying drug abuse or dependence in pregnant women.

Screening tools are not meant to diagnose drug dependence, abuse, addiction, or drug use disorders. Patients with positive screening results may, therefore, need to be offered or referred for diagnostic assessment.

Figure. Clinician Summary

June 9, 2020

<p>What does the USPSTF recommend?</p>	<p>For adults 18 years or older: <u>Grade B</u> Screen by asking questions about unhealthy drug use in adults 18 years or older. Screen when services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred. Screening refers to asking questions about unhealthy drug use, not testing biological specimens. Unhealthy drug use includes using illegal drugs, such as heroin, or using a prescription drug in ways that are not recommended by a doctor, such as to “get high” or affect someone’s mood or way of thinking.</p> <p>For adolescents: <u>I statement</u> The evidence is insufficient to assess the balance of benefits and harms of screening for unhealthy drug use.</p>
<p>To whom does this recommendation apply?</p>	<ul style="list-style-type: none"> • Adults 18 years or older and adolescents, including those who are pregnant and postpartum. • Settings and people for which services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred. • Does not apply to: <ul style="list-style-type: none"> ◦ Adolescents or adults who have a currently diagnosed drug use disorder or are currently undergoing or have been referred to drug use treatment. ◦ Settings and people for which treatment cannot be provided or the result of screening is punitive.
<p>What’s new?</p>	<ul style="list-style-type: none"> • This recommendation to screen adults for unhealthy drug use is new and is based on new evidence. Previously in 2008, there was insufficient evidence to make a recommendation for adults. • Evidence continues to be insufficient to assess the balance of benefits and harms of screening for drug use in adolescents.
<p>How to implement this recommendation?</p>	<p>For adults: Ask adults about unhealthy drug use. Clinicians can ask the questions or ask their patient to share their answers on a form, computer, or tablet. There are a variety of screening tools available, such as:</p> <ul style="list-style-type: none"> • Brief tools (eg, NIDA [National Institute on Drug Abuse] Quick Screen, which asks 4 questions about use of alcohol, tobacco, nonmedical use of prescription drugs, and illegal drugs in the past year), which may be more feasible in busy primary care settings. • Longer tools (eg, the 8-item ASSIST [Alcohol, Smoking and Substance Involvement Screening Test]) that assess risks associated with unhealthy drug use or comorbid conditions. • The PRO (Prenatal Risk Overview) for pregnant people. <p>Primary care providers should be aware of state requirements and best practices on informed consent for screening, documenting screening results in medical records, and confidentiality protections.</p> <p>For adolescents: Evidence is insufficient, so clinicians should use their judgment about screening by asking questions about drug use.</p>
<p>What are other relevant USPSTF recommendations?</p>	<p>The USPSTF has also issued other related recommendations on interventions to prevent drug use in children, adolescents, and young adults; screening and behavioral counseling interventions for reducing unhealthy alcohol use in adolescents and adults; interventions for tobacco smoking cessation in adults, including pregnant persons; and primary care interventions to prevent tobacco use in children and adolescents. These recommendations are available at https://www.uspreventiveservicestaskforce.org.</p>
<p>Where to read the full recommendation statement?</p>	<p>Visit the USPSTF website (https://www.uspreventiveservicestaskforce.org) to read the full recommendation statement. This includes more details on the rationale of the recommendation, including benefits and harms; supporting evidence; and recommendations of others.</p>

The USPSTF recognizes that clinical decisions involve more considerations than evidence alone. Clinicians should understand the evidence but individualize decision-making to the specific patient or situation.

USPSTF indicates US Preventive Services Task Force.

Screening Intervals

There is little evidence about the optimal time to start asking about unhealthy drug use or the optimal interval for screening in adults older than 18 years.

Treatment

Treatment of drug use disorders is based on the type of drug used, the severity of drug use, and the type of use disorder. Many drug use disorders are chronic, relapsing conditions, and many persons who start treatment do not complete treatment.¹³ Therefore, treatment must often be repeated to stabilize current drug use, reduce relapse, and achieve abstinence or other treatment goals. Some patients, such as those who are pregnant, nursing, or caring for ill or healthy neonates, may require specialized treatment settings.

