

VOLUME C
**Pharmacological Treatment
for Drug Use Disorders**
**Drug Treatment for Special
Populations**



Treat  net

Module 3

Special Populations: Co-Occurring Disorders, Women and Young People



**Co-occurring
psychiatric and
substance use
disorders**



**Women:
substance use
disorders
and treatment
issues**



**Young people:
substance use
disorders
and treatment
issues**



Workshop 3

Young people: SUD and treatment issues



Training objectives

At the end of this workshop you will be able to:

- ▶ Explain the reasons why alcohol and drug use have negative on young people
- ▶ Identify key issues for the treatment of SUD in young people
- ▶ Recognise drugs which are more frequently used by young people
- ▶ Understand the importance of family involvement





Young people

Who is young?



A “young person” is internationally accepted as someone who is between 10- and 24-years-old.

World Health Organization

Let's reflect!



- ▶ What is the scope of the problem of adolescents using drugs in your area/town/country?
- ▶ Does your treatment centre work with adolescents? What and how this work can be improved?
- ▶ Do you think boys and girls have special needs in treatment?
- ▶ What treatment options do you know for adolescents?

A black and white photograph of a diverse group of young people sitting together in a circle, engaged in conversation. The group includes three young men and three young women of various ethnicities. They are all looking towards each other, suggesting an active discussion. The background is slightly blurred, showing what appears to be an outdoor setting with a wooden structure.

**Why do young
people use drugs?**

Why do young people use drugs?

Many factors influence whether an adolescent tries drugs

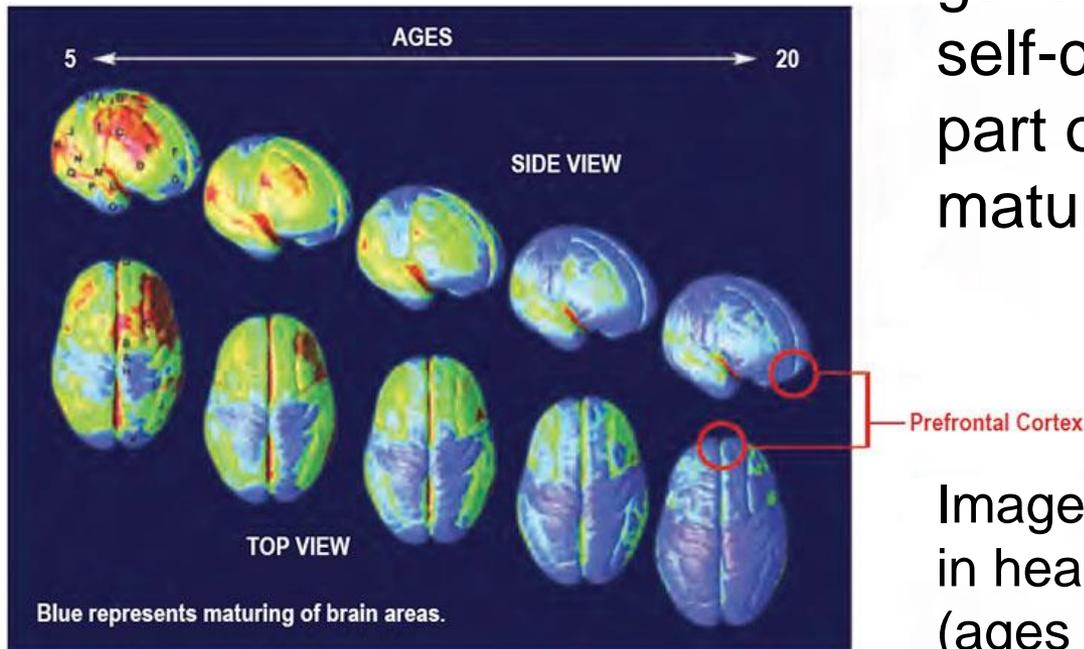
- ▶ Availability of drugs within the neighbourhood, community and school use by friends
- ▶ The family environment: violence, physical/emotional abuse, mental illness or drug use in the household
- ▶ Inherited genetic vulnerability: personality traits like poor impulse control/high need for excitement
- ▶ Early onset of mental health conditions: depression, anxiety or ADHD
- ▶ Beliefs such as that drugs are “cool” or harmless

Young people's vulnerability to develop SUD

- ▶ Brain is still developing and malleable (neuroplasticity)
- ▶ Brain circuits governing judgment & self-inhibition are still maturing
- ▶ Teenagers act on impulse, seek new sensations and be easily swayed by their peers
- ▶ Critical neural circuits are still actively forming— making the development of a SUD much more likely

Brain development in children and teens

The brain continues to develop through early adulthood. Mature brain regions at each developmental stage are indicated in blue. The prefrontal cortex (red circles), which governs judgment and self-control, is the last part of the brain to mature.



