BONUS DIGITAL CONTENT

U.S. Preventive Services Task Force

Screening and Behavioral Counseling Interventions to Reduce Unhealthy Alcohol Use in Adolescents and Adults: Recommendation Statement

Summary of Recommendation and Evidence

The USPSTF recommends screening for unhealthy alcohol use in primary care settings in adults 18 years or older, including pregnant women, and providing persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce unhealthy alcohol use *(Table 1)*. **B recommendation.**

The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening and brief behavioral counseling interventions for alcohol use in primary care settings in adolescents aged 12 to 17 years. **I statement.**

See the Clinical Considerations section for suggestions for practice regarding the I statement.

Rationale

IMPORTANCE

The USPSTF uses the term unhealthy alcohol use to define a spectrum of behaviors, from risky drinking to alcohol use disorder (e.g., harmful alcohol use, abuse, dependence) *(Table 2)*.[1] Risky or hazardous alcohol use means drinking more than the recommended daily, weekly, or per-occasion amounts, resulting in increased risk for health consequences but not meeting criteria for alcohol use disorder.[2] The National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines risky use as exceeding the recommended limits of 4 drinks per day (56 g/day based on the U.S. standard of 14 g/drink) or 14 drinks per week (196 g/day) for healthy adult men aged 21 to 64 years or 3 drinks per day or 7 drinks per week (42 g/day or 98 g/week) for all adult women of any age and men 65 years or older.[2]

A standard drink is defined as 12.0 oz of beer (5% alcohol), 5.0 oz of wine (12% alcohol), or 1.5 oz of liquor (40% alcohol).[2] The American Society of Addiction Medicine defines hazardous use as alcohol use that increases the risk of future negative health consequences.[3] The *Diagnostic and Statistical Manual of Mental Disorders,* 5th ed. (DSM-5) defines the severity of alcohol use disorder (mild, moderate, or severe) based on the number of criteria met.[4] Previous versions of the DSM-5 had separate diagnoses for alcohol abuse and alcohol dependence, but it no longer separates these diagnoses.[1] Currently, there is no firm consensus worldwide regarding the definition of risky drinking. In addition, the definition of a standard drink differs by country.[1] Any alcohol use is considered unhealthy in pregnant women and adolescents.[1] In adolescents, the definition of moderate- or high-risk alcohol use varies by age, based on days of use per year.[5]

Excessive alcohol use is one of the most common causes of premature mortality in the United States. From 2006 to 2010, an estimated 88,000 alcohol-attributable deaths occurred annually in the United States, caused by both acute conditions (e.g., injuries from motor vehicle collisions) and chronic conditions (e.g., alcoholic liver disease).[1,6] Alcohol use during pregnancy is also one of the major preventable causes of birth defects and developmental disabilities.[7]

See related Putting Prevention into Practice on page 771 and related Editorial on page 733.

As published by the USPSTF.

This summary is one in a series excerpted from the Recommendation Statements released by the USPSTF. These statements address preventive health services for use in primary care clinical settings, including screening tests, counseling, and preventive medications.

The complete version of this statement, including supporting scientific evidence, evidence tables, grading system, members of the USPSTF at the time this recommendation was finalized, and references, is available on the USPSTF website at https://www.uspreventiveservicestaskforce.org/.

This series is coordinated by Kenny Lin, MD, MPH, Deputy Editor.

A collection of USPSTF recommendation statements published in *AFP* is available at https://www.aafp.org/afp/uspstf.

TABLE 1

Screening and Behavioral Counseling Interventions to Reduce Unhealthy Alcohol Use in Adolescents and Adults: Clinical Summary of the USPSTF Recommendation

Population	Adults, including pregnant women	Adolescents
Recommendations	Screen for unhealthy alcohol use and provide persons engaged in risky or hazardous drinking with brief behavioral counseling interventions. Grade: B	No recommendation. Grade: I (insufficient evidence)
Screening tests	Numerous brief screening instruments can detect unhealthy alcohol use with acceptable sensitivity and specificity in primary care settings. One- to three-item screening instruments have the best accuracy for assessing unhealthy alcohol use in adults 18 years or older. These instruments include the Alcohol Use Disorders Identification Test–Consumption and the Single Alcohol Screening Questionnaire.	
Treatments and interventions	Brief behavioral counseling interventions were found to reduce unhealthy alcohol use in adults 18 years or older, including pregnant women. Effective behavioral counseling interventions vary in their specific components, administration, length, and number of interactions. The USPSTF was unable to identify specific intervention characteristics or components that were clearly associated with improved outcomes.	
Other relevant USPSTF recommendations	The USPSTF has made recommendations on screening for and interventions to reduce the unhealthy use of other substances, including illicit drugs and tobacco.	

