Official but Unformatted

Policy on Substance Misuse in Adolescent Patients

Latest Revision
2021

ABBREVIATION
AAPD: American Academy of Pediatric Dentistry. ENDS: Electronic nicotine delivery systems. MTF: Monitoring the Future. SUD: Substance use disorder

Purpose
The American Academy of Pediatric Dentistry (**AAPD**) recognizes that substance misuse in adolescents is a significant health, social, and familial issue in the United States. The increasing prevalence of substance misuse among adolescents obligates dental personnel to identify behaviors characteristic of active use, recognize clinical signs and symptoms of active use or withdrawal, modify dental treatment accordingly, and facilitate referral to medical providers or behavioral addiction specialists. This policy addresses the harmful effects of alcohol and drug misuse in the adolescent and the dental provider's role in recognition, initiation of appropriate interventions, and referrals.

Methods
This policy, developed by the Council on Clinical Affairs and adopted in 2016[1], is based upon a review of current dental and medical literature, including a literature review through the PubMed® database using the terms: adolescent substance abuse, adolescent substance misuse, substance use in adolescents, alcohol use in adolescents, illicit drug and alcohol use in teenagers, adolescent alcohol and/or drug abuse, and prescription drug use/misuse in teenagers; fields: all; limits: within the last five years, humans, English, birth through age 18. The search resulted in 741 papers that were reviewed by abstract and title. Papers for review were chosen from this list and from the references within selected articles. Websites and documents from select healthcare and public policy organizations, as well as governmental agencies, also were reviewed.

Definitions
Adolescence: "11 to 21 years of age, dividing the group into early (ages 11-14 years), middle (ages 15-17 years), and late (ages 18-21 years) adolescence."[2]
Binge or heavy episodic drinking: "pattern of drinking alcohol that brings blood alcohol concentration (BAC) to 0.08 percent - or 0.08 grams of alcohol per deciliter - or higher. For a typical adult, this pattern of excessive alcohol use corresponds to consuming four or more drinks (female), or five or more drinks (male) in about two hours. Research shows that fewer drinks in the same timeframe result in the same BAC in youth; only three drinks for girls, and three to five drinks for boys, depending on their age and size".[3]
Substance misuse: "used to distinguish improper or unhealthy use from use of a medication as prescribed or alcohol in moderation. These include the repeated use of drugs to produce pleasure, alleviate stress, and/or alter or avoid reality. It also includes using prescription drugs in ways other than prescribed or using someone else's prescription".[4]
***Substance use disorder* (SUD):** "a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems".[5]
Withdrawal syndrome: "the development of a substance-specific maladaptive behavioral change, usually with uncomfortable physiological and cognitive consequences, that is the result of a cessation of, or reduction in, heavy and prolonged substance use".[6]

Background
Many physical, social, and behavioral changes occur during the adolescent years. The developing adolescent may encounter difficulties and pressures without effective coping skills or maturity. Unfortunately, some teenagers do not have familial, peer, or other support systems to provide help and guidance in adjusting to

changes or with decision making. As a result, they may turn to alcohol or drugs to seek comfort and reduce the stresses associated with this erratic time in their lives.[7]

Substances misused by adolescents include alcohol, inhalants, opiates, amphetamines, cocaine, marijuana, barbiturates, benzodiazepines, hallucinogens, and anabolic steroids.[8] In a 2019 survey of eighth, tenth, and twelfth grade students, trends revealed alcohol use at 7.9, 18.4, and 29.3 percent respectively in the previous 30 days, reflecting a five-year decreasing trend in comparison to survey results from 2014.[9] Prevalence of binge drinking in the past 30 days demonstrated a five-year decline, reported at 3.8, 8.5, and 14.4 percent.[9] Use of any illicit drug was reported to be 8.5 percent for eighth graders, 19.8 percent for tenth graders, and 23.7 percent for twelfth graders.[9]

