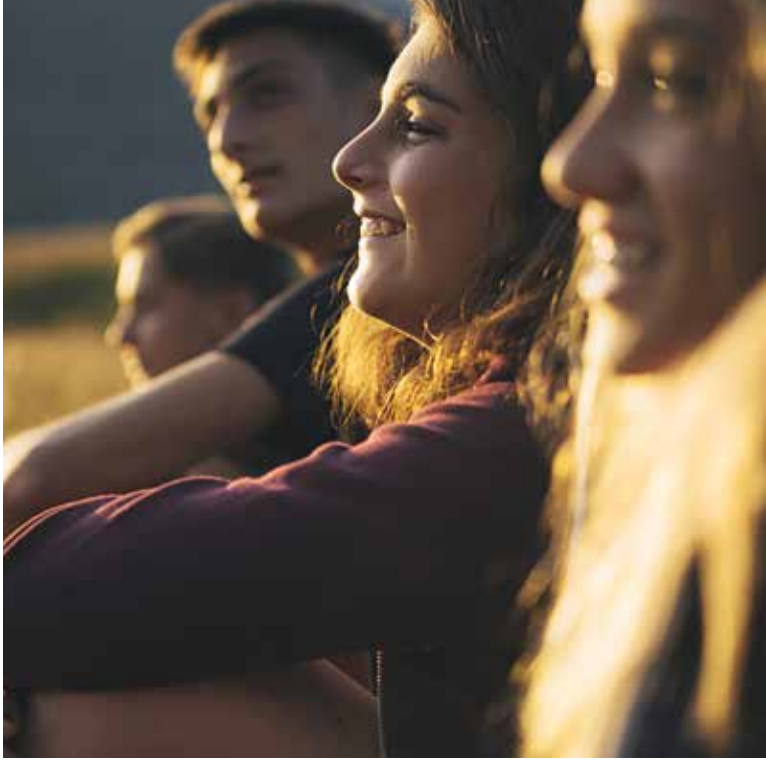
Substance use in adolescents

If you don't ask, they won't tell



VIKRAM PALIT BMedSc, MB BS, MSc (Health Mgmt)
BRONWYN MILNE BSc(Med), MB BS, MPH, FRACP, FAChAM

Adolescents presenting with substance use is increasingly commonplace. Fortunately, GPs are equally well placed to manage substance use with early intervention offering the greatest opportunity for positive behaviour change into adulthood. Effective approaches to prevention and intervention should be strengths-based with concurrent aims of increasing knowledge and motivation, reducing risk of further harm and building resilience. Engaging the adolescent is crucial and success depends on tailoring brief interventions that are evidence-based, age appropriate and where possible, involve the family and community.

MedicineToday 2021; 22(3 Suppl): 2-7
First Published 2020; 21(9): 51-56
Updated February 2021

Dr Palit is a Fellow in Adolescent and Addiction Medicine at Sydney Children's Hospital Network, Sydney; and a Senior Lecturer in Health Services Management, School of Public Health and Community Medicine, UNSW, Sydney.
Dr Milne is a Staff Specialist in Adolescent and Addiction Medicine at the Department of Adolescent Medicine and NSW CICADA Centre (Care and Intervention for Children and Adolescents affected by Drugs and Alcohol), Sydney Children's Hospital Network, Sydney, NSW.

Cannabis is the most commonly used illicit drug in Australia; tobacco smoking the leading cause of preventable death; and alcohol the most common primary drug of concern, accounting for most drug-related hospital episodes in 2018.[1] Equally concerning are the rising number of deaths due to methamphetamine and other stimulant use and the risk of overdose related to opioids, benzodiazepines and prescription medications.[1] These are sombre statistics that tell a story of a burgeoning health crisis marked by early initiation, easy access, increasing risk-taking behaviours and polysubstance use.