Images of brain development in healthy children and teens (ages 5-20)

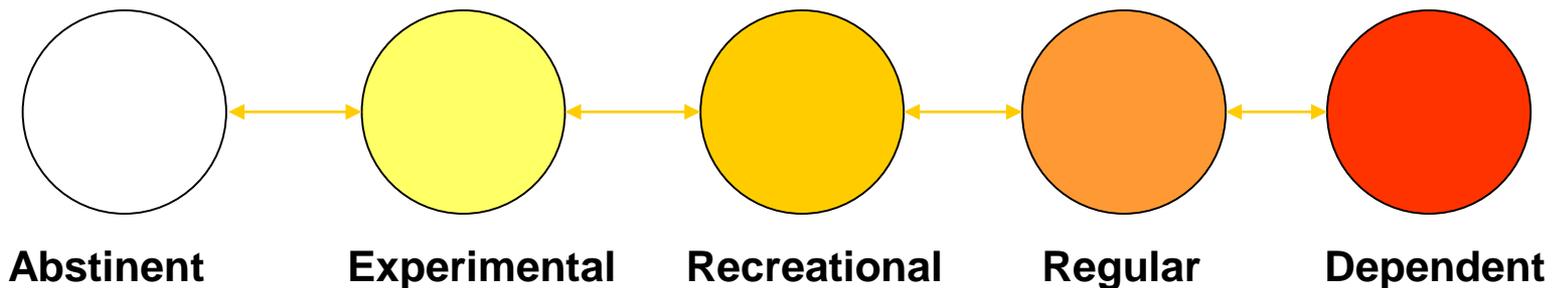
Adolescent brain



The adolescent brain is often likened to a car with a fully functioning gas pedal – the reward system, but weak brakes – the prefrontal cortex!

The spectrum of use

Drug using patterns range across a spectrum, from no use to dependent use, and may include more than one drug



A person can move along the spectrum (in either direction) and cease using at any point

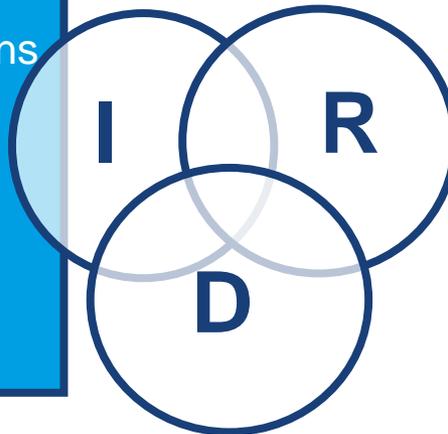
Adolescent drug use: How does addiction occur?

- ▶ Addiction occurs when repeated use of drugs changes how a person's brain functions over time
- ▶ Despite popular belief, willpower alone is often insufficient to overcome an addiction. Drug use has compromised the very parts of the brain that make it possible to "say no."

Identifying harms from drug use

Intoxication

- lower tolerance
- severe physical reactions
- overdose
- victimisation
- falls
- drunk driving
- unsafe sex
- accidents and injury



Regular/ Excessive Use

- organ damage at lower dose
- organ damage at lessor duration
- conception difficulties
- pregnancy – risk to the foetus
- work
- relationships
- finances
- child-rearing

Dependence

- family and societal censure
- child welfare intervention
- marginalisation
- reluctance to seek help
- overdose potential
- rapid deterioration in health

Adolescent substance use: Who is at risk?

- ▶ Not all young people are equally at risk for developing an addiction
- ▶ Various factors including inherited genetic predispositions & adverse experiences in early life make trying drugs and developing a SUD more likely
- ▶ Exposure to stress (e.g., emotional/physical abuse) in childhood primes the brain to be sensitive to stress and seek relief from it throughout life, this greatly ↑ the likelihood of subsequent drug abuse and of starting drug use early

Adolescent substance use: Who is at risk?