Findings from the 2019 Monitoring the Future (**MTF**) survey demonstrate the strong desire for vaping in adolescence, as seen in the increased prevalence of marijuana use as well as nicotine vaping.[9] Past-month marijuana vaping among twelfth graders nearly doubled in a single year from 7.5 to 14 percent.[9] Marijuana was the most commonly used illicit drug among teenagers.[9] A national sample study of adolescents and young adults demonstrated use of electronic nicotine delivery systems (**ENDS**) and coupled use of ENDS and cigarettes are significant underlying risk factors for COVID-19.[10] Association of the prevalence of individuals who vaped (vapers) in each U.S. state and daily number of COVID-19 cases and deaths per state suggested vapers may be more susceptible to COVID-19 cases and deaths.[11] MTF survey found rates remaining unchanged for other illegal drug use in this population, including methamphetamine, cocaine, and over-the-counter cough and cold preparations.[9] A 2015 survey found more than 2.3 million youth aged 12-17 years were current (i.e., in the past 30 days) users of illicit drugs, equivalent to 9.4 percent of adolescents.[12] In 2015, alcohol use was higher, reported at 11.5 percent, corresponding to 2.9 million adolescents, with binge drinking shown to occur in 6.1 percent.[12] Among the same age group, marijuana use was at 7.4 percent (approximately 1.8 million adolescents).[12] Misuse of prescription drugs (i.e., analgesics, stimulants, anxiolytics, sedatives) for non-medical purposes was reported by 2.6 percent of adolescents.[12] Based on 2019 survey, alcohol use among adolescents reduced to 9.4 percent, and the percent of binge drinkers reduced to 4.9 percent.[13] Despite the decrease, about one in 11 adolescents was a current alcohol users and one in 21 adolescents was a current binge drinkers in 2019.[13] Approximately 17.2 percent (one in six adolescents) aged 12 to 17 in 2019 were past-month illicit drug users.[13] Between 2015 to 2019, the percentage of adolescents who used illicit drugs in the past year ranged from 15.8 to 17.2 percent.[13]

In 2019, 4.5 percent of adolescents (one in 22 adolescents) had SUD, which was lower than five percent of adolescents diagnosed in 2015.[13] Similarly, the percentage of adolescents with alcohol use disorder decreased from 2.7 percent in 2015 to 1.7 percent in 2019.[13] Considered harmless and nonaddictive, adolescents regularly and frequently consume caffeine-containing beverages such as coffee, tea, cocoa, carbonated beverages, energy drinks, and energy shots.[14] Though caffeine use disorder is not officially classified in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), caffeine intoxication and caffeine withdrawal are listed disorders.[5]

Prescription drug monitoring programs (PDMPs) have been implemented in most states and have been effective in reducing the number of prescriptions and opiates available for misuse by adolescents.[15] However, many adolescents are resorting to heroin and fentanyl.[16] In 2017, misuse of prescription opioids, heroin, and fentanyl analogs increased the overall death rate (per 100,000) to 12.6 in adolescents and young adults, up from 3.7 in 2000.[17] Drug use at an early age is an important predictor of development of a SUD later in life.[7] Of people who started drinking by age 14, 15.2 percent eventually developed an alcohol use disorder as compared to just 2.1 percent of those who waited until they were 21 years or older.[18] Thirteen percent of those who developed an SUD began using marijuana by the time they were 14 years of age.[18] Of individuals who misused prescription drugs at age 13 or younger, 25.3 percent developed a SUD at some time in their lives.[19] Recurrent use of drugs or alcohol causes significant clinical and functional impairment such as health issues, disability, and failure to fulfill important responsibilities at work, school, or home.[20]