Note: For a summary of the evidence systematically reviewed in making this recommendation, the full recommendation statement, and supporting documents, go to https://www.uspreventiveservicestaskforce.org/.

USPSTF = U.S. Preventive Services Task Force.

DETECTION

The USPSTF found adequate evidence that numerous brief screening instruments can detect unhealthy alcohol use with acceptable sensitivity and specificity in primary care settings.

BENEFITS OF EARLY DETECTION AND BEHAVIORAL COUNSELING INTERVENTIONS

The USPSTF found no studies that directly evaluated whether screening for unhealthy alcohol use in primary care settings in adolescents and adults, including pregnant women, leads to reduced unhealthy alcohol use; improved risky behaviors; or improved health, social, or legal outcomes.

The USPSTF found adequate evidence that brief behavioral counseling interventions in adults who screen positive are associated with reduced unhealthy alcohol use. There were reductions in both the odds of exceeding recommended drinking limits and heavy use episodes at 6- to 12-month follow-up. In pregnant women, brief counseling interventions increased the likelihood that women remained abstinent from alcohol use during pregnancy. The magnitude of these benefits is moderate. Epidemiologic literature links reductions in alcohol use with reductions in risk for morbidity and mortality and provides indirect support that reduced alcohol consumption may help improve some health outcomes.[1,8]

The USPSTF found inadequate evidence that brief behavioral counseling interventions in adolescents were associated with reduced alcohol use.

HARMS OF SCREENING AND BEHAVIORAL COUNSELING INTERVENTIONS

The USPSTF bounds the harms of screening and brief behavioral counseling interventions for unhealthy alcohol use in adults, including pregnant women, as small to none, based on the likely minimal harms of the screening instruments, the noninvasive nature of the interventions, and the absence of reported harms in the evidence on behavioral interventions. When direct evidence is limited, absent, or restricted to select populations or clinical scenarios, the USPSTF may place conceptual upper or lower bounds on the magnitude of benefit or harms.

The USPSTF found inadequate evidence on the harms of screening and brief behavioral counseling interventions for alcohol use in adolescents.

USPSTF ASSESSMENT

The USPSTF concludes with moderate certainty that screening and brief behavioral counseling interventions for unhealthy alcohol use in the primary care setting in adults 18 years or older, including pregnant women, is of moderate net benefit.

The USPSTF concludes that the evidence is insufficient to determine the benefits and harms of screening for unhealthy alcohol use in the primary care setting in adolescents aged 12 to 17 years.

Clinical Considerations

PATIENT POPULATION UNDER CONSIDERATION

The B recommendation applies to adults 18 years or older, including pregnant women. The I statement applies to adolescents aged 12 to 17 years. These recommendations do not apply to persons who have a current diagnosis of or who

TABLE 2

Terms and Definitions of Unhealthy Alcohol Use

Term	Source	Definition
Low-risk use/ lower risk use	ASAM	Consumption of alcohol below the amount identified as hazardous and in situations not defined as hazardous
Risky/at-risk use	NIAAA	Consumption of alcohol above the recommended daily, weekly, or per-occasion amounts but not meeting criteria for alcohol use disorder For all women and men 65 years or older: No more than 3 drinks per day and no more than 7 drinks per week For men (21 to 64 years): No more than 4 drinks per day and no more than 14 drinks per week Should avoid alcohol completely: Adolescents; women who are pregnant or trying to get pregnant; and adults who plan to drive a vehicle or operate machinery, are taking medication that interacts with alcohol, or have a medical condition that can be aggravated by alcohol For adolescents: NIAAA defines moderate- and high-risk use based on days of alcohol use in the past year, by age group: Moderate risk: Ages 12 to 15 years: 1 day Ages 16 to 17 years: 6 days Age 18 years: 12 days Highest risk: Age 11 years: 1 day Ages 12 to 15 years: 6 days Age 16 years: 12 days Age 17 years: 24 days Age 18 years: 52 days
Unhealthy use	ASAM	Any alcohol use that increases the risk or likelihood of health consequences (hazardous use [see below]) or has already led to health consequences (harmful use [see below])
Hazardous use	WHO	A pattern of substance use that increases the risk of harmful consequences; in contrast to harmful use, hazardous use refers to patterns of use that are of public health significance, despite the absence of a current alcohol use disorder in the individual user
	ASAM	Alcohol use that increases the risk or likelihood of health consequences; does not include alcohol use that has already led to health consequences
Harmful use	WHO	A pattern of drinking that is already causing damage to health; the damage may be either physical (e.g., liver damage from chronic drinking) or mental (e.g., depressive episodes secondary to drinking) The description for ICD-10 code F10.1, also labeled "Alcohol Abuse" in the 2018 ICD-10-CM codebook
	ASAM	Consumption of alcohol that results in health consequences in the absence of addiction