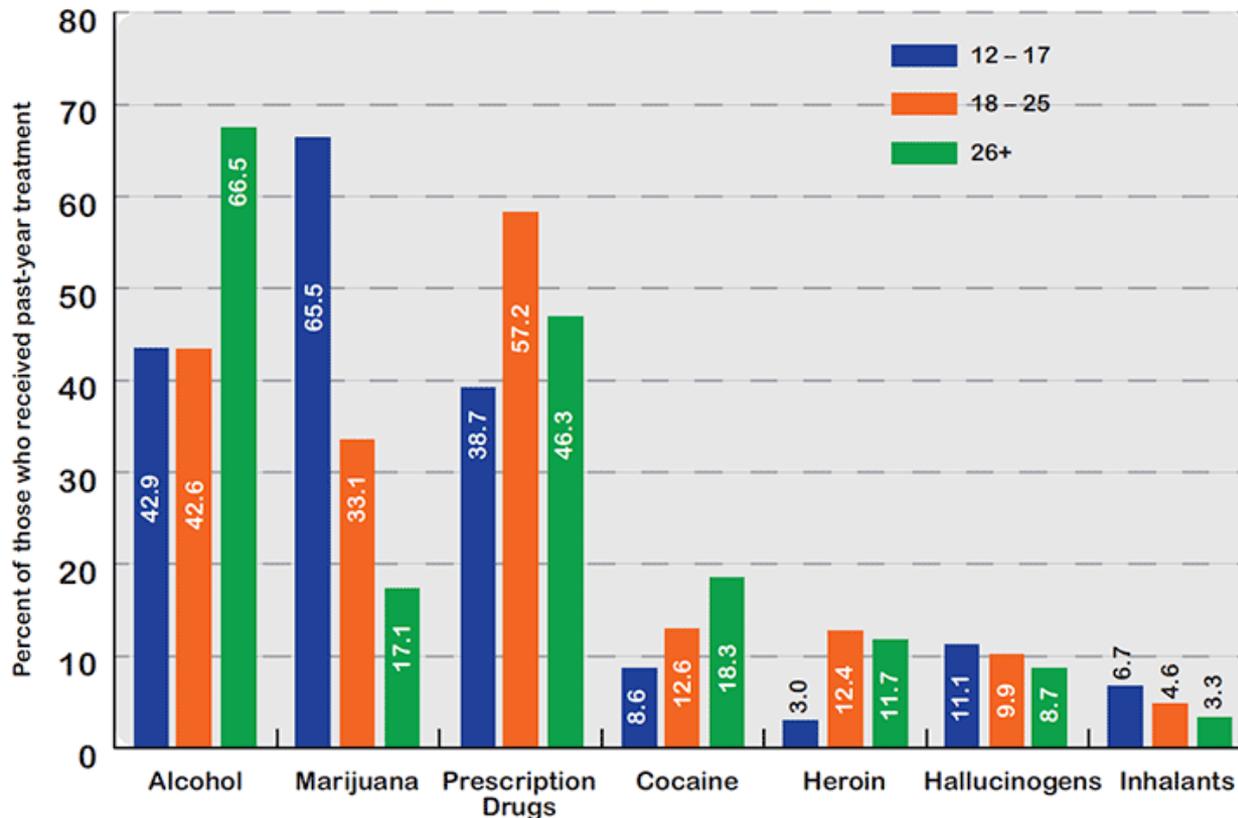
- ▶ Certain traits e.g., being impulsive, aggressive put a person at risk for drug use
- ▶ A range of factors, such as nurturing parenting or a healthy school environment, may encourage healthy development and thereby lessen the risk of later drug use

Adolescent substance use: How big is the problem?