Due to the prevalence of substance misuse, it would not be uncommon for the dental provider to encounter signs of substance misuse. Staff should be attentive to similar signs displayed by the parent. Clinical presentations of substance use may include odor of alcohol on breath, odor of marijuana on clothing, impaired behavior, slurred speech, staggering gait, visual hallucinations, disorientation, rhinitis, scratching, physical injuries including lacerations, needle marks, cellulitis, diaphoresis, tachycardia, sensory impairment, and pupillary dilation or constriction.[21] Cognitive and behavioral manifestations may present as mood changes or emotional instability, loud obnoxious behavior, laughing at nothing, withdrawn/depressed affect, lack of

communication/silence, hostility/anger/uncooperative behavior, inability to speak intelligibly or to focus, rapid-fire speech, hyperactivity, and unusually elated mood.[21,22] Perioral and oral signs may include sores around the mouth, continual wetting or licking of lips, clenched teeth, bruxism, trismus, enamel chips or coronal fractures, neglected/poor oral hygiene, multiple cervical carious lesions, gingivitis, gingival ulceration, periodontitis, pale mucosa, leukoplakia, and intraoral burns.[8,21,23] Adolescents experiencing withdrawal syndrome may demonstrate behaviors such as altered mental status, agitation, irritability, restlessness, increased anxiety or panic, and inattentiveness.[6,8] Clinical signs and reported symptoms of substance withdrawal include rhinorrhea, tachycardia, elevated temperature, yawning, tremors, hallucinations, and seizures.[6,8]

Adolescent substance misuse frequently co-occurs with mental disorders.[5,7,8,24,25] SUD often coexists with psychiatric conditions such as depression, anxiety disorders, attention-deficit hyperactivity disorder, oppositional defiant disorder, conduct disorder, bipolar disorder, post-traumatic stress disorder, bulimia nervosa, social phobia, and schizophrenia.[4,24,26,27] Substance use may induce the deterioration, emergence, or reoccurrence of psychiatric disorders, or it may work in reducing, masking, or enabling an adolescent to cope with symptoms.[24-26,28] Behaviors consistent with both SUD and mental disorders may be confusing to dental providers. Professionals must be cautious not to assume clinical signs are associated with substance misuse when, in fact, they are presentations consistent with mental disorders and vice versa.[7,8,24,26,27] Such caution prevents inaccurate diagnoses and judgment or labelling of an adolescent patient, which could lead to emotional harm and diversion from necessary treatment.[24,26,28]

Dentists are in a position to identify clinical manifestations of substance misuse, present brief interventions, and provide referrals to medical providers or behavioral health or addiction specialists. They also can assist the patient and family in finding treatment facilities, self-help groups, and community resources which address alcohol and drug misuse specific to adolescents.[7,8,29-31] When substance misuse is suspected or confirmed, an empathetic, non-judgmental style of discussion facilitates a trusting patient-doctor relationship.[8,31] Asking open-ended questions may garner more information as they tend to be less threatening to the patient.[8] Brief interventions may include educating the patient or family, or both, on health risks of use or misuse of alcohol or other drugs, strong encouragement for avoiding drugs and alcohol, motivational interviewing,[27,32] and initiating referrals for assessment and treatment by other health care providers.[7,8,29-31,33] Although the dental practitioner may grant patient confidentiality, he must abide by state laws when treating minors.[8] Involvement of the parent and other authorities is imperative when substance misuse places the adolescent patient or others in a high-risk or life-threatening situation.[8,34] In such circumstances, the patient should receive notification when disclosure of confidential information will occur and be provided an opportunity to join the conversation.[34]