Pharmacotherapy, which is often provided with individual or group counseling, is the standard for treatment of opioid use disorders involving heroin or prescription opioid use in adults and pregnant and postpartum persons.¹⁴⁻¹⁶ Drug use disorders involving nonopioid drugs, such as cannabis, stimulants, and some prescription drugs, are generally treated with various psychosocial interventions that usually involve multiple sessions of cognitive behavioral therapy, motivational interventions, contingency management, relapse prevention, community reinforcement, family behavioral therapy, 12-step facilitation therapy, or other behavioral approaches. Intensive interventions usually involve several in-person sessions over several weeks or months.

The management of patients who screen positive is usually accompanied by other interventions, including testing for blood-borne pathogens; assessment of misuse of, abuse of, or dependence on alcohol or

Table. Summary of USPSTF Rationale^a

Rationale	Adults 18 y and older	Adolescents aged 12 to 17 y
Detection	Adequate evidence that available screening tools can detect a spectrum of drug use and types of drug use	Inadequate evidence that available screening tools can detect most types of unhealthy drug use
Benefits of early detection and intervention and treatment	<ul style="list-style-type: none"> Adequate evidence that 3 FDA-approved pharmacotherapy agents have moderate benefits for reducing relapse and increasing retention in treatment in adults with opioid use disorders Adequate evidence that psychosocial interventions have moderate benefits for increasing abstinence from or reducing unhealthy drug use; effects may be greater for intensive psychosocial interventions and for cannabis use Magnitude of benefits is moderate for screening for and treatment of unhealthy drug use based on moderate benefits of pharmacotherapy in adults with opioid use disorders and some intensive psychosocial interventions in adults using some types of drugs 	<ul style="list-style-type: none"> Inadequate evidence that pharmacotherapy is effective for reducing relapses or increasing retention in treatment in adolescents with opioid use disorders Inadequate evidence that psychosocial interventions are effective for increasing abstinence from or reducing the use of drugs
Harms of early detection and intervention and treatment	<ul style="list-style-type: none"> Adequate evidence to bound the magnitude of harms as no greater than small for <ul style="list-style-type: none"> Screening (asking questions about unhealthy drug use, not testing biological specimens) Pharmacotherapy for opioid use disorders Intensive psychosocial interventions Based on lack of evidence that these interventions cause serious adverse events and evidence that buprenorphine is associated with minor adverse effects (such as constipation) 	<ul style="list-style-type: none"> Inadequate evidence to estimate the magnitude of harms of <ul style="list-style-type: none"> Screening Pharmacotherapy for opioid use disorders Psychosocial interventions for any type of drug use
USPSTF assessment	<ul style="list-style-type: none"> Moderate certainty that screening for unhealthy drug use has a moderate net benefit when services for accurate diagnosis of unhealthy drug use or drug use disorders, effective treatment, and appropriate care can be offered or referred 	<ul style="list-style-type: none"> Benefits and harms of screening for any type of drug use are uncertain and the balance of benefits and harms cannot be determined

Abbreviations: FDA, US Food and Drug Administration; USPSTF, US Preventive Services Task Force.

^a See the eFigure in the Supplement for explanation of USPSTF grades and levels of evidence.

Box. Tools and Resources to Help Clinicians Implement This Screening Recommendation

National Institute on Drug Abuse

Screening and Assessment Tools Chart
<https://www.drugabuse.gov/nidamed-medical-health-professionals/screening-tools-resources/chart-screening-tools>
 Screening for Drug Use in General Medical Settings: A Resource Guide for Providers
https://www.drugabuse.gov/sites/default/files/resource_guide.pdf

Substance Abuse and Mental Health Administration (SAMHSA)

