



Substance Use Screening, Brief Intervention, and Referral to Treatment

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The enormous public health impact of adolescent substance use and its preventable morbidity and mortality highlight the need for the health care sector, including pediatricians and the medical home, to increase its capacity regarding adolescent substance use screening, brief intervention, and referral to treatment (SBIRT). The American Academy of Pediatrics first published a policy statement on SBIRT and adolescents in 2011 to introduce SBIRT concepts and terminology and to offer clinical guidance about available substance use screening tools and intervention procedures. This clinical report provides a simplified adolescent SBIRT clinical approach that, in combination with the accompanying updated policy statement, guides pediatricians in implementing substance use prevention, detection, assessment, and intervention practices across the varied clinical settings in which adolescents receive health care.

abstract

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INTRODUCTION

Adolescent substance use is an issue of critical importance to the American public. In 2011, a nationally representative household survey found that adults rated drug abuse as the number one health concern for adolescents.¹ These concerns are reflected in the *Healthy People 2020* objectives, which call for reducing teen substance use.² Alcohol, tobacco, and marijuana are the substances most often used by children and adolescents in the United States. Twenty-eight percent of students have tried alcohol by eighth grade, and 68.2% have tried alcohol by 12th grade. Twelve percent of eighth-graders and more than half of 12th-graders have been drunk at least once in their life.³ Rates of marijuana use have increased substantially in recent years; in 2012, 45% of ninth- through 12th-graders reported ever using marijuana, and 24% reported marijuana use in the past 30 days.⁴ Eight percent of teenagers reported using marijuana nearly every day, an increase of approximately 60% from 2008.⁴ Decreases in tobacco use by high school students have plateaued since 2007; 41% of ninth- through 12th-graders reported having tried cigarettes and nearly one-quarter (22.4%)

reported current (past-30-day) use of tobacco in any form.⁵ “Misuse” of prescription medication, especially stimulants and pain medications, continues among a substantial minority of adolescents (eg, 15% of 12th-graders³). Approximately half (50.4%) of 12th-graders have used any illicit drug (half of these, or 24.7%, reported the use of any illicit drug other than marijuana).³

Although it is common for adolescents and young adults to try psychoactive substances, it is important that this experimentation not be condoned, facilitated, or trivialized by adults. Even the first use of a psychoactive substance may result in tragic consequences, such as injury, victimization, or even fatality. Adolescence extends from approximately 12 years of age into the early 20s and is a time of intensive neurodevelopmental molding and maturation that confers greater neurodevelopmental vulnerability at a time during which risk-taking behaviors are generally more prevalent. Adolescents are particularly susceptible to risk-related injuries, including those associated with alcohol, tobacco, and other drug use.^{6,7} Most alcohol and drug use consequences during adolescence are attributable not to addiction but to the fact that all substance use confers some amount of risk.⁸ Substance use correlates with sexual risk-taking⁹ and can complicate pregnancy outcomes. Other health complexities, such as having a chronic disease or disability, including intellectual disability, may increase an adolescent’s vulnerability to both substance use and its consequences.^{10,11} The neurodevelopmental changes during adolescence confer particular vulnerability to addictions.¹² The age at first substance use is inversely correlated with the lifetime incidence of developing a substance use disorder.^{7,12} Adolescence is thus a most critical time period for

pediatricians, the medical home, and any other entity providing health advice to deliver clear and consistent messaging about abstaining from substance use.¹³

*Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*¹⁴ highlights the unique role of the pediatrician in addressing problem behaviors throughout the pediatric age range. Most adolescents (83%) have contact with a physician annually.¹⁵ Adolescents consider physicians an authoritative source of knowledge about alcohol and drugs and are receptive to discussing substance use.¹⁶ These findings underscore the tremendous opportunity for addressing substance use in primary care settings, the medical home, and other settings in which children and adolescents receive medical care and health advice.

The Substance Abuse and Mental Health Services Administration (SAMHSA) recommends universal substance use screening, brief intervention, and/or referral to treatment (SBIRT) as part of routine health care.¹⁷ Capitalizing on opportunities to screen whenever and wherever adolescents receive medical care can increase the identification of risk behaviors and substance use. Because the adolescent age group is at the highest risk of experiencing substance use–related health consequences,¹⁸ it is also the most likely to derive the most benefit from universal SBIRT. This clinical report, together with an update of the 2011 American Academy of Pediatrics (AAP) policy statement on SBIRT,¹⁹ presents a simplified, practical clinical approach to support widespread implementation of research-informed SBIRT practices. Similar to any other patient interactions, SBIRT must be conducted with sensitivity to various patient population abilities, vulnerabilities, and needs, such as when adolescents have

chronic medical conditions or intellectual disabilities,^{10,11} and with considerations to modify SBIRT techniques as needed to ensure relevance, comprehensibility, and reliability.

CONFIDENTIALITY

Confidentiality practices in the medical home are important facilitators to SBIRT practices and the care of an adolescent disclosing substance use. Protection of their confidential health care information is an essential determinant of whether adolescents will access care, answer questions honestly, and engage in and maintain a therapeutic alliance with health care professionals.^{20,21} Adolescents may disclose substance use or other high-risk behaviors as a way to reveal that they want help or feel unsafe, possibly even in their own home, so a prime consideration for the pediatrician is whether maintaining confidentiality or disclosing confidential health information is in the patient’s best interest.

Health care professional organizations guiding best practices in adolescent and young adult medical care, including the American Medical Association, the AAP, the American College of Obstetricians and Gynecologists, the American Academy of Family Physicians, and the Society for Adolescent Health and Medicine, have established position statements and recommendations guiding confidentiality and informed consent in this age group.^{22,23} The AAP statement recommends that all children and adolescents receive comprehensive, confidential primary care, including indicated screenings, counseling, and physical and laboratory evaluations.¹⁹ The Society for Adolescent Health and Medicine’s position paper notes that participation of parents in the health care of their adolescents should usually be encouraged but

not mandated.²² The Center for Adolescent Health and the Law (CAHL.org) provides detailed information about each state's regulations that specify adolescent and parent rights, including adolescent confidentiality.

Confidentiality practices are best introduced to the patient and the parent(s) or legal guardian simultaneously before the first time the teen or "tween" (preadolescent) patient is interviewed without a parent present or when an adolescent is new to a pediatrician's practice. The "limit" to maintaining confidentiality relies on the pediatrician's clinical judgment of the need to prevent imminent harm to the patient or someone else and to protect the patient's health and safety. Adolescents often express relief that their parents will be informed of serious problems, although they may have preferences about how the information is presented. By first informing the adolescent that confidentiality can no longer be upheld and then strategizing about the disclosure, the pediatrician, with the adolescent's permission, or the patient, together with the pediatrician, can transmit the necessary information to parents while simultaneously protecting the physician-patient bond. Whether or not the adolescent's substance use poses an acute safety risk, adolescents are likely to benefit from the support and involvement of their parents in accessing recommended services and accepting the care plan. Adolescents are unlikely to follow through with referrals without the support of an adult, and even more so if they are being referred for the evaluation or treatment of something they do not believe they have, such as a severe substance use disorder (SUD), or addiction. In many cases and certainly by the time an adolescent has developed an SUD, parents are already aware or at least highly suspect that their adolescent

is engaged in substance use, although they may underestimate the extent of use or the seriousness of the situation.²⁴ In addition, confidentiality, intervention, and treatment are potentially influenced by a parent's substance use or active substance use disorder. Advising the substance-using parent to speak with their own physician or to seek other assistance is likely to be helpful as the pediatrician begins to work with the substance-using adolescent.

Adolescents may be less resistant to breaking confidentiality if the pediatrician and the adolescent first discuss why the disclosure is necessary, what details will be disclosed, who will disclose the details, and how disclosure will help. Teenagers may be most concerned about protecting tangential details (ie, which friends were involved, how and where they obtained substances, etc), which might be possible to keep confidential when disclosure would not substantially change the safety plan. Adolescents may be willing to include their parent(s) in a discussion of recommendations, particularly if the concerns and recommendations can be presented in a way that emphasizes positive attributes, such as the adolescent's honesty, willingness to change behavior, and/or acceptance of further evaluation or treatment. Adolescents who agree to accept a referral without notifying their parents may be able to access services available in the school or the community. Specific laws governing the need for parental consent for SUD treatment vary by state, so legal clarification is advised. Physicians should be aware that health insurance transactions can potentially jeopardize patient confidentiality and rapport with the patient and parent: for example, when a parent's insurance policy sends the policy holder (parent) an explanation of benefits with explicit diagnostic codes about the adolescent's care.