When providing treatment to a patient suspected of substance use, the dentist may need to modify sedation procedures, administration of local anesthetics, and prescribing practices. Administration of nitrous oxide or anxiolytic or sedative medications to an adolescent who is actively using or has a current history of substance misuse can lead to unfavorable drug interactions, over-sedation, or respiratory depression.[8,29] Use of these agents during remission/recovery from a SUD can predispose a patient to relapse.[7,8,24] Dentists should use local anesthetics containing vasoconstrictors judiciously in patients who misuse stimulant medications such as methylphenidate, amphetamine and dextroamphetamine, methamphetamine, and cocaine.[30] Drug interactions between vasoconstrictors and stimulants can cause tachycardia, hypertension or hypotension, palpitations, hyperthermia, cardiac dysrhythmias, myocardial infarction, and cerebrovascular accidents.[8,35-37] Dentists should be knowledgeable of the various SUDs (e.g., alcohol, opiate, benzodiazepine) when recommending or prescribing medications.[30] When pain management is necessary, an adolescent with an opioid use disorder should receive non-opioid analgesics (e.g., acetaminophen, non-steroidal anti-inflammatory drugs [NSAIDS]).[6,8] Prior to prescribing medications that have the potential to be misused, the practitioner should assess adolescent patients with risk factors such as active substance use, past SUD, current medications, and a family history of SUD.[7,38] For patients at high risk, the dentist should consider prescribing alternative medications with less abuse potential, closely monitoring the patient, reducing length of time between visits for refills, prescribing smaller amounts of liquid medications or fewer pills, and educating both patients and parents about proper use and potential risks of prescription medications, including the risk of sharing them with others.[7]

Policy statement

The number of adolescents who misuse alcohol, drugs, or both is a public health problem.[9,13] The AAPD recognizes providing dental care to adolescents with substance use disorders requires awareness of clinical manifestations and implementation of different treatment approaches. Therefore, the AAPD encourages dental professionals to:

- gain knowledge of SUD and associated behavioral, physiological, and cognitive effects in adolescents.
- use a specific adolescent medical history documenting past history, current use, and previous treatments for SUD.
- recognize behaviors, clinical signs, and symptoms of adolescent substance misuse.
- provide brief interventions to educate the adolescent and his family regarding the risks of substance misuse.
- provide brief interventions for encouragement, support, and positive reinforcement for avoiding substance use.
- provide referrals to primary care providers or behavioral health or addiction specialists for assessment and/or treatment of SUD in adolescents when indicated.
- be familiar with community resources, such as self-help groups and treatment facilities, specific to adolescents with SUD.
- use local anesthetics containing vasoconstrictors with caution in patients having a stimulant use disorder.
- limit or decline use of nitrous oxide and anxiolytic or sedative medications in adolescents with SUD.
- recommend non-opioid analgesics or prescribe non-controlled medications with a low potential for misuse when medications are indicated for disease management/pain control.
- if non-controlled medications are ineffective, prescribe only small amounts of medications that have the potential to be misused, preferably with no refills.
- respect patient confidentiality in accordance with state and federal laws.

References

1. American Academy of Pediatric Dentistry. Policy on substance abuse in adolescent patients. Pediatr Dent 2016;38)6):70-3.
2. Hagan JF Jr, Shaw JS, Duncan P, eds. Bright Futures: Guidelines for the Health Supervision of Infants, Children, and Adolescents. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2008:733-820.
3. Chung T, Creswell KG, Bachrach R, et al. Adolescent binge drinking: Developmental context and opportunities for prevention. Alcohol Res 2018;39(1):5-15.
4. National Institute on Drug Abuse. The science of drug abuse and addiction: The basics. Bethesda, Md.: National Institutes of Health; 2014. Available at: "https://www.drugabuse.gov/publications/media-guide/science-drug-use-addiction-basics". Accessed September 27, 2020.
5. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Arlington, Va.: American Psychiatric Association; 2013:483.
6. Center for Substance Abuse Treatment. Detoxification and substance abuse treatment. Treatment Improvement Protocol (TIP) Series, No. 45, Rockville, Md.: Center for Substance Abuse Treatment; 2006. HHS publication no. (SMA) 15-4131. Available at: "http://www.ncbi.nlm. nih.gov/books/NBK64119/#A85324". Accessed September 27, 2020.
7. National Institute on Drug Abuse. Principles of adolescent substance use disorder treatment: A research-based guide. Bethesda, Md.: National Institutes of Health; 2014. NIH publication no. 14-7953. Available at: "https: //teens.drugabuse.gov/sites/default/files/podata_1_17_ 14_0.pdf". Accessed October 3, 2020.
8. Kulig J, Ammermann SD, Moreno MA, et al. Substance abuse. In: Fisher MM, Aldermann EM, Kreipe RE, Rosenfeld WD, eds. American Academy of Pediatrics Textbook of Adolescent Health Care. Elk Grove Village, Ill.: American Academy of Pediatrics; 2011:1726-813.
9. Johnson LD, Miech RA, O'Malley, PM, Bachman JG, Schulenberg JE, Patrick ME. Monitoring the Future national survey results on drug use: 1975-2019: Overview, key findings on adolescent drug use. Ann Arbor, Mich.: Institute for Social Research, University of Michigan; 2020. Available at: "http://www.monitoringthefuture.org/pubs/monographs/mtf-overview2019.pdf". Accessed September 27, 2020.