Finding Quality Treatment for Substance Use Disorders.
<https://store.samhsa.gov/sites/default/files/d7/priv/pep18-treatment-loc.pdf>
 Substance Abuse Confidentiality Regulations
<https://www.samhsa.gov/about-us/who-we-are/laws-regulations/confidentiality-regulations-faqs>

SAMHSA-Health Resources and Services Administration Center for Integrated Health Solutions

Substance Use Disorder and Pregnancy
<https://www.integration.samhsa.gov/about-us/integration-edge/substance-use-disorder-and-pregnancy>

SAMHSA Center for Substance Abuse Treatment

A Guide to Substance Abuse Services for Primary Care Clinicians
<https://www.ncbi.nlm.nih.gov/books/NBK64820>

tobacco; assessment of potentially coexisting mental health disorders; and pain management for patients with pain who are abusing opioids.

Implementation

In practice, the benefits and harms of screening may vary because of several health, social, and legal issues. In many communities, affordable, accessible, and timely services for diagnostic assessment and treatment of patients with positive screening results are in limited supply or unaffordable.

To minimize the potential adverse effects such as stigma, labeling, or medicolegal consequences of asking questions about drug use and documenting and reporting answers, clinicians should be aware of state requirements and best practices on informed consent for screening, mandatory screening, documenting screening results in medical records, reporting of screening results to medicolegal authorities, and confidentiality protections (see the Additional Tools and Resources section).¹⁷⁻²⁴ This recommendation statement applies to settings and populations for which services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred. The net benefit assessment does not apply to settings and populations for which treatment is not provided or the result of screening is punitive.

Additional Tools and Resources

Several tools may help clinicians implement this screening recommendation (Box).

Suggestions for Practice Regarding the I Statement for Adolescents Aged 12 to 17 Years

Potential Preventable Burden

Based on a national survey in 2018, 8% of adolescents aged 12 to 17 years reported drug use in the last month. Among youth reporting such drug use, the most commonly used substances were marijuana, inhalants, prescription psychotherapeutic drugs, opioids, and hallucinogens.¹ An estimated 2.7% met diagnostic criteria for drug dependence or abuse,¹ and the vast majority presented with concurrent mental health diagnoses.²⁵ Risk factors for drug use in youth include aggressive childhood behavior, lack of parental supervision, poor social skills, access to drugs at school, and community poverty.²⁶

Adolescent substance use, including use of heroin and misuse of prescription opioids, is associated with the leading causes of death—suicide, overdose, unintentional injury, and violence in adolescents and young adulthood.²⁵ Substance use during this period of rapid brain development can also harm neurocognitive development and endocrine function that, in turn, can impair academic, occupational, and social functioning.²⁶⁻²⁸ Adolescents with drug use

disorders are also at increased risk of sexually transmitted infections, other physical health problems, unintended pregnancies, criminal involvement, and school truancy.²⁵

Potential Harms of Screening and Treatment

Although there is limited evidence on harms, adolescents may experience potential harms from screening for drug use such as labeling and stigmatization. Because of concerns about long-term use of opioid agonists, the US Food and Drug Administration (FDA) restricts approval for buprenorphine to youth 16 years or older, and the US Department of Health and Human Services restricts admission to methadone programs to youth younger than 18 years who continue to use opioids after at least 2 rounds of detoxification and psychosocial interventions.²⁸

Current Practice

About 50% to 86% of pediatricians report routinely screening for substance use, and most screen using their clinical impressions rather than a validated screening tool.²²

Other Related USPSTF Recommendations

The USPSTF has issued recommendation statements on these related topics:

- Interventions to prevent drug use in children, adolescents, and young adults²⁹
- Screening and behavioral counseling interventions for reducing unhealthy alcohol use in adolescents and adults³⁰
- Interventions for tobacco smoking cessation in adults, including pregnant women³¹
- Primary care interventions to prevent tobacco use in children and adolescents³²
- Screening for depression in adults³³
- Screening for depression in children and adolescents³⁴
- Screening for suicide risk in adolescents and adults³⁵