SCREENING

Screening is a procedure applied to populations to identify individuals or groups at risk of or with a disease, condition, or symptoms. Screening is conducted so that the results can form the basis for a corresponding care plan. The best screening tools are those containing the lowest number of succinct validated questions that can elicit accurate and reliable responses. Comprehensive biopsychosocial screening, including substance use screening, is a recommended component of routine adolescent health care. The HEEADSSS mnemonic, which stands for home environment, education and employment, eating, peer-related activities, drugs, sexuality, suicide/depression, and safety from injury and violence,^{25,26} is a frequently used framework to conduct a complete psychosocial interview with adolescents, as is the SSHADESS mnemonic, a strength- and resiliency-based tool. Whether the patient responds to a written or electronic survey or provider or medical assistant questioning, the "D" in these tools triggers screening about the patient's substance use but possibly also about use by their friends or household members.

The SBIRT screening goal is to define experience with substance use along a spectrum ranging from abstinence to addiction so that this information can be used to guide the next steps of the related clinical approach, or intervention (see Table 1). Screening results broadly inform clinical care: for example, alcohol and drug use may be the source of a presenting symptom or may interfere with prescribed medications and test results. The management of inattentiveness would be different if the physician learned that the patient used marijuana (a possible cause) or a stimulant drug (a prescribing risk). Awareness about the range of possible screening results allows the pediatrician to be prepared to

TABLE 1 Substance Use Spectrum and Goals for BI

Stage	Description	BI Goals
Abstinence	The time before an individual has ever used drugs or alcohol more than a few sips.	Prevent or delay initiation of substance use through positive reinforcement and patient/parent education.
Substance use without a disorder	Limited use, generally in social situations, without related problems. Typically, use occurs at predictable times, such as on weekends.	Advise to stop. Provide counseling regarding the medical harms of substance use. Promote patient strengths.
Mild–moderate SUD	Use in high-risk situations, such as when driving or with strangers. Use associated with a problem, such as a fight, arrest, or school suspension. Use for emotional regulation, such as to relieve stress or depression. Defined as meeting 2 to 5 of the 11 criteria for an SUD in the DSM-5.	Brief assessment to explore patient-perceived problems associated with use. Give clear, brief advice to quit. Provide counseling regarding the medical harms of substance use. Negotiate a behavior change to quit or cut down. Close patient follow-up. Consider referral to SUD treatment. Consider breaking confidentiality.
Severe SUD	Loss of control or compulsive drug use associated with neurologic changes in the reward system of the brain. Defined as meeting ≥ 6 of the 11 criteria for an SUD in the DSM-5.	As above. Involve parents in treatment planning whenever possible. Refer to the appropriate level of care. Follow up to ensure compliance with treatment and to offer continued support.

DSM-5, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*.

address the range of potential patient responses.

Pediatricians' self-reported rates of routine substance use screening vary from less than 50%^{27,28} to 86%,²⁹ although few physicians reported using a validated screening tool,³⁰ and most relied on clinical impressions. The most frequently cited barriers to screening were lack of time,³¹ insufficient training,³² and lack of familiarity with standardized tools.³³ Experienced pediatricians have failed to detect mild, moderate, and sometimes even severe SUDs when relying on clinical impressions alone.³⁴ A recent study found that when a screening tool was not used, only one-third of youth who were engaged in "excessive alcohol use" were identified.³⁵

An array of validated tools is available to conduct alcohol and other substance use screening and to guide assessment for use-related problems (Table 2). The effective incorporation of screening into the pediatric practice depends on pediatricians being knowledgeable about screening options and selecting

and implementing the tools most suitable for routine use in their particular care settings and patient population(s), including vulnerable patients in their care. Alcohol-only screening may be most useful with younger children, when time is very limited or when alcohol use is a particular concern. The AAP-endorsed National Institute on Alcoholism and Alcohol Abuse's "Youth Guide"³⁶ provides clinicians with an age-based schema to ask patients about the frequency of their drinking and their friends' drinking in the past year and to correlate the respective responses with the current and future risk of having an alcohol use disorder. The BSTAD (Brief Screener for Tobacco, Alcohol and other Drugs)³⁷ uses highly sensitive and specific cutoffs to identify various SUDs among adolescents 12 to 17 years of age: ≥ 6 days of past-year use for tobacco and >1 day of past-year use for alcohol or marijuana.³⁷ The Screening to Brief Intervention (S2BI) tool³⁸ uses a stem question and forced-response options (none, once or twice, monthly, and weekly or more)

in a sequence to reveal the frequency of past-year use of tobacco, alcohol, marijuana, and 5 other classes of substances most commonly used by adolescents (Table 3). The S2BI tool is highly sensitive and specific in discriminating among clinically relevant use-risk categories and therefore is remarkably efficient in its ability to detect severe SUDs aligned with criteria from the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*³⁹ (Table 4). Although the S2BI is not a formal diagnostic instrument, the patient's response to the question about the frequency of use in the past year correlates closely with the present likelihood of having an SUD, as follows: used "once or twice" correlates with no SUD, uses "monthly" correlates with mild or moderate SUD, and uses "weekly or more" correlates with a severe SUD (Fig 1). The CRAFFT (Car, Relax, Alone, Friends/Family, Forget, Trouble)⁴⁰ tool originally was validated to screen for substance use risk by scoring each patient's "yes" or "no" responses to 6 questions, but using the tool as an assessment to explore "yes" responses and to reveal the extent of the patient's substance use-related problems may be more effective for gathering details for use in SBIRT intervention.

Incorporating screening into the patient care visit logically assumes that the spectrum of possible screening outcomes will be addressed by using effective approaches and available resources most suitable for the particular patient population and locale. Options for pediatricians to respond to adolescent substance use screening results and to facilitate care are described by a range of "brief intervention and referral to treatment" practices.

BRIEF INTERVENTION

Brief intervention (BI) is a conversation that focuses on

encouraging healthy choices so that the risk behaviors are prevented, reduced, or stopped. In the context of SBIRT, regardless of which substance use screening tools are used, the BI strategy is identical, because it is a direct response to the reported substance use severity. BI encompasses a spectrum of potential pediatrician responses, including positive reinforcement for adolescents reporting no substance use; brief, medically based advice for those reporting use but showing no evidence of an SUD; brief motivational interventions when a mild or moderate SUD is revealed; and referral to treatment of those with a severe SUD. Using motivation-enhancing principles is compatible with all BI dialogue regarding any level of substance use and risk.

Among adolescents presenting to an ED for a substance use–related problem, BI has been shown to reduce subsequent alcohol use,⁴³ marijuana use,⁴⁴ and associated problems⁴⁵ and to be cost-effective compared with brief education.⁴⁶ Several BI models have been evaluated in primary care: structured intervention “5A’s,”⁴⁷ “CHAT,”⁴⁸ intervention with follow-up “Healthy Choices,”⁴⁹ “MOMENT,”⁵⁰ and therapist-delivered versus computer-delivered BI.⁵¹ All of these models have been modestly successful in showing reductions in substance use and related consequences and/or risky behaviors, although 1 trial found similar substance use reductions in both experimental and control groups.⁵⁰ Physician-implemented BI is acceptable to both teenagers¹⁶ and clinicians.⁵² Although a recent US Preventive Services Task Force⁵³ review found insufficient scientific basis to recommend any particular BI for addressing adolescent substance use, this clinical report reviews the current literature base to summarize expert opinion about practical BI strategies.