10. Gaiha SM, Cheng J, Halpern-Felsher B. Association between youth smoking, electronic cigarette use, and COVID-19. J Adolesc Health 2020;67(4):519-23.
11. Li D, Croft DP, Ossip DJ, Xie Z. The association between statewide vaping prevalence and COVID-19. Prev Med Rep 2020;20:101254. Available at: "https://doi.org/10.1016/j.pmedr.2020.101254". Accessed May 23, 2021.
12. Centers for Behavioral Health Statistics and Quality. Behavioral health trends in the United States: Results from the 2014 national survey on drug use and health. Rockville, Md.: Substance Abuse and Mental Health Services Administration; 2015. HHS publication no. SMA 15-4927, NSDUH series H-50. Available at: "https: //www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf". Accessed October 3, 2020.
13. Substance Abuse and Mental Health Services Administration. Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health (HHS Publication No. PEP20-07-01-001, NSDUH Series H-55). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration; 2020. Available at: "https://www.samhsa.gov/data/sites/default/files/reports/rpt29393/2019NSDUHFFRPDFWHTML/2019NSDUHFFR1PDFW090120.pdf". Accessed September 27, 2020.
14. Pagliaro LA, Pagliaro AM. Caffeine and nicotine. In: Child and Adolescent Drug and Substance Abuse. New York, N.Y.: Routledge; 2020: 275-383.
15. Centers for Disease Control and Prevention. Opioid overdose. Understanding the epidemic. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2020. Available at: "https://www.cdc.gov/drugoverdose/epidemic/index.html". Accessed September 27, 2020.
16. O'Donnell J, Halpin J, Mattson CL, Goldberger BA, Gladden RM. Deaths involving fentanyl, fentanyl analogs, and U-47700 — 10 States, July-December 2016. MMWR Morb Mortal Wkly Rep 2017;66 (43):1197-202.
17. Ford JA. Prescription opioid misuse among adolescents. Pediatr Clin N Am 2019;66(6):1099–108.
18. Substance Abuse and Mental Health Services Administration. Results from the 2012 National Survey on Drug Use and Health: Summary of National Findings. NSDUH Series H-46, HHS Publication No. (SMA) 13-4795 Rockville, MD: Substance Abuse and Mental Health Services Administration, 2013. Available at: "https://www.samhsa.gov/data/sites/default/files/NSDUHresults2012/NSDUHresults 2012.pdf". Accessed May 23, 2021.
19. McCabe SE, West BT, Morales M, Cranford JA, Boyd CJ. Does early onset of non-medical use of prescription drugs predict subsequent prescription drug abuse and dependence? Results from a national study. Addiction 2007:102(12):1920-30.
20. Substance Abuse and Mental Health Services Administration. Mental health and substance use disorders. Rockville, Md.; 2015. Available at: "http://www.samhsa.gov/disorders". Accessed October 3, 2020.
21. Partnership to End Addiction. How to spot the signs of teen or young adult substance use. Drugfree.org; 2020. Available at: "https://drugfree.org/article/spotting-drug-use/". Accessed October 2, 2020.
22. Williams JF, Storck M. American Academy of Pediatrics Committee on Substance Abuse; American Academy of Pediatrics Committee on Native American Child Health. Inhalant abuse. Pediatrics 2007;119(5):1009-17.
23. Saini GK, Gupta ND, Prabhat KC. Drug addiction and periodontal diseases. J Indian Soc Periodontol 2013;17 (5):587-91.
24. Center for Substance Abuse Treatment. Substance abuse treatment for persons with co-occurring disorders. Treatment Improvement Protocol (TIP) Series, No. 42. Rockville, Md.: Substance Abuse and Mental Health Services Administration; 2005. HHS publication no. (SMA) 05-3922. Available at: "http://www.ncbi.nlm. nih.gov/books/NBK64184/#A74167". Accessed October 3, 2020.
25. Fishman M. Relationship between substance use disorders and psychiatric comorbidity. In: Kaminer Y, ed. Youth Substance Abuse and Co-occurring Disorders. Arlington, Va.: American Psychiatric Association Publishing; 2016:21-47.
26. Chan YF, Dennis ML, Funk RR. Prevalence and comorbidity of major internalizing and externalizing problems among adolescents and adults presenting to substance abuse treatment. J Subst Abuse Treat 2008; 34(1):14-24.