continues

ASAM = American Society of Addiction Medicine; DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed.; ICD-10-CM = *International Classification of Diseases*, 10th revision, clinical modification; NIAAA = National Institute on Alcohol Abuse and Alcoholism; SAMHSA = Substance Abuse and Mental Health Services Administration; WHO = World Health Organization.

*—According to the ASAM, the preferred term is "heavy drinking episode."

are seeking evaluation or treatment for alcohol abuse or dependence.

SCREENING TESTS

Of the available screening tools, the USPSTF determined that 1-item to 3-item screening instruments have the best accuracy for assessing unhealthy alcohol use in adults 18 years or older.[1] These instruments include the abbreviated Alcohol Use Disorders Identification Test–Consumption (AUDIT-C) and the NIAAA-recommended Single Alcohol Screening Question (SASQ).

The abbreviated AUDIT-C has good sensitivity and specificity for detecting the full spectrum of unhealthy alcohol use across multiple populations.[1,9] The AUDIT-C has 3 questions about frequency of alcohol use, typical amount of alcohol use, and occasions of heavy use, and

TABLE 2 *(continued)*

Terms and Definitions of Unhealthy Alcohol Use

Term	Source	Definition
Alcohol use disorder	DSM-5	A maladaptive pattern of alcohol use leading to clinically significant impairment or distress, as manifested by 2 (or more) of the following, occurring within a 12-month period: 1. Having times when the patient drank more, or longer, than intended 2. More than once wanted to cut down or stop, tried it, but could not 3. Spending a lot of time drinking or being sick/getting over the aftereffects of drinking 4. Wanting to drink so badly that they could not think of anything else 5. Found that drinking (or being sick from drinking) often interfered with taking care of home or family responsibilities, caused problems at work, or caused problems at school 6. Continuing to drink even though it was causing trouble with family and friends 7. Given up or cut back on activities that were important or interesting in order to drink 8. More than once gotten into situations while or after drinking that increased the chances of getting hurt (e.g., driving, swimming, unsafe sexual behavior) 9. Continued to drink even though it was causing depression or anxiety, other health problems, or causing memory blackouts 10. Having to drink much more than previously in order to get the desired effect, or finding that the usual number of drinks had much less effect than previously 11. Experiencing the symptoms of withdrawal after the effects of alcohol were wearing off, such as trouble sleeping, shakiness, restlessness, nausea, sweating, racing heart, or seizure Severity is determined based on the number of symptoms present: Mild: 2 to 3 symptoms Moderate: 4 to 5 symptoms Severe: ≥ 6 symptoms
Binge drinking/ heavy drinking episodes*	NIAAA	A pattern of drinking that brings blood alcohol concentration levels to 0.08 g/dL, which typically occurs after 4 drinks for women and 5 drinks for men—in about 2 hours
	SAMHSA	Drinking ≥ 5 alcoholic drinks on the same occasion on at least 1 day in the past 30 days
Heavy drinking	SAMHSA	Drinking ≥ 5 drinks on the same occasion on each of ≥5 days in the past 30 days
Alcohol dependence	WHO/ ICD-10-CM	≥ 3 of the following at some time during the previous year: 1. A strong desire or sense of compulsion to take the substance 2. Difficulties in controlling substance-taking behavior in terms of its onset, termination, or levels of use 3. A physiological withdrawal state when substance use has ceased or been reduced, as evidenced by the characteristic withdrawal syndrome for the substance; or use of the same (or a closely related) substance with the intention of relieving or avoiding withdrawal symptoms 4. Evidence of tolerance, such that increased doses of the psychoactive substance are required in order to achieve effects originally produced by lower doses (clear examples of this are found in alcohol- and opiate-dependent individuals who may take daily doses sufficient to incapacitate or kill nontolerant users) 5. Progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance, or to recover from its effects 6. Persisting with substance use despite clear evidence of overtly harmful consequences, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy substance use, or drug-related impairment of cognitive functioning; efforts should be made to determine that the user was actually, or could be expected to be, aware of the nature and extent of the harm