Update of Previous USPSTF Recommendation

This recommendation statement replaces the 2008 USPSTF recommendation, which concluded that the evidence at that time was insufficient to assess the balance of benefits and harms of screening for illicit drug use in adolescents and adults, including those who were pregnant or postpartum.³⁶ This updated statement incorporates new evidence since 2008 about the accuracy of screening tools and the benefits and harms of treatment of unhealthy drug use or drug use disorders. This new evidence supports the current recommendation that primary care clinicians offer screening to adults 18 years or older, including those who are pregnant or postpartum, when services for accurate diagnosis, effective treatment, and appropriate care can be offered or referred. The USPSTF continues to conclude that the evidence is insufficient to assess the balance of benefits and harms of screening for drug use in adolescents.

Supporting Evidence

Scope of Review

The USPSTF commissioned 2 systematic evidence reviews in support of this updated recommendation statement. These reviews evalu-

ated evidence on the benefits and harms of screening for drug use, accuracy of screening tools to detect drug use, and the benefits and harms of psychosocial interventions and pharmacotherapy.^{12,37,38}

Accuracy of Screening Tools

The USPSTF identified 30 different screening tools that were evaluated in adults, pregnant or postpartum persons, or adolescents. Many tools had sensitivity of 75% or more for detecting unhealthy drug use, drug abuse or dependence, or drug use disorders. Most screening studies used structured clinical or diagnostic interviews that used varying definitions of drug use, abuse, dependence, and drug use disorders as the reference standard. Few studies used biologic reference standards such as testing of hair or urine specimens.^{12,37}

Adults

The USPSTF reviewed 12 studies that assessed the accuracy of 15 different screening tools in nonpregnant adults.^{12,37} There was considerable variation in sample size (139 to 2057, not including a large US-based national sample of 42 923), proportion of female participants (4.7% to 94%), and mean age (25.2 to 62.6 years). All but 2 studies were conducted in the US. The use and severity of use of any drug or specific drugs varied widely across study populations. The prevalence of unhealthy use of any drug ranged from 14.2% to 37.9% and the prevalence of use disorders due to any drug ranged from 1.8% to 16.7%, based on reference standards of clinical interviews (with or without confirmation of drug use by saliva testing).

Several screening tools directly addressed the frequency of drug use (single-item drug frequency; SUBS [Substance Use Brief Screen]; and TAPS-1) or the frequency of drug use and risks associated with drug use (ASSIST; ASSIST-Drug; CAST [Cannabis Abuse Screening Test]; 2-, 10-, and 28-DAST [Drug-Abuse Screening Test]; PDUQp [Prescription Drug Use Questionnaire-Patient Version]; PSQ [Parent Screening Questionnaire]; SoDU [Screen of Drug Use]; TAPS; and TICS [Two-Item Conjoint Screen], all of which are examples of "direct tools"). One tool indirectly assessed drug use by asking questions about alcohol or tobacco use (single-item heavy episode drinking frequency [an example of an "indirect tool"]).¹²

The sensitivity of direct tools for detecting unhealthy use of "any drug" (including illegal drugs and nonmedical use of prescription drugs) in the past month or year ranged from 0.71 to 0.94 (95% CI, 0.62-0.97), and specificity ranged from 0.87 to 0.97 (95% CI, 0.83-0.98). Direct tool sensitivity for detecting abuse or dependence or a use disorder related to "any drug" ranged from 0.85 to 1.00 (95% CI, 0.75-1.00) and specificity ranged from 0.67 to 0.93 (95% CI, 0.58-0.95). Screening tools had higher sensitivity for detecting unhealthy drug use and drug use disorders related to "any drug" (most of which was cannabis), cannabis, heroin, and stimulants than for detecting unhealthy drug use or drug use disorders related to nonmedical use of prescription drugs, including opioids or sedatives (range, 0.38-0.96 [95% CI, 0.29-0.99]) but specificity was comparable (range, 0.79-1.00 [95% CI, 0.71-1.00]).¹²