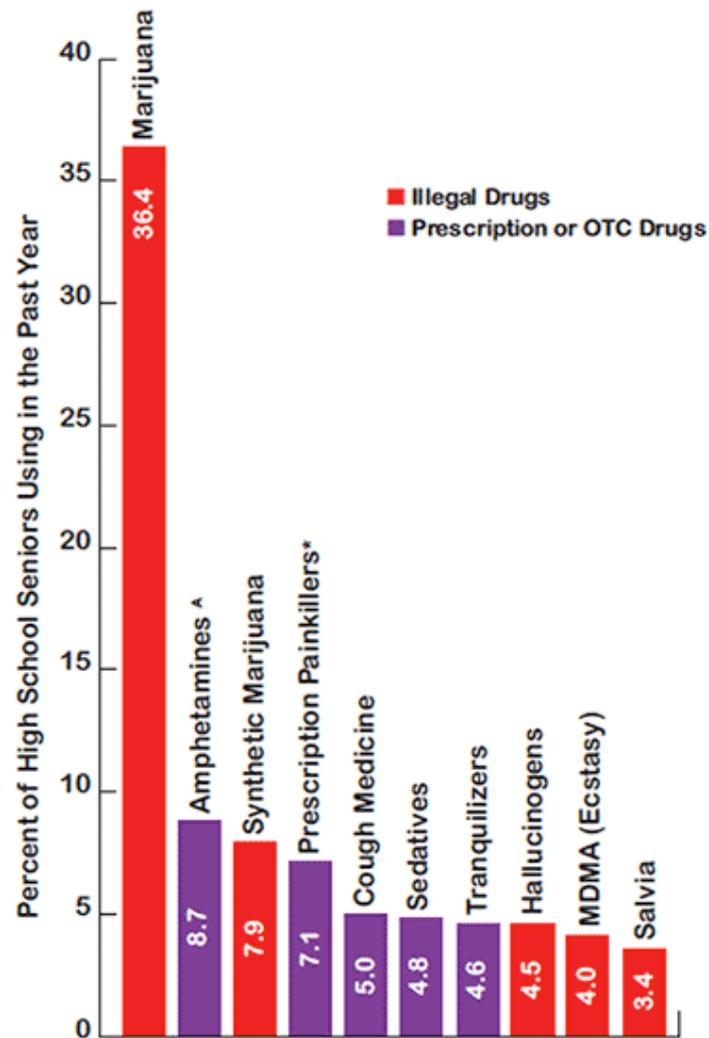
- ▶ People are most likely to begin abusing drugs during adolescence and young adulthood
- ▶ By the time they are seniors, almost 70% of high school students will have tried alcohol, 50% will have taken an illegal drug, nearly 40 % will have smoked a cigarette and >20 % will have used a prescription drug for a nonmedical purpose

Type of substances used: Adolescence vs adults

Adolescents differ from adults in substances most abused



Adolescence most commonly abused drugs



Alcohol and young people: Consequences

▶ Causes many deaths

- Every year in the United States, about 5,000 young people under age 21 die as a result of underage drinking

▶ Causes many injuries

- In 2008 alone, about 190,000 people under age 21 visited an emergency room for alcohol-related injuries

▶ Impairs judgment

- Drinking can lead to poor decisions about engaging in risky behaviour, including drinking and driving, sexual activity (such as unprotected sex), and aggressive or violent behaviour

Alcohol and young people: Consequences

- ▶ Increases the risk of physical and sexual assault
- ▶ Can lead to other problems:
 - trouble in school/with law
 - use of other drugs
- ▶ Increases the risk of alcohol problems later in life
 - starting to drink < 15 yrs., increase risk of developing alcohol dependence by 4 times
- ▶ Interferes with brain development

Alcohol and young people: Consequences

In the USA

- ▶ 1,825 college students (18-24 yrs.) die from alcohol-related unintentional injuries, including motor vehicle crashes
- ▶ 696,000 students(18 -24yrs) are assaulted by another student who has been drinking
- ▶ 97,000 students (18 – 24yrs) are victims of alcohol-related sexual assault or date rape

What are the consequences?



- ▶ Abusing drugs during adolescence can interfere with meeting crucial social and developmental milestones and also compromise cognitive development
- ▶ For example, heavy marijuana use in the teen years may cause a loss of several IQ points that are not regained even if users later quit in adulthood

Intoxication-related consequences

- ▶ A non-judgmental approach towards young people and their intoxication is recommended
- ▶ Potential consequences resulting from alcohol intoxication are immense. In Australia, alcohol is linked to:
 - 30% of all road, falls, and fire injuries and 30% of drownings
 - 50% of assaults, 12% of suicides (probably an underestimate for young people, and particularly indigenous youth)
 - overdose, drug-related rape and violence

Signs of drug use in adolescents

- ▶ Start behaving differently for no apparent reason
- ▶ Frequently tired/depressed/hostile
- ▶ A change in peer group
- ▶ Carelessness with grooming
- ▶ Decline in academic performance
- ▶ Missing classes or skipping school
- ▶ Loss of interest in favorite activities
- ▶ Changes in eating or sleeping habits
- ▶ Deteriorating relationships with family members and friends



**Adolescent drug use:
Some commonly
abused drugs and
their effects**



Cannabis

- ▶ Estimates from research suggest that about 9 percent of users become addicted to marijuana this number increases among those who start young (to about 17 percent) and among daily users (to 25–50%)
- ▶ Withdrawal symptoms include irritability, insomnia, ↓ appetite, anxiety & craving
- ▶ If dependent, young people function at a sub-optimal level in their schoolwork and in other areas of their lives