The good news is that rates of tobacco smoking, regular cannabis use and drinking alcohol at harmful levels are dropping among adolescents and young people in Australia.[2] Effective public health measures and a national strategy of harm minimisation for tobacco, alcohol and other drugs have demonstrated early successes across the board. However, the treatment models used over the past two decades have focused on adult substance use and addiction. Only recently have efforts shifted to investing in adolescents from a developmental science perspective, with the knowledge that early intervention in this group (aged 10 to 19 years) during a period of rapid growth, learning and adaptation will shape their long-term health trajectory. Dahl et al, in their review of adolescent health interventions, describe the distinctive attributes of learning, development and maturation during adolescence that 'support acquisition of the culturally embodied knowledge, skills and self-regulating capacities needed to become independent and integrate into adult society'.[3]

It is within this developmental context that GPs are aptly positioned to intervene early. The key message for primary care providers is to ask adolescents about their substance use and engage them early in treatment. Our own discomfort, lack of familiarity with or preconceptions of substances should not be a barrier to patients receiving appropriate care. To that end, it

is important that clinicians appreciate what substances young people commonly use and how they work, that is, both their intended and unintended side effects. Box 1 provides useful drug and alcohol resources for healthcare providers.

Assessment

Substance use is a spectrum that varies with an individual's level of use and the dysfunction they experience as a result of their use. The use of alcohol and other drugs ranges from experimenting and social use (e.g. in social situations, weekends) to substance abuse, when the drug's effects seriously interfere with health or occupational and social functioning. Continued use of psychoactive substances can lead to chemical dependency or addiction, with the inability to control use despite harmful consequences, maladaptive patterns of behaviour and features of tolerance and/or withdrawal.

Intervention is integral to elicit behavioural change. Primary intervention aims to prevent or delay the onset of alcohol and other substance use, and can take place outside of GP practices, including at school, hospitals and through community youth health services. Secondary intervention focuses on reducing problems early in the substance use spectrum and averting progression to possible substance dependence.

Setting the scene

Experimenting with alcohol and other drugs is commonplace during adolescence.[1] Being conscious of this and using clear, open and nonjudgemental communication will improve your engagement with young people when talking about substance use. It is best practice to see the adolescent on their own and to establish confidentiality early in your consultation, except in exceptional circumstances such as disclosure of intention to self-harm or harm others. It may take several visits with the young person to earn their trust and, provided that they are safe, this is recommended. Parents and/or carers may present with concerns about the adolescent's substance use. Consent to disclose information to parents/carers should be sought, unless the adolescent identifies risk of self-harm or harm to others, in which case safety planning must be developed. Building a therapeutic alliance from the start will confer positive results later and give young people the confidence to seek counsel with other sensitive health needs.

History and screening

Bridging questions are often helpful before launching into a focused drug and alcohol history, and the HEADSSS (Home, Education, Activities, Drugs, Suicidality, Sex and Safety) assessment is a good place to start.[4] Ask individually about each substance group starting with tobacco, alcohol and cannabis, and progressing to drugs that are less commonly used such as

1. YOUTH DRUG AND ALCOHOL RESOURCES FOR HEALTHCARE PROVIDERS

- **Australian Drug Foundation (ADF):** the premierwebsite for specific drug and alcohol information with helpful resources and downloadable factsheets (https://adf.org.au/drug-facts/)
- **Dovetail:** provides clinical advice and professional support to workers, services and communities across Queensland who engage with young people affected by alcohol and drug use (www.dovetail.org.au/)
- **Headspace:** Australia's national youth mental health foundation (www.headspace.org.au)
- **"KidsQuit" Smoking Cessation Brief Interventions:** an interactive and educational tool, developed by The Children's Hospital at Westmead, to provide professionals with simple strategies for advising adolescents, parents and carers about smoking cessation and reducing exposure to secondhand smoke (https://kidshealth.schn.health.nsw.gov.au/kidsquit-smoking-cessation-brief-interventions)
- **Alcohol and Drug Information Service (ADIS):** a 24-hour support line with counsellors available to provide information, referrals and crisis counselling. Tel: 1800 250 015, web chat available Monday to Friday 8.30am–5pm (https://yourroom.health.nsw.gov.au/getting-help/Pages/adis.aspx)
- **Hello Sunday Morning:** an online resource and community for young adults to help change drinking behaviours and includes the free 'Daybreak' app (https://hellosundaymorning.org/)
- **Youth Support and Advocacy Service (YSAS):** provides online resources for healthcare professionals including a Youth/Parent/Out-of-home care alcohol and other drugs tool box and learning hub (ysas.org.au/for-professionals-1)
- **Alcohol and Drug Withdrawal Guidelines:** (https://www.turningpoint.org.au/treatment/clinicians/withdrawal-guidelines)
- **NSW Health Drug and Alcohol Withdrawal Clinical Practice Guidelines:** (https://www1.health.nsw.gov.au/pds/pages/doc.aspx?dn=GL2008_011)