Four studies assessed the accuracy of direct tools (the frequency-based ASSIST-2 tool and the risk assessment-based DAST-10, PRO, and WIDUS [Wayne Indirect Drug Use Screener]/ASSIST-2 [modified tool]) or an indirect tool (WIDUS) for detecting drug use or drug use disorders (not including alcohol) in women

recruited during prenatal care visits or shortly after delivery. The prevalence of any prenatal drug use varied from 1.2% to 41% across these 4 studies. Sensitivity for detecting any prenatal use of drugs using direct tools ranged from 0.37 to 0.76 (95% CI, 0.24-0.86) and specificity ranged from 0.68 to 0.83 (95% CI, 0.55-0.91). One study of the PRO risk assessment-based tool (in a population in which 7% met diagnostic criteria for drug abuse, dependence, or both) reported sensitivity for detecting any drug abuse or dependence of 0.89 (95% CI, 0.77-0.95) and specificity of 0.74 (95% CI, 0.71-0.77). The only indirect tool that reported on any prenatal use of drugs, not including alcohol (WIDUS/ASSIST-2), had lower sensitivity (0.68 [95% CI, 0.53-0.80]) and specificity (0.69 [95% CI, 0.57-0.80]). An additional study of the indirect tool Parents Partner Past Pregnancy reported high sensitivity (0.87 [95% CI, 0.71-0.95] and high specificity (0.76 [95% CI, 0.70-0.82]) for detecting the combined outcome of any prenatal use of drugs or alcohol but did not assess the outcome of prenatal use of drugs alone.¹²

Adolescents

The evidence on accuracy of screening tools in adolescents is limited. Most studies focus on the detection of cannabis use; no studies provide information specifically on opioid use or other drug classes. Few tools that assess cannabis use were evaluated in more than 1 study. The available studies evaluated direct tools—the Brief Screener for Tobacco, Alcohol, and Other Drugs; a single item assessing cannabis use; ASSIST; ASSIST-Lite; CAST; CPQ-A-S (Cannabis Problems Questionnaire for Adolescents-Shortened); CRAFFT (Car Relax Alone Forget Family/Friends Trouble); PESQ-PS (Personal Experience Screening Questionnaire-Problem Severity Scale); POSIT (Problem Oriented Screening Instrument for Teenagers); and SDS (Severity Dependence Scale)—against a diagnostic interview. Sensitivity of these direct tools for detecting any cannabis use or unhealthy use ranged from 0.68 to 0.98 (95% CI, 0.64-0.99) and specificity ranged from 0.82 to 1.00 (95% CI, 0.80-1.00). Sensitivity of these direct tools for detecting cannabis use disorders ranged from 0.71 to 0.98 (95% CI, 0.41-1.00) and specificity ranged from 0.79 to 0.95 (95% CI, 0.77-0.98). Given the limited number of studies on individual tools and the lack of information on the accuracy of tools for detecting use of drugs other than cannabis, the USPSTF determined the evidence on accuracy of screening in adolescents to be inadequate.¹²

Benefits of Screening and Treatment

Screening

No studies directly addressed the benefits of screening on reducing drug use or drug-related health, social, or legal outcomes in adults or adolescents.

Pharmacotherapy

Several trials found that use of FDA-approved pharmacotherapy had benefits for nonpregnant adults with opioid use disorders who had sought or were referred for treatment for symptoms, signs, or drug-related health, social, or legal problems (hereafter abbreviated as “treatment-seeking populations”). Adults assigned to pharmacotherapy generally had lower rates of relapse and increased retention in treatment than adults assigned to placebo or no treatment.^{37,38}

Nineteen trials evaluated naltrexone (opioid antagonist), buprenorphine (partial opioid agonist), or methadone (opioid ago-

nist) (usually provided with individual or group counseling) in adults with opioid use disorder primarily related to heroin. None assessed the effects of pharmacotherapy in adults whose opioid use disorder was related only to prescription opioids or was detected through primary care screening. Trials recruited participants from inpatient settings, drug treatment programs, and criminal justice systems. Most trials were conducted outside the US, and several used naltrexone formulations not available in the US. Most participants were adult males younger than 30 years. No trials specifically enrolled pregnant or postpartum persons or adolescents, although FDA-approved pharmacotherapy agents are available for these patient populations. However, women of reproductive age comprised 25% to 46% of trial participants who received methadone or buprenorphine and 0% to 28% of participants who received naltrexone.^{37,38}