TABLE 2 Substance Use Screening and Assessment Tools Used With Adolescents

	Description
Brief screens	
S2BI (Screening to Brief Intervention) ³⁸	Single frequency-of-use question per substance Identifies the likelihood of a DSM-5 SUD Includes tobacco, alcohol, marijuana, and other/illicit drug use Discriminates among no use, no SUD, moderate SUD, and severe SUD Electronic medical record compatible Self- or interviewer-administered
BSTAD (Brief Screener for Tobacco, Alcohol, and Other Drugs) ³⁷	Identifies problematic tobacco, alcohol, and marijuana use Built on the NIAAA screening tool with added tobacco and “drug” questions Electronic medical record compatible Self- or interviewer-administered
NIAAA Youth Alcohol Screen (Youth Guide) ³⁶	Two-question alcohol screen Screens for friends’ use and for personal use in children and adolescents aged ≥9 y Free resource: http://pubs.niaaa.nih.gov/publications/Practitioner/YouthGuide/YouthGuide.pdf
Brief assessment guides	
CRAFFT (Car, Relax, Alone, Friends/Family, Forget, Trouble) ⁴⁰	Quickly assesses for problems associated with substance use Not a diagnostic tool
GAIN (Global Appraisal of Individual Needs) ⁴¹	Assesses for both SUDs and mental health disorders
AUDIT (Alcohol Use Disorders Identification Test) ⁴²	Assesses for risky drinking Not a diagnostic tool

Adapted with permission from American Academy of Pediatrics; Levy S, Bagley S. Substance use: initial approach in primary care. In: Adam HM, Foy JM, eds. Signs and Symptoms in Pediatrics. Elk Grove Village, IL: American Academy of Pediatrics; 2015:887–900. DSM-5, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*; NIAAA, National Institute on Alcohol Abuse and Alcoholism.

No Substance Use: Positive Reinforcement

It has been recommended that adolescents reporting no substance use (whether tobacco, alcohol, or other drugs) receive positive reinforcement for making this smart decision and related healthy choices.⁵⁴ Even a few positive words from a physician may delay the initiation of alcohol use by adolescents.⁵⁵ Any delay in substance use onset coincides with additional brain maturation, so abstaining may be protective against the known acute and long-term consequences of early-onset substance use. Choosing to abstain from substance use can be framed as an active decision, and the adolescent is given credit for making a healthful decision and acting on it. Although screening has never been shown to increase rates of substance use, the National Institute on Alcoholism and Alcohol Abuse recommends including a “normative

correction” statement whenever screening children or younger adolescents, such as, “I am glad to hear that you, just like most others your age, have never tried alcohol.” Normative correction statements may help avoid the potential for patient misinterpretation that being screened in this case for alcohol use implies that alcohol use by the patient and at his or her age is expected and the age norm.

Substance Use Without an SUD: BI

When substance use is infrequent with a low likelihood of having an SUD, such as an S2BI screening response of using “once or twice” in the past year, the appropriate BI is to advise the patient to abstain in support of health and safety. A BI comprising clear, pointed advice to stop substance use combined with succinct mention of the negative health effects of use can lead to decreased use or

abstinence in adolescent patients who use substances infrequently.⁵⁶ Brief medical advice could include statements such as, “For the sake of your health, I advise you to quit smoking marijuana. Marijuana use interferes with concentration and memory and is linked to getting lower grades at school.” This BI could also recognize and leverage personal strengths and positive attributes, such as, “You are doing so well in school. I hope you will consider how your marijuana use could change all that, and whether or not that is what you really want.”

Mild to Moderate SUD: Brief Motivational Intervention

Brief intervention for adolescents with mild to moderate SUD is a likely short structured conversation based on the principles of motivational interviewing,⁵⁷ through which the pediatrician respects patient autonomy while enhancing the patient’s self-efficacy to institute behavior change, rather than persuading, coercing, or demanding the behavior change.⁵⁸ The core activity of BMI is to help the patient compare the benefits of continued substance use with the potential benefits of behavior change (ie, decreasing or stopping use) and ultimately take action that supports personal health and safety. The intervention is based on the premise that although adolescents who have experienced substance use–related problems can identify the potential benefits of reducing or stopping use, behavior change will not occur until the perceived benefits of giving up use outweigh the perceived “cost” and harms from continued use. For example, an adolescent may realize that marijuana use is causing tension in the relationship with his or her parents but continue to use marijuana because of perceived greater benefit from marijuana use to relieve stress or as a pleasurable activity shared with friends.

TABLE 3 S2BI Screen for Substance Use Risk Level

The following questions will ask about your use, if any, of alcohol, tobacco, and other drugs. Please answer every question by clicking on the box next to your choice.

In the past year, how many times have you used ...

- Tobacco?
 -Never
 -Once or twice
 -Monthly
 -Weekly or more

- Alcohol?
 -Never
 -Once or twice
 -Monthly
 -Weekly or more

- Marijuana?
 -Never
 -Once or twice
 -Monthly
 -Weekly or more

STOP if answers to all previous questions are “never.” Otherwise, continue with the following questions.

In the past year, how many times have you used...

- Prescription drugs that were not prescribed for you (such as pain medication or Adderall)?
 -Never
 -Once or twice
 -Monthly
 -Weekly or more

- Illegal drugs (such as cocaine or Ecstasy)?
 -Never
 -Once or twice
 -Monthly
 -Weekly or more

- Inhalants (such as nitrous oxide)?
 -Never
 -Once or twice
 -Monthly
 -Weekly or more

- Herbs or synthetic drugs (such as salvia, “K2,” or bath salts)?
 -Never
 -Once or twice
 -Monthly
 -Weekly or more

Starting an intervention with assessment questions to identify substance use frequency and associated problem severity can guide the pediatrician in deciding the next steps for patient care, namely continued conversation around behavior change managed in the medical home or referring to more specialized substance use evaluation, intervention, and/or treatment. This model optimizes the CRAFFT⁴⁰ tool as an assessment guide. For example, an adolescent patient responding “yes” to the CRAFFT question, “Have you gotten into trouble while you were using alcohol or drugs?” The pediatrician can distill these

details into a fulcrum to pivot the conversation into discussing the adolescent’s plans for avoiding such problems in the future. The pediatrician can assist the patient in making a specific intervention plan to record in the medical record and facilitate follow-up (Box 1).

Box 1

The pediatrician screens a 14-year-old boy who reports monthly alcohol use. The pediatrician asks follow-up questions about patterns of use and associated problems. The patient mentions binge drinking and not always knowing how he gets home from

TABLE 4 DSM-5³⁹ and ICD-10 Criteria for SUD

DSM-5		ICD-10	
Criteria	Severity	Criteria	Severity
1. Use in larger amounts or for longer periods of time than intended	Severity is designated according to the number of symptoms endorsed: 0–1, no diagnosis; 2–3, mild SUD; 4–5, moderate SUD; ≥6, severe SUD	1. A strong desire or sense of compulsion to take the substance	Three or more of these manifestations should have occurred together for at least 1 month or if persisting for periods of <1 month, then they have occurred together repeatedly within a 12-month period
2. Unsuccessful efforts to cut down or quit		2. Impaired capacity to control substance-taking behavior in terms of onset, termination, or level of use, as evidenced by the substance being often taken in larger amounts over a longer period than intended or any unsuccessful effort or persistent desire to cut down or control substance use	
3. Excessive time spent taking the drug		3. A psychological withdrawal state when substance use is reduced or ceased, as evidenced by the characteristic withdrawal syndrome for the substance, or use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms	
4. Failure to fulfill major obligations		4. Evidence or tolerance to the effects of the substance, such that there is a need for markedly increased amounts of the substance to achieve intoxication or desired effect, or that there is a markedly diminished effect with continued use of the same amount of the substance	
5. Continued use despite problems		5. Preoccupation with substance use, as manifested by important alternative pleasures or interests being given up or reduced because of substance use, or a great deal of time being spent in activities necessary to obtain the substance, take the substance, or recover from its effects	
6. Important activities given up		6. Persisting with substance use despite clear evidence or harmful consequences, as evidenced by continued use when the person was actually aware of, or could be expected to have been aware of, the nature and extent of harm	
7. Recurrent use in physically hazardous situations			
8. Continued use despite problems			
9. Tolerance			
10. Withdrawal			
11. Craving			

DSM-5, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*; ICD-10, *International Statistical Classification of Diseases and Related Health Problems, 10th ed.*

parties. He admits preferring not to think about it because it frightens him. The pediatrician correlates the report of ‘monthly’ use to a likelihood that the patient has a mild or moderate SUD, indicating the next step is intervention to reduce use. The patient is given brief advice and challenged to make a behavior change: *“As your doctor, I recommend that you stop drinking alcohol. You described having ‘blackouts’ from your drinking. This means that you drank enough to poison your brain cells at least temporarily, which is why at times you can’t remember how you have gotten home from parties. As you*

pointed out, a teenager can get into trouble with ‘blackouts,’ and it sounds like you have had some frightening experiences. How do you think you can protect yourself better in the future?” The patient says that he is not going to quit drinking, but can agree to limiting himself to 2 drinks per occasion, a sharp decrease from his usual 6 to 8 drinks, because he does not want to black out again. The pediatrician gives advice about alcohol and motor vehicle-associated risks and suggests developing a safety plan. Planning is documented in the medical record and a follow-up appointment is scheduled in 3 months.