Interactive websites for young people

- **NSW Your Room:** a user-friendly drug and alcohol website with plenty of helpful resources (https://yourroom.health.nsw.gov.au)
- **Your Choice:** a binge drinking support program with AUDIT-C questionnaire (www.yourchoiceonline.com.au)
- **Moodgym:** an interactive, self-help resource that helps users prevent and manage symptoms of depression and anxiety (https://moodgym.com.au)

2. DRUG AND ALCOHOL SCREENING TOOLS

- **Car, Relax, Alone, Forget, Friends, Trouble (CRAFFT) 2.0:** Validated screening tool with high sensitivity and specificity for alcohol and substance misuse in adolescents.[5] This tool is easy for GPs to administer, covers substance use generally and is recommended by the American Academy of Paediatrics (https://crafft.org/)
- **Hooked on Nicotine Checklist (HONC):** 10-item instrument used to determine the onset and strength of tobacco dependence (https://cancercontrol.cancer.gov/brp/tcrb/measures-guide/hooked-on-nicotine-checklist)
- **Alcohol Use Disorders Identification Test (AUDIT):** 10-item instrument developed by the WHO to detect harmful drinking behaviours (www.dacas.org.au/sites/default/files/inline-files/AUDIT-interview-version.pdf)
- **Cannabis Use Disorder Identification Test – Revised (CUDIT-R):** 8-item measure to screen for cannabis use disorder (https://insight.qld.edu.au/shop/the-cannabis-use-disorder-identification-test-revised-cudit-r-insight-2019)
- **Severity of Dependence Scale (SDS) and Readiness Rulers Screening Tool:** Questionnaire that provides a score indicating the severity of dependence for cannabis, amphetamines and benzodiazepines (https://insight.qld.edu.au/shop/severity-of-dependence-scale-sds-and-readiness-rulers-screening-tool)

amphetamines (speed, base, ice and ecstasy), cocaine, opiates, benzodiazepines, over the counter medications, inhalants and hallucinogens (such as LSD; lysergic acid diethylamide) and ketamine. More young Australians are experimenting with vaping (approximately 5% of 18 to 24 year-olds) with increasing rates of first-time use seen in nonsmokers.[1] From our experience, this figure is likely under-reported and we recommend that healthcare providers routinely ask about vaping, including the type of device used (e.g. e-cigarette, tank, pipe) and the content of the e-liquid or 'juice' (e.g. nicotine, tetrahydrocannabinol, cannabinoid). Ascertain their pattern of use (e.g. daily, socially, on weekends), the age of onset and regular use, how they access drugs and quantify the amount consumed at any given time. Finally, ask the young person about when they last used and whether they have experienced symptoms of withdrawal or tolerance.

Several screening tools have been validated to identify harmful consumption of drugs and alcohol in adolescents and include the AUDIT (Alcohol Use Disorders Identification Test), CRAFFT (Car, Relax, Alone Forget, Friends, Trouble) and HONC (Hooked on Nicotine Checklist) screening tools (Box 2).[5] These tools are administered via interview or are self-reported (e.g. in the waiting room of your practice) and will help to distinguish between social, problematic and dependent patterns of substance use.

3. RISK ASSESSMENT FOR ADOLESCENT SUBSTANCE USE

Consider the following in your work-up of adolescents with moderate to severe substance use:

- Medical complications of the substance used
- Nutritional assessment
- Immunisation status
- Risks of intravenous drug use including thrombophlebitis, skin abscesses, septicaemia, infective endocarditis and blood-borne viruses (hepatitis B, C and HIV)
- Sexual health and sexually transmitted infection screening
- Mental health including screening for anxiety, depression, suicidal risk factors and early psychosis
- Family relationships and living situation
- Educational achievement including issues such as attention deficit hyperactivity disorder and specific learning difficulties
- Forensic history
- Assessment of harms associated including sexual assault, motor vehicle accidents, trauma, violence or aggression