Thirteen trials evaluated the effects of oral, injectable, or implantable naltrexone. Outcomes were assessed during the course of treatment in 11 trials (2-9 months after start of treatment) or after treatment completion in 2 trials (6-10 months after completion). Sample sizes ranged from 31 to 306 (total N = 1718 participants). Retention in treatment varied considerably in persons assigned to naltrexone (range, 7%-60%) and persons assigned to placebo or no treatment (range, 6%-56%). Use of naltrexone was associated with a significant decrease in drug use relapse (pooled relative risk [RR], 0.73 [95% CI, 0.62-0.85]) and increased retention in treatment (pooled RR, 1.71 [95% CI, 1.13-2.49]). The few naltrexone trials that reported on mortality, global functioning, quality of life, anxiety, depression, or legal or employment outcomes had inconsistent findings regarding these outcomes, but mortality was rare.^{37,38}

Seven trials assessed the opioid agonist methadone, the partial opioid agonist buprenorphine, or both. During the course of ongoing treatment with 1 of these 2 opioid agonists (monitored for 4-12 months), use of methadone and sublingual or implantable buprenorphine was significantly associated with a decrease in relapse (4 trials; pooled RR, 0.75 [95% CI, 0.59-0.82]) and increased retention in treatment (7 trials; pooled RR, 2.58 [95% CI, 1.78-4.59]). Findings from 5 trials that assessed the effects of opioid agonists on health, social, and legal outcomes were mixed and did not show clear treatment benefits. A few trials found that buprenorphine was associated with better self-reported scores on quality of life, well-being, and life satisfaction. No deaths were reported in trials that reported this outcome.^{37,38}

Psychosocial Interventions

Adults | Psychosocial interventions were associated with increased likelihood of abstaining from use of drugs vs control conditions at 3 to 4 months (15 trials; RR, 1.60 [95% CI, 1.24-2.13]) and at 6 to 12 months (14 trials; RR, 1.25 [95% CI, 1.11-1.52]).^{37,38}

Approximately one-half of the psychosocial intervention trials enrolled persons who had sought or were referred for drug treatment. Sample sizes ranged from 34 to 1175 (total N = 15 659). Most trials were conducted in the US and included participants who were primarily male, nonwhite, and had lower socioeconomic status. The severity of drug use in trial participants varied greatly. Interventions were categorized as intensive (defined as more than 2 sessions or 2 sessions lasting more than 1 hour each) or brief (defined as 1 to 2 sessions each lasting 1 hour or less). Interventions were generally based on established behavioral approaches and

were administered by telephone or in person by researchers or were self-administered by computer. Intensive interventions commonly used face-to-face cognitive behavioral therapy, motivational interviewing, and contingency management approaches. Most brief interventions consisted of a single, personalized counseling session with in-person or computer-based feedback, with or without a telephone or in-person booster session. Follow-up ranged from 3 to 4 months to 12 or more months after the start of interventions. Thirty-eight percent to 98% of participants completed assessments at designated follow-up points. Meta-analyses and sensitivity analyses included only the subset of trials with data that could be pooled and combined trials that evaluated nonpregnant adults, pregnant or postpartum adults, or adolescents; any type of drug use; and either brief or intensive interventions.³⁸