Medical home follow-up can be conducted after a few weeks of attempted behavior change to assess whether risk behaviors have diminished, remained the same, or escalated. Adolescents who are found to have met the agreed-on substance use behavior change goals can benefit from discussing the pros and cons of their decreased use and identifying any motivating factors that can be reinforced to sustain the behavior change and lead to abstinence. Adolescents who are unable to meet the behavior change goals may benefit from more extensive substance use-targeted individual counseling provided by an allied mental health professional, such

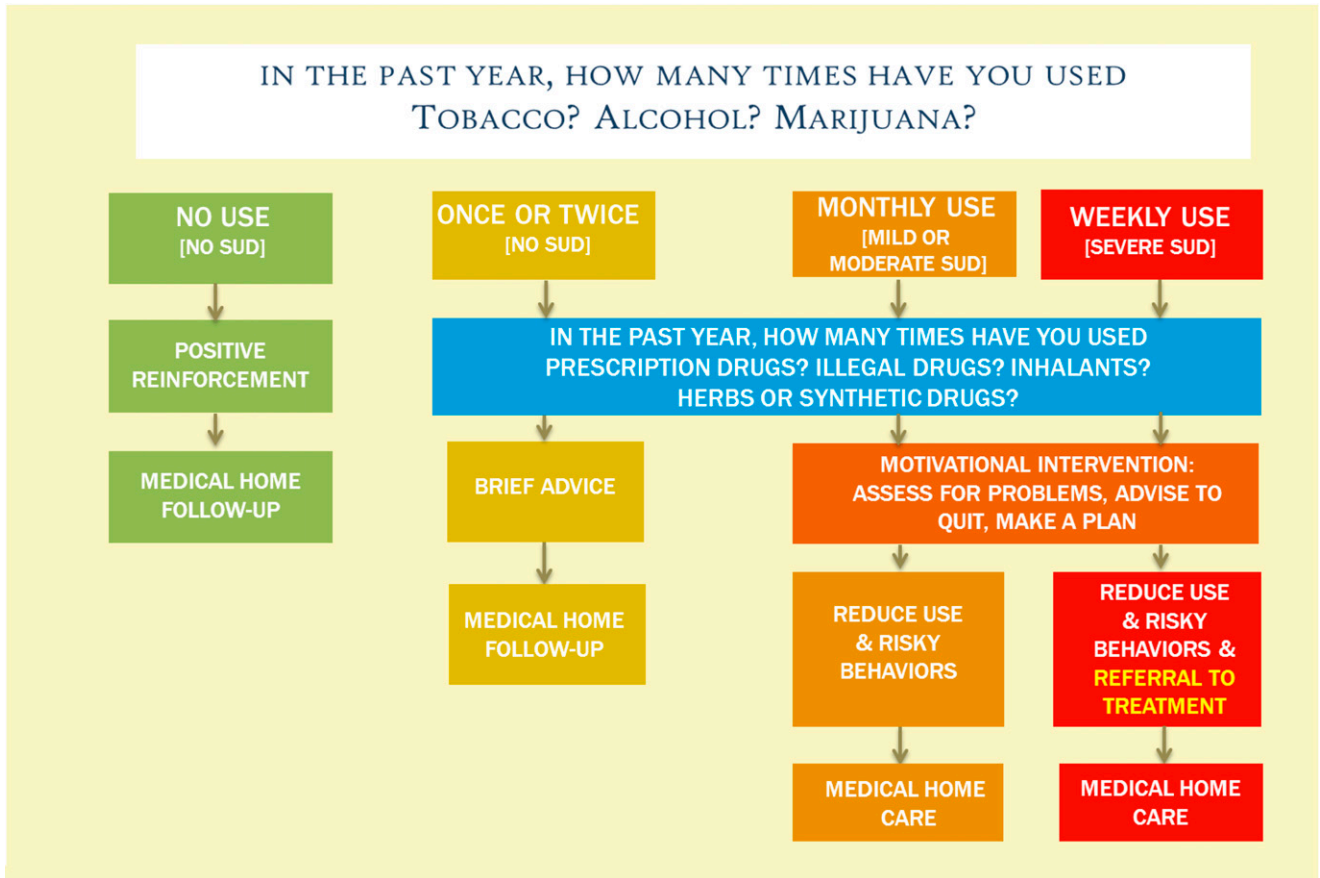


FIGURE 1
The S2BI-based approach to clinical SBIRT. S Levy, L Shrier. 2014. Boston, MA: Boston Children’s Hospital. Copyright 2014, Boston Children’s Hospital. Reprinted under Creative Commons Attribution-Noncommercial 4.0 International License.

as a social worker or psychologist. Referral for specific substance use evaluation and/or to psychiatric services or other available treatment options is a next step when patients have psychiatric symptomatology or cannot decrease use. When available, referral to mental health professionals within the same medical home practice setting may optimize patient compliance.

Severe SUD: Brief Intervention Focused on Referral to Treatment

Severe SUD, or addiction, is a neurologically based disorder resulting from the disruption of neurons in the reward center of the brain as the result of repeated exposure to a psychoactive substance.⁵⁹⁻⁶¹ The earlier an individual initiates psychoactive substance use, the more likely that

individual is to develop addiction, a nearly linear and highly significant relationship.⁶²⁻⁶⁴ The S2BI tool delineates use-risk categories so that a patient reporting weekly or more frequent substance use has a high probability of a severe SUD. When addiction is likely, the next SBIRT steps are to engage the patient in a comprehensive evaluation by a substance use specialist, ensure assessment for co-occurring mental health disorders, and engage in available treatment options as soon as possible to initiate the significant behavior change that is necessary for the patient’s future health and safety. Because resistance and denial (ie, lack of insight)⁶⁵ are intrinsic SUD symptoms, the patient and/or family may be unwilling to pursue an evaluation or therapy when it is recommended. Despite this

challenge, it is important for the pediatrician to remain engaged with the patient and family and supportive during discussions and decision-making about the care options as well as throughout the entire course of care and aftercare. Motivational interviewing strategies can be helpful for encouraging an adolescent and/or the family to accept a referral (Box 2).

Box 2

In response to S2BI screening in the medical home, a 16-year-old girl reports weekly marijuana use. The pediatrician then asks questions to determine quantity, frequency, and context of use and to explore for problems. The patient says she relies on marijuana to help calm her down

TABLE 5 “911 Plan” for Adolescents at Acute Risk of Harm

Break confidentiality and notify parents of risk.
Make a verbal contract with patient not to use substances while awaiting treatment entry.
Ask parents to monitor adolescent closely while awaiting treatment entry.
If parents know adolescent is talking about self-harm, seek an emergency evaluation. Call 911, if adolescent refuses.
If parents note that the adolescent has altered mental status, seek emergency evaluation.
If the adolescent is unwilling to accept parent’s rules or becomes violent or threatening, advise parents to call local police station and request emergency assistance.

when she is stressed and that she does not see the harm in it. She also states that her mother knows about her use and thinks marijuana use is bad for her, so their relationship has gotten tense over this disagreement. She was recently suspended from school when caught with marijuana. The pediatrician summarizes the situation and provides brief advice: *“It seems that you depend on marijuana to help you manage stress, and at the same time you realize marijuana use is causing tension at home and has gotten you into trouble at school. It is clear to me that you are thinking about this, and I am glad you are willing to speak with me about it. As your physician and for the sake of your health, your school work, and your relationship with your mom, I recommend that you quit your marijuana use. I would like you to speak with a colleague of mine who can help you continue thinking through the “good things” and “not so good things” about marijuana use and help you figure out what you want to do. What do you think?”* The patient agrees tentatively. The pediatrician gives her positive feedback about her willingness to discuss her marijuana use now and meet with the recommended colleague soon. The pediatrician asks the patient’s permission to invite her mother into the room to discuss the plan together and mentions this would also show her that the patient is taking the concerns about her marijuana use seriously. She agrees and the patient’s mother joins them for

a summary of the conversation. The counseling appointment is scheduled, and the plan is detailed in the medical record. The patient and mother are scheduled for follow-up in 1 month.