Mental health

It will be of no surprise to the readership that many young people who present with problematic substance use have comorbid mental health issues. Although GPs are adept at managing mental health in the community, it is particularly important to recognise the complex interplay between psychiatric disorders, substance use and access to both prescription and illicit drugs. Young people with neurodevelopmental disorders such as attention deficit hyperactivity disorder, oppositional defiant disorder, conduct disorder and mood disorder have a higher risk of problematic substance use and disproportionally present to youth drug and alcohol services.[6] Although outside the scope of this review, addressing specific management of these comorbidities will improve outcomes, and referral to community mental health and paediatric services for assessment and intervention is recommended.

Risk assessment

A comprehensive assessment including risk assessment (Box 3) should be performed for all adolescents and young adults presenting with substance use. Vulnerable young people, including those who are homeless or in out-of-home care; in the criminal justice system; victims of violence, child abuse or neglect; or those not engaging in work or education are particularly prone to substance use. When assessing the patient, consider age of first substance use, ease of access, parental supervision, safety of the young person and harms associated with specific substances.

Adolescents who are in out-of-home care, or case managed

4. THE 5A'S APPROACH TO SMOKING CESSATION[8]

The 5A's provide health professionals with a framework for structuring smoking cessation support, but can also be applied to other forms of substance use. The key features are:

- **Ask** adolescents regularly if they smoke and/or vape and document this information. Use the Hooked on Nicotine Checklist (HONC) (Box 2)
- **Advise** smokers to quit in a clear and unambiguous way, taking into account the young person's developmental stage
- **Assess** the adolescent smoker's needs and stage of change. Nicotine dependence should also be assessed. Complete a thorough risk assessment (Box 2) to help develop a comprehensive treatment plan
- **Assist** all smokers to quit. This may be a through combination of pharmacological therapy (e.g. nicotine patch), motivational interviewing, written information and referral to local smoking cessation services
- **Arrange** follow-up visits to provide ongoing support and brief intervention

5. THE FRAMES MODEL FOR RISKY OR HARMFUL ALCOHOL CONSUMPTION[9]

- **Feedback of personal risks:** inform the young person of their AUDIT score. Many adolescents may be surprised that they are drinking at hazardous levels and highlighting risks can be a powerful motivator for change
- **Responsibility:** stress that the decision to change drinking patterns is their choice, but that supports are available. Engage the family or other caregivers if appropriate
- **Advice:** offer clear and succinct advice using language that is developmentally appropriate. Outline safe drinking levels and risks of continued harmful consumption
- **Menu:** offer several strategies to change drinking behaviour. These include alternating alcoholic drinks with soft drinks, switching to low alcohol content drinks, goal setting (e.g. regular alcohol-free days), engaging in alternative activities to drinking and identifying high-risk situations for heavy drinking and creating a management plan
- **Empathy:** adopt a warm, reflective, and collaborative approach in order to build a therapeutic alliance with your patient
- **Self-efficacy:** support the young person's ability to change. Focus on positive steps taken including engaging with services and communicate a sense of optimism, not helplessness

by social services, nongovernment organisations or other youth agencies, add a further degree of complexity when trying to co-ordinate their care. Fostering interagency collaboration is crucial to ensure that the needs of the adolescent are met and treatment plans are followed. Missed appointments, unfilled prescriptions and frequent presentations to acute mental health and emergency services should raise concern. Additionally, some adolescents engage in risky or criminal activity, including unwanted or unsafe sexual activities associated with substance use. GPs and other healthcare providers are mandatory reporters for child protection concerns and need to be acutely aware of the child-at-risk reporting framework and the local guidance for the state or territory in which they practise.

Treatment principles

Adolescence is an opportune time for early intervention for issues related to alcohol and other substance use. The goals of assessment are to identify the harms and comorbidities associated with substance use and to formulate a treatment plan that is unique to the needs of the adolescent. Provision of evidence-based behavioural interventions, addressing child protection concerns and delivering care in a trauma informed manner are key treatment principles that GPs are well-equipped to perform.

