Substance Use and Misuse Among Youth

Lisa Curtin, Emily Rowe

Substance use during adolescence is a robust predictor of substance use disorder in adulthood. This commentary argues for routine screening of substance use among adolescents in primary care settings. In addition, practical suggestions for follow-up, including brief interventions and referral to specialty treatment when indicated, are offered.

Substance use in adolescence ranges from experimentation to high-risk substance misuse that can be associated with negative consequences, including but not limited to poor academic performance, relationship problems, accidents, suicide, and health problems. Approximately 60% of adolescents between 13 and 19 years of age reporting drinking alcohol at some point in life [1]. A 2018 state-specific study shows that 27% of North Carolina high school students report drinking alcohol at least once in the past 30 days, and 12% report at least one heavy drinking episode in the past 30 days [1]. Rates of substance-related problems among adolescents vary by race; a survey by the Substance Abuse and Mental Health Services Administration indicated that rates of substance misuse (i.e., met Diagnostic and Statistical Manual of Mental Disorders (5th ed., DSM-IV) criteria for diagnosis of abuse or dependence on substances including but not limited to alcohol) were 4.6% among Asian American adolescents, 7.4% among Black adolescents, 8.4% among White adolescents, 8.6% among Hispanic adolescents, 10.9% among mixed race adolescents, 11.3% among Pacific Islander adolescents, and 14.9% among American Indian adolescents [2]. Of note, data from the 2015 national Youth Risk Behavior Survey found that LGBTQ adolescents were at higher risk for lifetime substance use and polysubstance use compared to heterosexual adolescents [3]. While adult men have almost twice the rate of substance misuse compared to adult women, the rate of substance misuse is the same (6.9%) among male and female adolescents [2].

Alcohol is the most-used drug in the United States among adolescents and marijuana is the most commonly used illicit drug in this age group [4]. While cigarette use among adolescents has gradually declined since the mid-1990s, adolescent nicotine vaping is increasing [4]. The absolute increases in the prevalence of vaping among high school students in recent years are the largest ever recorded by Monitoring the Future, a continuing study of American youth [5]. In North Carolina, 22% of high school students report using electronic vapor products (“vaping”) within the past 30 days, which is noticeably higher than the 13% reported by American high school students as a whole [1].

Substance use among adolescents is comorbid with a number of behavioral health diagnoses, such as mood disorders, sleep disorders, and anxiety disorders [6]. Adolescents are at high risk for using and abusing substances, as the still-developing brain presents increased vulnerability to stress and a higher likelihood of engaging in risky behaviors [7]. Substance use in adolescence is a robust predictor of substance use disorder (SUD) diagnoses in adulthood; for example; among a large national sample (N = 42,093; average age = 44 years), 47% of those who retrospectively reported consuming alcohol at or before age 14 (excluding “tastes or sips”) had at least one episode of alcohol dependence compared to 9% of those who first consumed alcohol at age 21 or older [8].

A range of risk factors can put an adolescent at risk for substance use. Individual risk factors include attention-deficit/hyperactivity disorder (ADHD) and depression; social risk factors include involvement with a deviant peer group, bullying, and/or gang affiliation; and familial risk factors include childhood abuse and neglect, familial substance use, and lack of adult monitoring [9]. This wide range of risk factors offers numerous points for prevention and intervention. Evidence-based practices can help address substance use among adolescents in a variety of settings, including school and physicians’ offices.

Assessment

The American Academy of Pediatrics recommends routine substance use screening for patients aged 12 and older [10]. Screening instruments are utilized to identify potential areas of concern and prompt additional assessment and potential interventions. The Screening to Brief Intervention (S2BI) is a reliable and valid substance use screening instrument for adolescents [11]. It is brief and assesses frequency of use (“never,” “once or twice,” “monthly,” “weekly or more”...
Autonomy and responsibility can be based on a collaborative approach to addressing substance use known as Brief Interventions and Referral to Treatment (SBIRT).