Acute Risk of Harm

Substance use screening may reveal that an adolescent patient is at risk of imminent harm and immediate attention is warranted, including screening for suicidal or homicidal ideation. Certain substance use patterns indicate acute risk, such as injection drug use, drug withdrawal symptoms, and active substance use with a past history of a drug-related emergency department visit or medically supervised withdrawal. Very high-risk behaviors include using different sedatives together, such as mixing alcohol, benzodiazepines, barbiturates, and/or opioids; frequent or excessive binge drinking, which is especially concerning for alcohol poisoning; and operating a motor vehicle coincident with alcohol or other drug use. The more recent the activity, the more immediate is the need to address the risk through mental health and/or medical intervention and to detect or confirm an SUD and other underlying or co-occurring health issues.

When an acute risk of harm is revealed, the next steps for the pediatrician are to use brief intervention techniques to facilitate a commitment from the adolescent to curtail or avoid further substance use and high-risk behaviors. Imminent risk of harm calls for the patient and pediatrician to discuss confidentiality

and disclosure, because the parent(s) nearly always should be involved in the safety plan and next steps of medical care, including how the parent(s) can support and monitor the adolescent and respond to acute concerns about safety as specialty evaluation and care services are engaged (Table 5, Box 3).

Box 3

A 17-year-old boy reports weekly use of alcohol and marijuana and monthly use of prescription medications and cocaine. The pediatrician asks follow-up questions to gauge the patient’s level of acute health and safety risk. He uses marijuana to relax. He often smokes alone and sometimes drinks alone. He has frequent blackouts and explains “that’s the point.” He likes mixing pills with alcohol because he blacks out faster. He has thought that he may have an alcohol problem, but he does not plan to stop. He denies thoughts of hurting himself or others. The pediatrician responds: *“I am glad you spoke honestly with me today. From what you told me, I am worried about your drug use. Mixing drugs can really get you into trouble, even if you only take a couple of pills. Because I am so concerned, I want you to know that some of this information must be shared with your parents and an appointment will be made for you to speak more about your drug use with one of my colleagues. In the meantime, can you promise me that you will not use any pills or drugs at all before your next appointment? What do you think would be the best way to share the information with your parents?”*

REFERRAL TO TREATMENT

Referral to treatment describes the facilitative process through which patients identified as needing more

TABLE 6 ASAM Levels of Care for Treatment of SUDs

	Description
OUTPATIENT	
Individual counseling	Adolescents with SUDs should receive specific treatment of their substance use; general supportive counseling may be a useful adjuvant but should not be a substitute. ⁶⁹ Several therapeutic modalities (motivational interviewing, cognitive behavioral therapy, contingency management, etc) have all shown promise in treating adolescents with SUDs. ⁷⁰
Group therapy	Group therapy is a mainstay of SUD treatment of adolescents with SUDs. It is a particularly attractive option because it is cost-effective and takes advantage of the developmental preference for congregating with peers. However, group therapy has not been extensively evaluated as a therapeutic modality for this age group, and existing research has produced mixed results. ^{69–71}
Family therapy	Family-directed therapies are the best-validated approach for treating adolescent SUDs. A number of modalities have all been shown to be effective. Family counseling typically targets domains that figure prominently in the etiology of SUDs in adolescents: family conflict, communication, parental monitoring, discipline, child abuse/neglect, and parental SUDs. ⁶⁹
Intensive outpatient program (IOP)	IOPs serve as an intermediate level of care for patients who have needs that are too complex for outpatient treatment but do not require inpatient services. These programs allow individuals to continue with their daily routine and practice newly acquired recovery skills both at home and at work. IOPs generally comprise a combination of supportive group therapy, educational groups, family therapy, individual therapy, relapse prevention and life skills, 12-step recovery, case management, and after-care planning. The programs range from 2 to 9 hours per day, 2 to 5 times per week, and last 1 to 3 months. These programs are appealing because they provide a plethora of services in a relatively short period of time. ⁷²
Partial hospital program	Partial hospitalization is a short-term, comprehensive outpatient program in affiliation with a hospital that is designed to provide support and treatment of patients with SUDs. The services offered at these programs are more concentrated and intensive than regular outpatient treatment because they are structured throughout the entire day and offer medical monitoring in addition to individual and group therapy. Participants typically attend sessions for 7 or 8 hours per day, at least 5 days per week, for 1–3 weeks. As with IOPs, patients return home in the evenings and have a chance to practice newly acquired recovery skills. ⁷³
OUTPATIENT	
Detoxification	Detoxification refers to the medical management of symptoms of withdrawal. Medically supervised detoxification is indicated for any adolescent who is at risk for withdrawing from alcohol or benzodiazepines and may also be helpful for adolescents withdrawing from opioids, cocaine, or other substances. Detoxification may be an important first step but is not considered definitive treatment. Patients who are discharged from a detoxification program should then begin either an outpatient or residential SUD treatment program. ^{70,71}
Acute residential treatment (ART)	ART is a short-term (days–weeks) residential placement designed to stabilize patients in crisis, often before entering a longer-term residential treatment program. ⁷⁰ ART programs typically target adolescents with co-occurring mental health disorders.
Residential treatment	Residential treatment programs are highly structured live-in environments that provide therapy for those with severe SUD, mental illness, or behavioral problems that require 24-hour care. The goal of residential treatment is to promote the achievement and subsequent maintenance of long-term abstinence as well as equip each patient with both the social and coping skills necessary for a successful transition back into society. Residential treatment programs are classified by the length of the program; short-term refers to programs of ≤ 30 days' duration, long-term refers to programs of >30 days' duration. Residential treatment programs generally comprise individual and group therapy sessions plus medical, psychological, clinical, nutritional, and educational components. Residential facilities aim to simulate real living environments with added structure and routine to prepare individuals with the framework necessary for their lives to continue drug and alcohol free on completion of the program. ⁷⁴
Therapeutic boarding school	Therapeutic boarding schools are educational institutions that provide constant supervision for their students by professional staff. These schools offer a highly structured environment with set times for all activities, smaller, more specialized classes, and social and emotional support. In addition to the regular services offered at traditional boarding schools, therapeutic schools also provide individual and group therapy for adolescents with mental health or SUDs. ⁷⁵

extensive evaluation and treatment are able to access the appropriate services. Historically, medical encounters have been notably poor in identifying adolescents who have severe SUDs and connecting them with treatment. SAMHSA has estimated that fewer than 10% of adolescents in need of specialty substance use treatment receive it, and the majority of referrals are from the justice system.^{66,67} The referral to treatment, or “RT,” of SBIRT

is composed of 2 distinct yet connected clinical activities: working with the adolescent and family so they accept that timely referral and treatment are necessary for the patient’s health and facilitating the referral process to engage the patient and family with the appropriate professional(s) or program(s).
Deciding where to refer an adolescent in need of treatment is often complicated by limited treatment

availability, insurance coverage complexities, and preferences of the adolescent and family. In most cases, pediatricians will refer adolescents with SUDs to a mental health or addiction specialist to conduct a comprehensive biopsychosocial assessment and to determine the appropriate level of care from the treatment spectrum, ranging from outpatient substance use counseling to long-term residential treatment

programs. In 2001, the American Society of Addiction Medicine (ASAM) revised its comprehensive national guidelines for placement, continued stay, and discharge of patients with alcohol and other drug problems. The separate guidelines devised for adults and adolescents detail 5 broad levels of care that range from early intervention to medically managed intensive inpatient treatment and correspond to addiction severity, related problems, and potential for behavior change and recovery⁶⁸ (Table 6). Adolescents should be treated in the least-restrictive environment (ie, level of care) that supports their clinical needs. Adolescents who voluntarily accept therapeutic placement will usually engage more readily in their care, which is a key factor influencing SUD treatment success.