Brief interventions

Brief interventions offer GPs the most value in influencing positive behaviour change and reducing harmful use.[7] When successfully applied, a brief intervention is opportunistic, revisited at every contact and consists of informal counselling and drug psychoeducation. It is most appropriate early in substance use to reduce harmful consumption but can also be applied later to achieve harm reduction for individuals who are chronically using or drug dependent. Examples of brief interventions that are easy to follow include the 5A's (ask, advise, assess, assist, arrange) approach (Box 4) and FRAMES (feedback of personal risk/impairment, responsibility, advice, menu, empathy, self-efficacy) (Box 5) model, and although specific to tobacco and alcohol, respectively, can be applied generally to other substances.[8,9]

Motivational interviewing/Motivational enhancement therapy

Motivational interviewing and enhancement therapy models are based on the assumption that ambivalence about substance use (and change) is normal and can be resolved by working with the person's intrinsic motivations and values.[10] A significant part of drug and alcohol assessment and intervention is understanding where the adolescent sits with regard to wanting to change their drug use (Box 6)[11] and adopting an empathetic yet directive counselling style to provide conditions under which change can occur. We are mindful that the effect of this intervention is somewhat influenced by the developmental age of the adolescent and their capacity to make changes, particularly if there are issues related to substance use in their family and community. Younger adolescents are more likely to require additional supportive social and family systems (including parental/carer supervision) to assist with making changes.

6. THE STAGES OF CHANGE MODEL OF DRUG/SUBSTANCE USE[11]

- **Precontemplation:** the adolescent does not recognise that alcohol or drug use is a problem and is not ready to change. They will usually focus on the positive aspects of their drug use
- **Contemplation:** the adolescent is ambivalent or unsure about substance use and is thinking about making some change. This group is particularly amenable to motivational interviewing
- **Action:** adolescents in this group are ready for change. They may have already taken some action to change their behaviours. This is when the risk of relapse is highest
- **Maintenance:** this group of adolescents has ceased their alcohol or drug use and are maintaining the change
- **Relapse:** the adolescent has returned to substance use. It is important to treat this as part of the process of change rather than as failure. Relapse is common in the natural history of substance use

7. PRACTICE POINTS

- Assessment is key – use validated screening tools to ascertain patterns of substance use and motivation for change
- Engage the young person – build a therapeutic alliance based on trust, confidentiality and shared decision-making
- Act now – adolescence is an opportune time for intervention to prevent or delay the onset of alcohol and other substance use
- Promote self-management – encourage active participation with treatment goals and empower the young person to keep themselves and their peers safe
- Identify and address comorbidities including mental health issues such as anxiety and depression
- Make every contact count – brief interventions can reduce harmful consumption and help maintain behaviour change

Harm minimisation

It is important to consider the actual harms associated with the use of a particular drug and how these harms can be reduced for the individual and society. This can include individual and physical harms (such as overdose, accident or injury associated with substance use) and impact on our society (such as increased criminal activity associated with substance use). A harm minimisation approach does not insist on abstinence as the only objective of treatment but on reducing the risks associated with substance use. Some examples of harm minimisation include educating young people on strategies to reduce harms from alcohol consumption, party safe campaigns and needle exchange programs to reduce risk of harms associated with intravenous drug use.

Individual cognitive behavioural therapy

Cognitive behavioural therapy is an evidence-based treatment approach for young people who present with substance use.[12] Referral to psychosocial services that offer cognitive behavioural therapy and/or online modules (Box 1) will generally focus on emotion regulation and impulse control and entail the following:

- relaxation techniques
- anxiety management
- managing cravings
- relapse prevention
- counselling
- substituting substance use with healthier options
- spiritual fulfilment.

Family therapy

Family therapy has proven efficacy for adolescents with substance use problems by focusing on close relationships and validating the experience of all family members. Involving parents in treatment indirectly assists the adolescent by addressing parental concerns, influencing parenting style, building capacity and breaking unhealthy patterns of communication and interactions.[13]

Pharmacotherapy

Pharmacotherapy refers to the use of medications in substance abuse treatment in addition to other therapies mentioned. More commonly, medications are used to manage comorbid mental health issues, for the short-term alleviation of withdrawal symptoms and for patients at the more severe end of the substance use spectrum. Examples include nicotine replacement therapy for young people who are nicotine dependent, or medications such as acamprosate for chronic alcohol abuse. Our experience suggests that adolescents are more likely to benefit from pharmacological treatments when used adjunctively with individual and family interventions, and starting therapy is often a case-by-case decision. Medication to assist with withdrawal symptoms for the short term may be considered.