Although older, the CRAFFT (Car, Relax, Alone, Forget, Friends, Trouble) Screening Interview is also commonly utilized in primary care practices [12]. The CRAFFT screen employs three questions to assess any substance use across the past 12 months. Respondents who report any use across the 12-month time period are asked questions related to potential harm or consequences (e.g., driven in a car with someone under the influence, getting into trouble), motivation for use (e.g., relaxation), and potential signs of concern (e.g., problem noted by family or friends). The CRAFFT can be useful for more in-depth assessment of potentially problematic use if a patient screens positive with another instrument.

Given high rates of comorbidity between mental health problems and substance use, regular screening for common mental health concerns is also suggested. The Patient Health Questionnaire for Adolescents (PHQ-A) is often administered in primary care settings and can be considered in conjunction with a substance use screening measure [13]. Finally, if screening and follow-up assessment are positive, the DSM-5 can be utilized to fully consider the criteria for SUD [6].

It is highly recommended that validated instruments such as these be utilized rather than relying on clinical judgment or an unstructured clinical interview. Findings suggest that deviation from the specific questions or reliance on clinical impressions often results in under-detection and missed opportunities to address substance use [14]. Under a medical provider's supervision, adjunct staff (clinical or administrative) can administer screening instruments on paper or electronically, ideally in a private area without direct supervision from parents or guardians. To increase the likelihood of truthful reporting it is important to establish a trusting relationship, to make it clear that discussions about substance use—as well as other sensitive topics—is routine, and to discuss confidentiality policies up front with adolescents and parents or guardians.

Clinician follow-up is always recommended after screening and assessment for substance use. Even the absence of a positive screen offers an opportunity to initiate a discussion about substance use, to discuss normative perceptions of use, and to potentially reinforce non-use. For example, if a 14-year-old patient reports no use of alcohol, the clinician can acknowledge this with a statement such as, “I see that you do not drink any alcohol. That’s what we find with most kids your age. Do you have any questions about alcohol?”

**Brief Interventions and Referral to Treatment**

As noted above, the S2BI easily maps onto an evidence-based approach to addressing substance use known as SBIRT that can be utilized in the context of standard medical practice [11, 15]. SBIRT involves three components: screening, brief intervention, and referral for treatment if indicated. First, as discussed above, patients are screened for substance use. The SBIRT model outlines how to proceed with a patient after screening. For example, an answer of “no use” or “once or twice” to the S2BI questions indicates the absence of a SUD. An answer of “monthly” suggests the possibility of a mild or moderate SUD and an answer of “weekly” is consistent with a more severe SUD.

**Brief Interventions**

For those who screen positively but further assessment suggests low likelihood of a SUD, a brief intervention may suffice. Brief interventions generally last two to three minutes and occur during the office visit. While reviewing the screening results, a brief intervention is designed to facilitate exploration of the pros and cons of the patient’s substance use and help develop a potential plan for prevention, reduction, harm reduction, and/or quitting. Motivational interviewing (MI) is a style and stance recommended by the SBIRT model and approach [16]. MI was born out of early brief interventions for substance use. In general, brief interventions included the following elements, known by the acronym FRAMES:

- **Feedback**: Give feedback on the results of objective assessment instruments (e.g., screening instruments, physical assessments such as liver function or respiratory tests);
- **Responsibility**: Emphasize the patient’s autonomy;
- **Advice**: Offer direct advice on changing use (e.g., physician may advise that an adolescent abstain from substances given legal, health, and developmental concerns);
- **Menu of options**: Autonomy and responsibility can be highlighted by generating a number of options and collaboratively developing a change plan;
- **Empathy**: Stance of empathy, respect, and non-judgment;
- **Self-efficacy**: Support confidence and hope (e.g., reflect on strengths and successes).

MI has evolved since its inception in the 1980s and is currently defined as “a collaborative, goal-oriented method of communication with particular attention to the language of change. It is designed to strengthen an individual’s motivation for and movement toward a specific goal by eliciting and exploring the person’s own arguments for change” [16].” MI is a style of interaction rather than a specific set of techniques. In MI, a collaborative partnership is formed in which the interviewer (e.g., physician) respects the patient’s autonomy and evokes personal thoughts and ideas rather than imposing expert opinions onto the patient. It is best for the patient to voice the reasons for change, known as change talk, rather than the provider or others telling the adolescent why they need to change.