The Center for Substance Abuse Treatment has published evidence-based treatment and assessment protocols and manuals (available at: www.ncbi.nlm.nih.gov/books/NBK82999). To help identify treatment options throughout the country, SAMHSA maintains a comprehensive and easy-to-use Substance Abuse Treatment Facility Locator on its Web site (www.samhsa.gov/treatment/index.aspx), which also lists both a Buprenorphine Physician & Treatment Program Locator and an Opioid Treatment Program Directory. Opioid and alcohol use disorders are the primary indications for medication-assisted treatment in adult populations; medication-assisted treatment with buprenorphine or naltrexone also is an option for opioid-dependent adolescents.^{76,77}

Successful addiction treatment usually involves a long recovery process during which the patient experiences more than 1 level of care. In 2013, the ASAM reconceived the notion of “patient placement” by incorporating the entire admission, treatment, and continuing care

into a single longitudinal process and encouraging the integration of addiction services with general health care, mental health, and a variety of other subjects and settings. Because clinicians and payers need to exchange information frequently and repeatedly during the treatment payment approval process, the current edition of the ASAM *National Treatment Guidelines*⁶⁸ includes a section about working effectively with managed care, particularly in the context of health care reform.

Most patients in addiction treatment consider themselves “recovering” rather than “recovered” to recognize their lifelong potential for relapse. Whether treatment begins in outpatient or inpatient care, it should continue at the level appropriate to support the patient’s recovery process, which often is achieved through sequential or overlapping therapeutic levels and usually includes participation in a formal structured program, self-help groups (eg, Alcoholics Anonymous, Alateen, Narcotics Anonymous), ongoing after-care programs, and self-help recovery work.

The medical home plays a key role for all patients in recovery through many roles that include providing continuity of general medical care and rapport with the patient and family, coordinating the patient’s various care specialties and services involved, and providing SUD follow-up care to detect relapse and providing support through referral and collaborative care. Relapse is not uncommon in SUDs, but anticipating it and viewing it as a learning opportunity can motivate the patient and family to re-engage in care. By collaborating with addiction medicine specialists and other mental health professionals as well as working with the family, third-party payers, and schools, among others, the pediatrician

plays an essential role in the ongoing care of children and adolescents with SUDs.

OPTIMAL STANDARDS FOR AN SUD TREATMENT PROGRAM

The following were adapted from SAMHSA and Center for Substance Abuse Treatment standards into optimal goals for inpatient or outpatient SUD treatment programs serving the pediatric population.⁷⁸ The program will:

1. View drug and alcohol use disorders as a primary disease rather than a symptom.
2. Include a comprehensive patient evaluation and a developmentally appropriate management and treatment referral plan for associated medical, emotional, and behavioral problems identified.
3. Maintain rapport with the patient’s pediatrician to facilitate seamless after-care and primary care follow-up.
4. Adhere to an abstinence philosophy and consider the patient’s continued use of tobacco, alcohol, or other drugs as indicating more treatment is needed rather than the program should discharge or refuse to treat.
5. Maintain a low patient-to-staff ratio.
6. Use treatment professionals who are knowledgeable in both addiction treatment and child and adolescent behavior and development.
7. Maintain separate treatment groups for individuals at varying developmental levels (adolescents, young adults, and older adults).
8. Involve the entire family in the treatment and relate to

the patients and their families with compassion and concern. Programs located as close to home as possible are preferable to facilitate family involvement, even though separation of the adolescent from the family may be indicated initially.

9. Offer patients an opportunity to continue academic and vocational education and assistance with restructuring family, school, and social life. Consider formal academic and cognitive skills assessment, because unidentified weaknesses may contribute to emotional factors contributing to the substance use.
10. Keep the family apprised of costs and financial arrangements for inpatient and outpatient care and facilitate communication with managed-care organizations.
11. Ensure that follow-up and continuing care are integral parts of the program.

Billing and payment for screening and office-based BI varies by payer. A fact sheet about coding for behavior change intervention for substance use is available on the AAP Web site (www.aap.org/en-us/professional-resources/practice-support/Coding-at-the-AAP/Pages/Private/Substance-Abuse-Coding-Fact-Sheet.aspx). Further clarification is available through the AAP coding hotline (AAPCodingHotline@aap.org).

SUMMARY

Pediatricians play a key role in preventing and curtailing adolescent substance use and associated harm, whether through direct patient care practices, multidisciplinary collaboration, or support of parenting and community efforts. Research-informed SBIRT practices can be applied across the variety of practice

settings and clinicians providing health care to adolescents. SBIRT is recognized to include the use of validated screening tools, assessing for substance use risk and problems, sharing expert health promotion and disease prevention advice, and conducting interventions that encourage substance use reduction and/or referral to treatment. (See the accompanying policy statement for further detail and recommendations.)

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SELECTED RESOURCES FOR PEDIATRICIANS

American Academy of Child and Adolescent Psychiatry. Practice parameter for the assessment and treatment of child and adolescent substance use disorders. Available at: www.aacap.org/App_Themes/AACAP/docs/practice_parameters/substance_abuse_practice_parameter.pdf

American Academy of Pediatrics. Implementing mental health priorities in practice substance use [video]. Available at: www.aap.org/en-us/advocacy-and-policy/

[aap-health-initiatives/Mental-Health/Pages/substance-use.aspx](http://www.aap.org/en-us/health-initiatives/Mental-Health/Pages/substance-use.aspx)

American Academy of Pediatrics Julius B. Richmond Center of Excellence. Available at: www2.aap.org/richmondcenter

Massachusetts Department of Public Health. Adolescent SBIRT toolkit for providers. Available at: <http://massclearinghouse.ehs.state.ma.us/BSASSBIRTPROG/SA1099.html>

National Institute on Alcohol Abuse and Alcoholism. Alcohol screening and brief intervention for youth: a practitioner's guide. Available at: www.niaaa.nih.gov/YouthGuide

Partnership for Drug-Free Kids. The Medicine Abuse Project. Available at: <http://medicineabuseproject.org/resources/health-care-providers>

SELECTED RESOURCES FOR FAMILIES

American Academy of Child and Adolescent Psychiatry. Family resources. Available at: www.aacap.org/AACAP/Families_and_Youth/Family_Resources/Home.aspx

American Academy of Pediatrics. Patient/parent brochures. Available at: <http://bit.ly/1LIC93Z>

HealthyChildren.org. Official consumer Web site of the AAP. Available at: www.healthychildren.org/English/ages-stages/teen/substance-abuse

National Institute on Alcohol Abuse and Alcoholism. Make a difference: talk to your child about alcohol. Available at: http://pubs.niaaa.nih.gov/publications/MakeADiff_HTML/makediff.htm

National Institute on Alcohol Abuse and Alcoholism. Treatment for alcohol problems: finding and getting help. Available at: <http://pubs.niaaa.nih.gov/publications/Treatment/treatment.htm>

National Institute on Drug Abuse. Family checkup: positive parenting prevents drug abuse. Available at: www.drugabuse.gov/family-checkup

National Institute on Drug Abuse. NIDA for teens. Available at: <http://teens.drugabuse.gov>

Substance Use and Mental Health Services Administration. "Talk. They hear you?": application. Available at: www.samhsa.gov/underage-drinking/mobile-application