27. Kaminer Y, Winters KC, Kelly J. Screening, assessment, and treatment options for youths with a substance use disorder. In: Kaminer Y, ed. Youth Substance Abuse and Co-occurring Disorders. Arlington, Va.: American Psychiatric Association Publishing; 2016:49-80.
28. Garito PJ. Assessing and treating psychiatric co-morbidity in chemically abusing adolescents. In: O'Connell D, Beyer E, eds. Managing the Dually Diagnosed Patient: Clinical Issues and Clinical Approaches. 2nd ed. New York, N.Y.: The Haworth Press; 2002:153-88.
29. Yepes JF, Dean JA. Examination of the mouth and other relevant structures. In: Dean JA, senior ed., Jones JE, Sanders BJ, Vinson LAW, Yepes JF eds. McDonald and Avery's Dentistry for the Child and Adolescent. 11th ed. St. Louis, Mo.: Elsevier; 2022:14-6.
30. American Dental Association. Statement on provision of dental treatment for patients with substance use disorders. October, 2005. Available at: "https://www.ada.org/en/advocacy/current-policies #substanceusedisorders". Accessed October 3, 2020.
31. Fingerhood MI. Special populations: Adolescents. In: Rastegar DA, Fingerhood MI, eds. American Society of Addiction Medicine Handbook of Addiction Medicine. 2nd ed. New York, N.Y.: Oxford University Press; 2020; 380-5.
32. Miller WR, Rollnick S. Applying motivational interviewing. In: Motivational Interviewing: Helping People Change. 3rd ed. New York, N.Y.: The Guilford Press; 2013:335-51.
33. Levy SJ, Williams JF. American Academy of Pediatrics Committee on Substance Use and Prevention. Substance use screening, brief intervention, and referral to treatment. Pediatrics 2016;138(1): e20161211.
34. Moon MR. Confidentiality in dealing with adolescents. In: Miller SC, Fiellin DA, Rosenthal RN, Saitz R, eds. American Society of Addiction Medicine Principles of Addiction Medicine. 6th ed. Philadelphia, Pa.: Wolters Kluwer; 2019:1664-6.
35. Klein-Schwartz W. Abuse and toxicity of methylphenidate. Curr Opin Pediatr 2002;14(2):219-23.
36. Hamamoto DT, Rhodus NL. Methamphetamine abuse and dentistry. Oral Dis 2009;15(1):27-37.
37. Friedlander AH, Yagiela JA, Paterno VI, Mahler ME. The pathophysiology, medical management, and dental implications of children and young adults having attention-deficit hyperactivity disorder. J Calif Dent Assoc 2003;31(9):669-78.
38. Bukstein OG. Adolescents with substance use disorders: How did they get there? In: Treating Adolescents with Substance Use Disorders. New York, N.Y.: The Guilford Press; 2019:19-21.