ASAM = American Society of Addiction Medicine; DSM-5 = *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed.; ICD-10-CM = *International Classification of Diseases,* 10th revision, clinical modification; NIAAA = National Institute on Alcohol Abuse and Alcoholism; SAMHSA = Substance Abuse and Mental Health Services Administration; WHO = World Health Organization.

*—According to the ASAM, the preferred term is "heavy drinking episode."

it takes 1 to 2 minutes to administer. The USAUDIT and USAUDIT-C are based on U.S. standards. Preliminary evidence (1 study) suggests that the USAUDIT (specifically the USAUDIT-C) may be more valuable in identifying at-risk college drinkers.[10] The SASQ also has adequate sensitivity and specificity across the unhealthy alcohol use spectrum and requires less than 1 minute to administer, asking "How many times in the past year have you had 5 [for men] or 4 [for women and all adults older than 65 years] or more drinks in a day?"[1,2] The Cut down, Annoyed, Guilty, Eye-opener (CAGE) tool is well known but detects only alcohol dependence rather than the full spectrum of unhealthy alcohol use.[1,11]

When patients screen positive on a brief screening instrument (e.g., SASQ or AUDIT-C), clinicians should ensure follow-up with a more in-depth risk assessment to confirm unhealthy alcohol use and determine the next steps of care. Evidence supports the use of brief instruments with higher sensitivity and lower specificity as initial screening, followed by a longer instrument with greater specificity (e.g., AUDIT). The AUDIT has 10 questions: 3 questions covering frequency of alcohol use, typical amount of alcohol use, and occasions of heavy use; and 7 questions on the signs of alcohol dependence and common problems associated with alcohol use (e.g., being unable to stop once you start drinking). It requires approximately 2 to 5 minutes to administer.[1,12] If AUDIT is used as an initial screening test, clinicians may use a lower cutoff (such as 3, 4, or 5) to balance sensitivity and specificity in screening for the full spectrum of unhealthy alcohol use.

Screening instruments have also been specifically developed for various populations. Screening tools for pregnant women include Tolerance, Worried, Eye-opener, Amnesia, Kut down (TWEAK)[13]; Tolerance, Annoyed, Cut down, Eye-opener (T-ACE)[14]; Parents, Partner, Past, Present Pregnancy (4P's Plus)[15]; and Normal drinker, Eye-opener, Tolerance (NET).[16] The NIAAA and American Academy of Pediatrics recommend the Car, Relax, Alone, Forget, Family, Friends, Trouble (CRAFFT) screening instrument for identifying risky substance use in adolescents.[17] The NIAAA also recommends asking patients about their own alcohol use as well as their friends' alcohol use.[5] The Comorbidity Alcohol Risk Evaluation Tool (CARET) is used in older adults.[18] The Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST), developed by the World Health Organization, screens for substance and alcohol use in adults.[1,19]