Tertiary intervention

Tertiary intervention strategies are aimed at achieving abstinence and reducing harm for young people at the severe end of the substance use spectrum. This intensive intervention requires referral to youth drug and alcohol services and adopts an assertive case management approach. Residential rehabilitation falls under this category and programs are specifically targeted to assist with breaking the cycle of drug use, re-engaging the young person in school, education or employment and promoting healthy social supports.

Conclusion

Investing in adolescents offers the greatest opportunity for positive behaviour change and successful attainment in

adulthood. To do this well, we need to recognise the distinct developmental changes of adolescence, when this occurs and how their changing social roles and identity affect their learning and behaviours. The issue of substance use by adolescence is no different – ask the question, understand the problem and target treatments that are tailored to their needs (Box 7). Prevention and early intervention for adolescents with substance use offers the best chance to intercept that pivotal inflection point, when habits are formed and behaviours can change. MT

References

1. Australian Institute of Health and Welfare (AIHW). Alcohol, tobacco & other drugs in Australia. AIHA 2020; Cat. No. PHE 221. Available online at: https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia (accessed August 2020).
2. Guerin N, White V. ASSAD 2017 Statistics & Trends: Australian secondary students' use of tobacco, alcohol, over-the-counter drugs, and illicit substances. Second Edition. Cancer Council Victoria 2020. Available online at: www.health.gov.au/resources/publications/secondary-school-students-use-of-tobacco-alcohol-and-other-drugs-in-2017 (accessed August 2020).
3. Dahl RE, Allen NB, Wilbrecht L, Ballonoff Suleiman A. Importance of investing in adolescence from a developmental science perspective. Nature 2018; 554: 441-450.
4. Contemporary Paediatrics. HEEADSSS 3.0: The psychosocial interview for adolescents updated for a new century fueled by media. Contemporary Paediatrics 2014. Available online at: www.contemporarypediatrics.com/view/heeadsss-30-psychosocial-interview-adolescents-updated-new-century-fueled-media (accessed August 2020).
5. Knight JR, Sherritt L, Shrier LA, Harris SK, Chang G. Validity of the CRAFFT substance abuse screening test among adolescent clinic patients. Pediatr Adolesc Med 2002; 156: 607-614.
6. Phillips NL, Milne B, Silsbury C, et al. Addressing adolescent substance use in a paediatric health-care setting. J Paediatr Child Health 2014; 50: 726-731.
7. Babor TF, McRee BG, Kassebaum PA, Grimaldi PL, Ahmed K, Bray J. Screening, Brief Intervention, and Referral to Treatment (SBIRT): toward a public health approach to the management of substance abuse. Subst Abus 2007; 28: 7-30.
8. Australian Government Department of Health. Smoking cessation guidelines for Australian general practice: desktop guidelines and patient education materials. 2004. Available online at: www1.health.gov.au/internet/main/publishing.nsf/Content/phd-pub-tobacco-smoking-cessation-flip-cnt (accessed August 2020).
9. Bien TH, Miller WR, Tonigan JS. Brief interventions for alcohol problems: a review. Addiction 1993; 88: 315-335.
10. Britt E, Hudson SM, Blampied NM. Motivational interviewing in health settings: a review. Patient Educ Couns 2004; 53: 147-155.
11. Prochaska JO, Norcross JC. Stages of change. Psychother Theor Res Pract Train 2001; 38: 443-448.
12. Tanner-Smith EW, Wilson SJ, Lipsey MW. The comparative effectiveness of outpatient treatment for adolescent substance abuse: a meta-analysis. J Subst Abuse Treat 2013; 44: 145-158.
13. Das JK, Salam RA, Arshad A, Finkelstein Y, Bhutta ZA. Interventions for adolescent substance abuse: an overview of systematic reviews. J Adolesc Health 2016; 59(4S): S61-S75.

COMPETING INTERESTS: None.