In sensitivity analyses, effects on abstinence were greater at 3 to 4 months in trials of treatment-seeking populations (7 trials; RR, 2.08 [95% CI, 1.51-3.07]) than in trials of screen-detected populations (8 trials; RR, 1.28 [95% CI, 0.97-1.84]; $P = .05$ for interaction). Effects on abstinence were smaller in trials of brief interventions than in trials of intensive interventions, but the differences were not statistically significant. Effects were statistically significant for abstinence from cannabis use (7 trials; RR, 2.08 [95% CI, 1.51-3.07] at 3 to 4 months and 4 trials; RR, 1.58 [95% CI, 1.17-3.06] at 6 to 12 months), but not for abstinence from stimulants or mixed drug use. Results of meta-analyses on the association of psychosocial interventions and other outcomes, including number of days using drugs and drug use severity, were mixed. Evidence on the association between psychosocial interventions and health, social, or legal outcomes related to use of cannabis, stimulants, opioids, "any drug," or mixed drugs in adults was sparse and showed no or limited effectiveness.³⁸

Five trials specifically assessed intensive or brief interventions exclusively in pregnant or postpartum persons compared with attention control groups or information and advice from obstetricians or nurses. None reported significant effects on drug use or health, social, or legal outcomes of drug use at 3 to 6 months after the start of the interventions.¹²

Adolescents | There were few trials on psychosocial interventions that focused on adolescents aged 12 to 17 years. Evidence was limited and results were inconclusive.^{12,38} These studies did not report the effect of psychosocial interventions on drugs other than cannabis.

Harms of Screening and Treatment

Screening

No studies addressed the harms of screening in adults or adolescents.¹²

Pharmacotherapy

Eleven naltrexone trials and 4 buprenorphine trials assessed potential harms, including suicide, overdose, or study withdrawal due to serious adverse events, but no methadone trials assessed harms. Few harms or serious adverse events were reported. In pooled analyses, the risk of adverse events was generally similar in persons assigned to pharmacotherapy and control groups, including the risk of study discontinuation due to adverse events (3 trials; RR, 1.54 [95% CI, 0.35-8.31]) or serious adverse events (3 trials; RR,

1.24 [95% CI, 0.11-10.21]) in trials of naltrexone or the risk of serious adverse events (2 trials; RR, 0.32 [95% CI, 0.09-1.12]) in trials of buprenorphine. Constipation was significantly more common in buprenorphine users than in control groups. No trials reported on harms of pharmacotherapy in adolescents or in pregnant or postpartum persons.³⁸

Psychosocial Interventions

None of the 4 trials that reported on harms or adverse events of brief psychosocial interventions identified harms or adverse events. These included 2 trials in college students targeting cannabis use and 2 trials in postpartum persons who received brief interventions after delivery. None of the other psychosocial intervention trials reported on harms or adverse events in adults.³⁸

Response to Public Comment

A draft version of this recommendation statement was posted for public comment on the USPSTF website from August 13 to September 9, 2019. In response to public comments, the USPSTF clarified that "screening" means asking questions about unhealthy drug use (not testing biological specimens, such as blood or urine testing) and that the term "unhealthy drug use" is used to describe nonmedical use of prescription or nonprescription drugs, illegal drugs, or unregulated substances (other than alcohol or tobacco). A few comments requested more information about the USPSTF's interpretation of the evidence. The USPSTF clarified in the Rationale section that screening in primary care settings for drug use can detect a spectrum of drug use and types of drug use. The USPSTF, therefore, considered evidence from treatment trials that may have included patients with more severe drug use disorders to be applicable to screening. Some comments noted that screening adults may have unintended harms, such as discouraging health care seeking in persons who do not want to be screened, medical and sociolegal consequences of reporting positive screening results, privacy issues, or diverting clinicians' attention from patients with established drug use disorders. The USPSTF recognizes these as potential harms and provided more details on screening implementation considerations that may address these harms. In addition, the USPSTF clarified in the Practice Considerations section that the net benefit assessment for this recommendation does not apply to settings and populations for which treatment is not provided or the result of screening is punitive.

Some respondents commented that screening should be offered to adolescents, but the USPSTF did not find sufficient evidence to support routine screening in this age group.

Research Needs and Gaps

The USPSTF identified important gaps related to screening for unhealthy drug use. To fill these gaps, the USPSTF needs more evidence from well-designed studies that further evaluate the following.