MI is inherently pragmatic and provision of direct advice and/or suggestions is consistent with the model if the advice is offered with permission from the patient. Providers are
encouraged to elicit information from the patient (eg, “what concerns you about vaping?”) before requesting permission to offer direct advice and then offering direct advice concerning goals (eg, best to abstain) and strategies (eg, nicotine replacement, disposing of paraphernalia, alternative coping strategies).

MI follows four main principles: expressing empathy (actively communicating an understanding of the patient’s perspective), supporting self-efficacy (seeing patient strengths and invoking hope), rolling with resistance (focus on client defining the “problem” and solution versus imposing the “right” way), and developing discrepancy (helping client see the gap between their current behavior and values/goals—where they are versus where they want to be) [16].

The primary tools used in MI are consistent with active listening and include use of open-ended questions (eg, “what are your concerns about your use of marijuana?”), affirmations (eg, “it sounds like you know a lot about the negative effects of vaping”), reflections (eg, “you have some real concerns about your drinking”), and summaries (eg, “as an athlete, you are concerned about the results of your respiratory test that could get in the way of you reaching goals you’ve been working toward for years, but at the same time, you like the way vaping makes you feel”) [16].

In the brief intervention portion of SBIRT, some form of a plan is typical [15]. Such a plan should be specific and might include an agreement to not drive while using, to not use at all or to limit use, to exercise three times/week, and to schedule a follow-up appointment. Adolescents and young adults are often reticent to commit to abstinence. Although a physician may be clear that the recommendation is for abstinence (eg, for health, developmental, and legal reasons), a harm-reduction stance may maintain the therapeutic relationship, decrease associated harm, and keep the door open to future intervention.

**Referral to Treatment**

Of course, some cases will be more severe and may require a higher level of care. Near-daily uncontrollable use, withdrawal symptoms, safety concerns, and comorbid mental or physical health conditions may indicate the need for a more thorough evaluation and specialized intervention. The need for a referral should be discussed with the adolescent, and parental involvement should be discussed and encouraged. In the case of potential for immediate risk or harm to the adolescent or others, a violation of confidentiality may be deemed necessary and in compliance with state and federal laws. Consistent with the SBIRT approach, providers should have a list of treatment options available. Recommendations for specific treatment options should be individually tailored to the extent possible (eg, age-appropriate, covered by patient’s insurance), and staff should ideally facilitate the referral (eg, make phone call with patient; assist with navigating the often confusing admissions system) [15]. Recognize that patients may not be able to immediately access a referral to specialty treatment, which may be inpatient, day treatment, or outpatient, and may need support during the interim. On a practical level, it is helpful to obtain releases of information to allow for integration of care and to coordinate follow-up with the patient upon discharge.

**Concluding Comments**

Primary care practitioners and school health staff are in a unique position to screen for and address substance use with adolescents. Routine screening of substance use with standardized measures, as well as screening for potential etiological (eg, depression, anxiety, bullying) and maintaining (eg, lack of parental monitoring) factors, can serve to prevent, delay, address, and treat substance use problems. Provision of brief interventions is within the scope of practice for health care providers, with a variety of trainings available (eg, https://health.uconn.edu/sbirtacademy/adolescent-resources/; http://www.sbirt.care/training.aspx?tab =videos); such interventions are acceptable to adolescents and family members, and a promising, although limited, evidence base exists for their use [17]. Staff can be supervised to administer screening instruments, and computerized versions of screeners that also provide individualized feedback can be incorporated to save time for the practitioner while maintaining effectiveness [18]. Although SBIRT provides a framework for addressing adolescent substance use and prompting potentially life-saving interventions for young people, the world of substance use is ever-changing. In recent years, we have seen the need to identify and treat vaping-related lung diseases, to monitor prescription medications to limit recreational use (eg, stimulant ADHD medication, narcotics), and to prepare for providing or recommending life-saving harm-reduction interventions (eg, providing naloxone for family members of a patient who uses opiates and training them to use the medication to reverse a potential opiate overdose). Individual patients, as well as society as a whole, will benefit from addressing substance use among adolescents given the impact that it can have on the future generation.

Lisa Curtin, PhD professor of psychology, Appalachian State University, Boone, North Carolina.

Emily Rowe, MA Appalachian State University, Boone, North Carolina.

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