ABBREVIATIONS

AAP: American Academy of Pediatrics

ASAM: American Society of Addiction Medicine

BI: brief intervention

S2BI: Screening to Brief Intervention

SAMHSA: Substance Abuse and Mental Health Services Administration

SBIRT: screening, brief intervention, and referral to treatment

SUD: substance use disorder

REFERENCES

1. University of Michigan. Drug Abuse Now Equals Childhood Obesity as Top Health Concern for Kids. Vol 13. Ann Arbor, MI: University of Michigan, C.S. Mott Children's Hospital; 2011. Available at: <http://mottnpch.org/sites/default/files/documents/081511toptenreport.pdf>. Accessed July 23, 2015
2. US Department of Health and Human Services. Healthy People 2020: substance abuse objectives. Washington, DC: US Government Printing Office; 2011. Available at: www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=40. Accessed July 23, 2015
3. Johnston LD, O'Malley PM, Bachman JG, Schulenberg JE, Miech RA. Monitoring the Future: National Survey Results on Drug Use, 1975–2013. Vol. I: *Secondary School Students*. Ann Arbor, MI: University of Michigan, Institute for Social Research; 2014. Available at www.monitoringthefuture.org/pubs/monographs/mtf-vol1_2013.pdf. Accessed July 23, 2015
4. The Partnership at DrugFree.org. 2012 Partnership Attitude Tracking Study: Teens and Parents. New York, NY: Partnership for Drug-Free Kids; 2013. Available at: www.drugfree.org/wp-content/uploads/2013/04/PATS-2012-FULL-REPORT2.pdf. Accessed July 23, 2015
5. Kann L, Kinchen S, Shanklin SL, et al; Centers for Disease Control and Prevention. Youth risk behavior surveillance—United States, 2013. *MMWR Suppl*. 2014;63(4 SS-4):1–168
6. DuRant RH, Smith JA, Kreiter SR, Krowchuk DP. The relationship between early age of onset of initial substance use and engaging in multiple health risk behaviors among young adolescents. *Arch Pediatr Adolesc Med*. 1999;153(3):286–291
7. Hingson RW, Zha W. Age of drinking onset, alcohol use disorders, frequent heavy drinking, and unintentionally injuring oneself and others after drinking. *Pediatrics*. 2009;123(6):1477–1484
8. Weitzman ER, Nelson TF. College student binge drinking and the “prevention paradox”: implications for prevention and harm reduction. *J Drug Educ*. 2004;34(3):247–265
9. Levy S, Sherritt L, Gabrielli J, Shrier LA, Knight JR. Screening adolescents for substance use-related high-risk sexual behaviors. *J Adolesc Health*. 2009;45(5):473–477
10. VanDerNagel JEL, Kiewik M, Postel MG, et al. Capture recapture estimation of the prevalence of mild intellectual disability and substance use disorder. *Res Dev Disabil*. 2014;35(4):808–813
11. Carroll Chapman SL, Wu L-T. Substance abuse among individuals with intellectual disabilities. *Res Dev Disabil*. 2012;33(4):1147–1156
12. Chambers RA, Taylor JR, Potenza MN. Developmental neurocircuitry of motivation in adolescence: a critical period of addiction vulnerability. *Am J Psychiatry*. 2003;160(6):1041–1052
13. Kulig JW; American Academy of Pediatrics Committee on Substance Abuse. Tobacco, alcohol, and other drugs: the role of the pediatrician in prevention, identification, and management of substance abuse. *Pediatrics*. 2005;115(3):816–821
14. Haġan JF, Shaw JS, Duncan P, eds. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2008
15. MacKay AP, Duran C. *Adolescent Health in the United States, 2007*. Atlanta, GA: National Center for Health Statistics, Centers for Disease Control and Prevention; 2007
16. Yoast RA, Fleming M, Balch GI. Reactions to a concept for physician intervention in adolescent alcohol use. *J Adolesc Health*. 2007;41(1):35–41
17. Substance Abuse and Mental Health Services Administration. About Screening, Brief Intervention, and Referral to Treatment (SBIRT). Available at: www.samhsa.gov/sbirt/about. Accessed July 23, 2015
18. Kann L, Kinchen S, Shanklin S, et al. Youth risk behavior surveillance—United States, 2013. *MMWR Surveill Summ*. 2014;63(4):1–172. Available at: www.cdc.gov/mmwr/pdf/ss/ss6304.pdf?utm_source=rss&utm_medium=rss&utm_campaign=youth-risk-behavior-surveillance-united-states-2013-pdf. Accessed July 23, 2015
19. American Academy of Pediatrics, Committee on Substance Abuse. Substance use screening, brief intervention, and referral to treatment [policy statement]. *Pediatrics*. 2016
20. Ford CA, Millstein SG, Halpern-Felsher BL, Irwin CE Jr. Influence of physician confidentiality assurances on adolescents' willingness to disclose information and seek future health care: a randomized controlled trial. *JAMA*. 1997;278(12):1029–1034
21. Ford CA, Bearman PS, Moody J. Foregone health care among adolescents. *JAMA*. 1999;282(23):2227–2234
22. Society for Adolescent Medicine. Access to health care for adolescents and young adults. *J Adolesc Health*. 2004;35(4):342–344
23. Coble YD, Estes EH, Head CA, et al; Council on Scientific Affairs, American Medical Association. Confidential health services for adolescents. *JAMA*. 1993;269(11):1420–1424
24. Fisher SL, Buchholz KK, Reich W, et al. Teenagers are right—parents do not know much: an analysis of adolescent-parent agreement on reports of adolescent substance use, abuse, and dependence. *Alcohol Clin Exp Res*. 2006;30(10):1699–1710
25. Goldenring JM, Cohen G. Getting into adolescent heads. *Contemp Pediatr*. 1988;5(7):75–90

26. Goldenring JM, Rosen D. Getting into adolescent heads: an essential update. *Contemp Pediatr*. 2004;21(1):64–90
27. American Academy of Pediatrics. *Periodic Survey of Fellows #31: Practices and Attitudes Toward Adolescent Drug Screening*. Elk Grove Village, IL: American Academy of Pediatrics, Division of Child Health Research; 1997
28. Millstein SG, Marcell AV. Screening and counseling for adolescent alcohol use among primary care physicians in the United States. *Pediatrics*. 2003;111(1):114–122
29. Harris SK, Herr-Zaya K, Weinstein Z, et al. Results of a statewide survey of adolescent substance use screening rates and practices in primary care. *Subst Abuse*. 2012;33(4):321–326
30. Harris SK, Csémy L, Sherritt L, et al. Computer-facilitated substance use screening and brief advice for teens in primary care: an international trial. *Pediatrics*. 2012;129(6):1072–1082
31. Barry KL, Blow FC, Willenbring ML, McCormick R, Brockmann LM, Visnic S. Use of alcohol screening and brief interventions in primary care settings: implementation and barriers. *Subst Abuse*. 2004;25(1):27–36
32. O'Connor PG, Nyquist JG, McLellan AT. Integrating addiction medicine into graduate medical education in primary care: the time has come. *Ann Intern Med*. 2011;154(1):56–59
33. Van Hook S, Harris SK, Brooks T, et al; New England Partnership for Substance Abuse Research. The “Six T’s”: barriers to screening teens for substance abuse in primary care. *J Adolesc Health*. 2007;40(5):456–461
34. Wilson CR, Sherritt L, Gates E, Knight JR. Are clinical impressions of adolescent substance use accurate? *Pediatrics*. 2004;114(5). Available at: www.pediatrics.org/cgi/content/full/114/5/e536
35. Levy S. Brief interventions for substance use in adolescents: still promising, still unproven. *CMAJ*. 2014;186(8):565–566
36. National Institute on Alcohol Abuse and Alcoholism. Alcohol Screening and Brief Intervention for Youth: A Practitioner’s Guide. Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism; 2011. NIH Publication 11-7805. Available at: <http://pubs.niaaa.nih.gov/publications/Practitioner/YouthGuide/YouthGuide.pdf>. Accessed July 23, 2015
37. Kelly SM, Gryczynski J, Mitchell SG, Kirk A, O’Grady KE, Schwartz RP. Validity of brief screening instrument for adolescent tobacco, alcohol, and drug use. *Pediatrics*. 2014;133(5):819–826
38. Levy S, Weiss R, Sherritt L, et al. An electronic screen for triaging adolescent substance use by risk levels. *JAMA Pediatr*. 2014;168(9):822–828
39. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*. Arlington, VA: American Psychiatric Association; 2013
40. Knight JR, Shrier LA, Bravender TD, Farrell M, Vander Bilt J, Shaffer HJ. A new brief screen for adolescent substance abuse. *Arch Pediatr Adolesc Med*. 1999;153(6):591–596
41. Dennis ML, Chan YF, Funk RR. Development and validation of the GAIN Short Screener (GSS) for internalizing, externalizing and substance use disorders and crime/violence problems among adolescents and adults. *Am J Addict*. 2006;15(suppl 1):80–91
42. Saunders JB, Aasland OG, Babor TF, de la Fuente JR, Grant M. Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption—II. *Addiction*. 1993;88(6):791–804
43. Spirito A, Monti PM, Barnett NP, et al. A randomized clinical trial of a brief motivational intervention for alcohol-positive adolescents treated in an emergency department. *J Pediatr*. 2004;145(3):396–402
44. Bernstein E, Edwards E, Dorfman D, Heeren T, Bliss C, Bernstein J. Screening and brief intervention to reduce marijuana use among youth and young adults in a pediatric emergency department. *Acad Emerg Med*. 2009;16(11):1174–1185
45. Tait RJ, Hulse GK, Robertson SI. Effectiveness of a brief-intervention and continuity of care in enhancing attendance for treatment by adolescent substance users. *Drug Alcohol Depend*. 2004;74(3):289–296
46. Neighbors CJ, Barnett NP, Rohsenow DJ, Colby SM, Monti PM. Cost-effectiveness of a motivational intervention for alcohol-involved youth in a hospital emergency department. *J Stud Alcohol Drugs*. 2010;71(3):384–394
47. Haller DM, Meynard A, Lefebvre D, Ukoumunne OC, Narring F, Broers B. Effectiveness of training family physicians to deliver a brief intervention to address excessive substance use among young patients: a cluster randomized controlled trial. *CMAJ*. 2014;186(8):E263–E272
48. Stern SA, Meredith LS, Gholson J, Gore P, D’Amico EJ. Project CHAT: a brief motivational substance abuse intervention for teens in primary care. *J Subst Abuse Treat*. 2007;32(2):153–165
49. Murphy DA, Chen X, Naar-King S, Parsons JT; Adolescent Trials Network. Alcohol and marijuana use outcomes in the Healthy Choices motivational interviewing intervention for HIV-positive youth. *AIDS Patient Care STDS*. 2012;26(2):95–100
50. Shrier LA, Rhoads A, Burke P, Walls C, Blood EA. Real-time, contextual intervention using mobile technology to reduce marijuana use among youth: a pilot study. *Addict Behav*. 2014;39(1):173–180
51. Walton MA, Bohnert K, Resko S, et al. Computer and therapist based brief interventions among cannabis-using adolescents presenting to primary care: one year outcomes. *Drug Alcohol Depend*. 2013;132(3):646–653
52. Haller DM, Meynard A, Lefebvre D, Tylee A, Narring F, Broers B. Brief intervention addressing excessive cannabis use in young people consulting their GP: a pilot study. *Br J Gen Pract*. 2009;59(560):166–172
53. Patnode CD, O’Connor E, Rowland M, Burda BU, Perdue LA, Whitlock EP. Primary care behavioral interventions to prevent or reduce illicit drug use and nonmedical pharmaceutical use in children and adolescents: a systematic evidence review for the U.S. Preventive Services Task Force. *Ann Intern Med*. 2014;160(9):612–620