- The effectiveness of screening and interventions for drug use in adolescents
- The optimal screening interval for detecting unhealthy drug use
- The accuracy of screening tools for detecting nonmedical use of prescription drugs, including opioids

- Strategies to improve access to pharmacotherapy and psychosocial interventions for persons with various types of drug use disorders
- The harms that occur when the result of screening is punitive
- The benefits and harms of providing prophylactic prescriptions for naloxone “rescue therapy” to patients in whom opioid misuse or opioid use disorders are detected after primary care screening

Recommendations of Others

Several organizations have issued statements about screening for drug use by asking about drug use; these recommendations vary by patient subpopulation. SAMHSA recommends universal screening for substance use (including alcohol), brief intervention, and/or referral to treatment (known as SBIRT) as part of routine health care,¹² including during pregnancy.¹⁷ The US Departments of Defense and Veterans Affairs³⁹ and the American Academy of Family Physicians⁴⁰ have adopted the 2008 USPSTF recommendation statement (I statement) indicating that evidence is insufficient to recommend

routine screening for illicit drug use. The American Academy of Pediatrics recommends screening adolescents through their early 20s for substance use (including tobacco and alcohol) at every annual physical examination as well as screening adolescents who present to emergency departments or urgent care centers; report cigarette smoking; have depression, anxiety, or other mental health conditions associated with substance abuse; or exhibit school, legal, or social problems or other behavioral changes.⁴¹ It provides a list of screening tools that have been validated for use in adolescents through their early 20s.²² The Bright Futures initiative includes a recommendation that all adolescents (including those aged 18 to 21 years) should be screened for substance use (including tobacco and alcohol) as part of an overall psychosocial history.⁴² The American College of Obstetricians and Gynecologists specifically advises screening women annually for nonmedical use of prescription drugs. It also recommends screening women aged 18 to 26 years for drug use as part of preventive care, universal screening of women before pregnancy and early in pregnancy, and screening postpartum women as indicated.⁴³⁻⁴⁹

ARTICLE INFORMATION

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Accepted for Publication: May 4, 2020.

Author Contributions: Dr Krist had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. The USPSTF members contributed equally to the recommendation statement.

Conflict of Interest Disclosures: Authors followed the policy regarding conflicts of interest described at <https://www.uspreventiveservicestaskforce.org/>

[uspstf/about-uspstf/conflict-interest-disclosures](https://www.uspreventiveservicestaskforce.org/about-uspstf/conflict-interest-disclosures).

All members of the USPSTF receive travel reimbursement and an honorarium for participating in USPSTF meetings. Dr Barry reported receiving grants and personal fees from Healthwise.

Funding/Support: The USPSTF is an independent, voluntary body. The US Congress mandates that the Agency for Healthcare Research and Quality (AHRQ) support the operations of the USPSTF.

Role of the Funder/Sponsor: AHRQ staff assisted in the following: development and review of the research plan, commission of the systematic evidence review from an Evidence-based Practice Center, coordination of expert review and public comment of the draft evidence report and draft recommendation statement, and the writing and preparation of the final recommendation statement and its submission for publication. AHRQ staff had no role in the approval of the final recommendation statement or the decision to submit for publication.

Disclaimer: Recommendations made by the USPSTF are independent of the US government. They should not be construed as an official position of AHRQ or the US Department of Health and Human Services.

Additional Contributions: We thank Katy Irwin, MD, MPH (AHRQ), who contributed to the writing of the manuscript, and Lisa Nicoletta, MA (AHRQ), who assisted with coordination and editing.

Additional Information: The USPSTF makes recommendations about the effectiveness of specific preventive care services for patients without obvious related signs or symptoms. It bases its recommendations on the evidence of both the benefits and harms of the service and an assessment of the balance. The USPSTF does not consider the costs of providing a service in this assessment. The USPSTF recognizes that clinical decisions involve more considerations than evidence alone. Clinicians should understand the evidence but individualize decision-making to the specific patient or situation. Similarly, the USPSTF notes that policy and coverage decisions involve considerations in addition to the evidence of clinical benefits and harms.

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