BEHAVIORAL COUNSELING INTERVENTIONS

Behavioral counseling interventions for unhealthy alcohol use vary in their specific components, administration, length, and number of interactions. Thirty percent of the interventions reviewed by the USPSTF were web-based. Nearly all of the interventions comprised 4 or fewer sessions; the median number of sessions was 1 (range, 0-21). The median length of time of contact was 30 minutes (range, 1-600 minutes). Most of the interventions had a total contact time of 2 hours or less.[1] Primary care settings often used the Screening, Brief Intervention, and Referral to Treatment (SBIRT) approach. Interventions targeting adults other than college students (including pregnant and postpartum women) were more likely to take place in primary care settings, have multiple sessions, and involve a primary care team.[1] Most interventions involved giving general feedback to participants (e.g., how their drinking fits with recommended limits, or how to reduce alcohol use). The most commonly reported intervention component was use of personalized normative feedback sessions, in which participants were shown how their alcohol use compares with that of others; more than half of the included trials and almost all trials in young adults used this technique.[1] Most trials in young adults involved 1 or 2 in-person or web-based personalized normative feedback sessions in university settings. Personalized normative feedback was often combined with motivational interviewing or more extensive cognitive behavioral counseling. Other cognitive behavioral strategies, such as drinking diaries, action plans, alcohol use "prescriptions," stress management, or problem-solving, were also frequently used. About one-third of the intervention trials in general and older adult populations involved a primary care team.[1] The USPSTF was unable to identify specific intervention characteristics or components that were clearly associated with improved outcomes.[1]

The USPSTF found no evidence to suggest that patients of different race/ethnicity or lower socioeconomic status have a lower likelihood of benefit from interventions. Effects of interventions were also similar in men and in women.[1]

SCREENING INTERVALS

The USPSTF did not find adequate evidence to recommend an optimal screening interval for unhealthy alcohol use in adults.

SUGGESTIONS FOR PRACTICE REGARDING THE I STATEMENT

Potential Preventable Burden. In 2016, the National Survey on Drug Use and Health reported that an estimated 9.2% of adolescents aged 12 to 17 years drink alcohol and 4.9% had an episode of binge drinking in the last 30 days.[20] Each year, excessive drinking in underage youth leads to more than 4300 deaths.[21] Driving while under the influence of alcohol is particularly hazardous among adolescents. The 2015 Youth Risk Behavior Survey found that about 8% of high school students who drove a car in the last 30 days reported driving after drinking alcohol, and 20% reported riding with a driver who had been drinking.[22] In 2010, 1 in 5 teen drivers involved in a fatal motor vehicle collision

had some alcohol in their system, and most had blood alcohol levels higher than the legal limit for adults.[23] An estimated 97,000 students aged 18 to 24 years have reported an alcohol-related sexual assault or date rape; 696,000 students aged 18 to 24 years have been assaulted by another student who was under the influence of alcohol.[24,25] An estimated 1 in 4 college students reports academic consequences from drinking, such as missing class, doing poorly on examinations or papers, falling behind in class, and receiving lower grades.[1,24,26]

Potential Harms. Possible harms of screening for unhealthy alcohol use include stigma, anxiety, labeling, discrimination, privacy concerns, and interference with the patient-clinician relationship. The USPSTF did not find any evidence that specifically examined the harms of screening for alcohol use in adolescents.

Current Practice. Research suggests that although a majority of pediatricians and family practice clinicians report providing some alcohol prevention services to adolescent patients, they do not consistently screen and counsel for alcohol misuse.[27] Survey results indicate that screening was more likely if adolescents were older (aged 15 to 17 years).[27] However, the quality of screening practices, tools used, and interventions provided varied widely. Current data on rates of screening are lacking. Reported barriers to screening include time constraints, lack of knowledge about best practices, and lack of services for adolescent patients who screen positive.[1,28]

USEFUL RESOURCES

The AUDIT and AUDIT-C, which screen for unhealthy alcohol use in adults 18 years or older, including pregnant women, are available from the Substance Abuse and Mental Health Services Administration, as well as other resources.[29,30] More information about SASQ and counseling for unhealthy alcohol use is available from the NIAAA.[31] Clinician guides are available from the World Health Organization[32] and the American Academy of Family Physicians.[33] An implementation guide for primary care practices is available from the Centers for Disease Control and Prevention.[34]

The Community Preventive Services Task Force recommends electronic screening and brief interventions to reduce excessive alcohol consumption in adults. It found limited information on the effectiveness of electronic screening and brief interventions in adolescents.[35] The Community Preventive Services Task Force has also evaluated public health interventions (i.e., interventions occurring outside of the clinical practice setting) to prevent excessive alcohol consumption.[36]

The USPSTF has made recommendations on screening for and interventions to reduce the unhealthy use of other substances, including illicit drugs[37] and tobacco.[38]

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The "Other Considerations," "Discussion," "Update of Previous USPSTF Recommendation," and "Recommendations of Others" sections of this recommendation statement are available at https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/unhealthy-alcohol-use-in-adolescents-and-adults-screening-and-behavioral-counseling-interventions.

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