54. Ginsburg KR. Viewing our adolescent patients through a positive lens. *Contemp Pediatr*. 2007;24:65–76
55. Harris SK, Csemy L, Sherritt L, et al. Computer-facilitated screening and physician brief advice to reduce substance use among adolescent primary care patients: a multi-site international trial. *Pediatrics*. 2012;129(6):1072–1082
56. Hassan A, Harris SK, Sherritt L, et al. Primary care follow-up plans for adolescents with substance use problems. *Pediatrics*. 2009;124(1):144–150
57. Miller WR, Rollnick S. Meeting in the middle: motivational interviewing and self-determination theory. *Int J Behav Nutr Phys Act*. 2012;9:25
58. Butterworth SW. Influencing patient adherence to treatment guidelines. *J Manag Care Pharm*. 2008;14(6 suppl B):21–24
59. Nestler EJ. Molecular basis of long-term plasticity underlying addiction. *Nat Rev Neurosci*. 2001;2(2):119–128
60. Volkow ND, Li T-K. Drug addiction: the neurobiology of behaviour gone awry. *Nat Rev Neurosci*. 2004;5(12):963–970
61. Everitt BJ, Belin D, Economidou D, Pelloux Y, Dalley JW, Robbins TW. Neural mechanisms underlying the vulnerability to develop compulsive drug-seeking habits and addiction [review]. *Philos Trans R Soc Lond B Biol Sci*. 2008;363(1507):3125–3135
62. Grant BF, Dawson DA. Age of onset of drug use and its association with DSM-IV drug abuse and dependence: results from the National Longitudinal Alcohol Epidemiologic Survey. *J Subst Abuse*. 1998;10(2):163–173
63. Hingson RW, Heeren T, Winter MR. Age at drinking onset and alcohol dependence: age at onset, duration, and severity. *Arch Pediatr Adolesc Med*. 2006;160(7):739–746
64. Taioli E, Wynder EL. Effect of the age at which smoking begins on frequency of smoking in adulthood. *N Engl J Med*. 1991;325(13):968–969
65. Miller WR, Rollnick S. *Motivational Interviewing: Helping People Change*. Vol 3. New York, NY: Guilford Press; 2013
66. Substance Abuse and Mental Health Services Administration. *Results From the 2012 National Survey on Drug Use and Health: Summary of National Findings*. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2013
67. Substance Abuse and Mental Health Services Administration. The TEDS Report: Substance Abuse Treatment Admissions Referred by the Criminal Justice System. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2009. Available at: www.samhsa.gov/data/2k9/211/211CJadmits2k9.pdf. Accessed July 23, 2015
68. Mee-Lee D, ed. *The ASAM Criteria: Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions*. Carson City, NV: The Change Companies; 2013
69. Bukstein OG, Bernet W, Arnold V, et al; Work Group on Quality Issues. Practice parameter for the assessment and treatment of children and adolescents with substance use disorders. *J Am Acad Child Adolesc Psychiatry*. 2005;44(6):609–621
70. Fournier ME, Levy S. Recent trends in adolescent substance use, primary care screening, and updates in treatment options. *Curr Opin Pediatr*. 2006;18(4):352–358
71. Vaughan BL, Knight JR. Intensive drug treatment. In: Neinstein LS, Gordon C, Katzman D, Woods ER, Rosen D, eds. *Adolescent Healthcare: A Practical Guide*. 5th ed. Philadelphia, PA: Lippincott, Williams & Wilkins; 2009:671–675
72. Center for Substance Abuse Treatment. Services in intensive outpatient treatment programs. In: Substance Abuse: Clinical Issues in Intensive Outpatient Treatment. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2006. Available at: www.samhsa.gov/data/2k6/2k61211CJadmits2k6.pdf. Accessed July 23, 2015
73. CIGNA. CIGNA Standards and Guidelines/Medical Necessity Criteria for Treatment of Behavioral Health and Substance Use Disorders. 2015. Available at: <https://cignaforhcp.cigna.com/public/content/pdf/resourceLibrary/behavioral/medicalNecessityCriteriaDraft.pdf>. Accessed October 6, 2015
74. Center for Substance Abuse Treatment. Triage and placement in treatment services. In: Substance Abuse Treatment for Adults in the Criminal Justice System. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2005. Available at: www.ncbi.nlm.nih.gov/books/NBK64131. Accessed July 23, 2015
75. Center for Substance Abuse Treatment. Therapeutic communities. In: SAMHSA/CSAT Treatment Improvement Protocols. Rockville, MD: Substance Abuse and Mental Health Services Administration; 1999. Available at: www.ncbi.nlm.nih.gov/books/NBK64342. Accessed July 23, 2015
76. Gowing L, Ali R, White JM. Buprenorphine for the management of opioid withdrawal. *Cochrane Database Syst Rev*. 2009;3:CD002025
77. Woody GE, Poole SA, Subramaniam G, et al. Extended vs short-term buprenorphine-naloxone for treatment of opioid-addicted youth: a randomized trial. *JAMA*. 2008;300(17):2003–2011
78. Center for Substance Abuse Treatment. Treatment of Adolescents With Substance Abuse Disorders. Rockville, MD: US Department of Health and Human Services; 1999. Available at: <http://adaiclearinghouse.org/downloads/TIP-32-Treatment-of-Adolescents-with-Substance-Use-Disorders-62.pdf>. Accessed July 23, 2015