Cannabis

- ▶ Marijuana use as a teen may harm the developing brain, lower IQ and seriously impair the ability to drive safely, especially when combined with alcohol
- ▶ Long-term marijuana behavioural interventions, including CBT & Contingency have proven to be effective in treating marijuana addiction
- ▶ Recent discoveries about the workings of the endocannabinoid system makes it possible to discover effective medications for cannabis misuse

Inhalants

- ▶ Cleaning fluids, glues, lighter fluid, aerosol sprays etc. are used as inhalants
- ▶ Inhalant use produces a brief, alcohol-like high
- ▶ Because of their ready availability, these are among the earliest substances youth abuse; they are generally less popular among older teens, who have greater access to other substances like alcohol or marijuana

Inhalants

- ▶ It can cause severe health consequences: in addition to nausea/vomiting, it can cause suffocation and heart failure called “sudden sniffing death”
- ▶ Serious long-term consequences include hepatic and renal dysfunction, hearing loss, bone marrow damage, and brain damage
- ▶ Dependence can occur with repeated abuse
- ▶ Early abuse of inhalants may also be a warning sign for later abuse of other drugs. One study found that youth who used inhalants before age 14 were twice as likely to later use opiate drugs

Adolescent drug use: Prescription medications

- ▶ Commonly abused are: opioid analgesics, ADHD medications and benzodiazepines
- ▶ Opioid abuse e.g., Oxycontin®, carries a great risk of addiction and death from OD
- ▶ When pills are crushed and injected or snorted, these medications affect the brain and body very much like heroin, including euphoric effects & respiratory depression
- ▶ Some young people who develop prescription opioid dependence shift to heroin because it may be cheaper to obtain
- ▶ ADHD medications such as Adderall® (contains the stimulant amphetamine) are increasingly popular among young people who take them believing it will improve their school performance

Steroids

- ▶ Adolescents, especially male abuse anabolic-androgenic steroids r to improve their athletic performance and/or improve their appearance by helping build muscles
- ▶ Steroid abuse may lead to serious, even irreversible, health problems including renal and hepatic dysfunction, and cardiovascular diseases. It ↑ risk of CVA & MI even in young people
- ▶ It has the potential to cause dependence. Animal studies indicate that chronic steroid use alters dopamine reward pathways in the brain
- ▶ Withdrawal symptoms such as hormonal changes can produce fatigue, loss of muscle mass and sex drive etc.
- ▶ One of the more dangerous withdrawal symptoms is depression, which has led to suicide in some cases

Steroids

- ▶ Steroid abuse frequently complicated by abuse of other substances taken either as part of a performance-enhancing regimen (such as stimulants) or to help manage pain, sleep or mood-related side effects (such as opioids, cannabis and alcohol)
- ▶ Because of this complicated mix of issues, treatment for steroid abuse necessarily involves addressing all related mental and physical health issues and substance use disorders simultaneously
- ▶ Treatment involves behavioral treatments as well as medications to help normalize the hormonal system and treat any depression or pain issues that may be present. If symptoms are severe or prolonged, hospitalization may be needed

Where are we so far?

- 
- ▶ Why do young people initiate drug use?
 - ▶ What are the main risk factors for adolescents to start using drugs?
 - ▶ What are the consequences of drug use for adolescents?
 - ▶ What are some signs of drug use in adolescents?

Break





Adolescent drug use: Other considerations

Co-morbid psychiatric illness

- ▶ Frequent overlap with other mental health problems. E.g., mood, anxiety, learning or behavioral disorder
- ▶ Diagnosis can be complicated as in adults
Adolescents may begin taking drugs to deal with depression or anxiety, on the other hand, frequent drug use may also cause or precipitate those disorders
- ▶ Effectively treating a substance use disorder requires addressing drug abuse and other mental health problems simultaneously

Do ADHD medications increase risk of SUD?



- ▶ Review of evidence from studies conducted so far have found no differences in later substance use for ADHD-affected children who received treatment versus those that did not
- ▶ This suggests that treatment with ADHD medication does not affect (either negatively or positively) an individual's risk for developing a substance use disorder

What role can medical professionals play?

- ▶ Doctors have an important role to play in screening their adolescent patients for substance use
- ▶ Screening and brief assessment tools administered during annual routine medical checkups can detect drug use before it becomes a serious problem



What role can medical professionals play?

Brief Intervention

- ▶ Adolescents who report using drugs can be given a brief intervention to reduce their drug use and other risky behaviors. Specifically, they should be advised how continued drug use may harm their brains, general health and other areas of their life, including family relationships and education
- ▶ Adolescents reporting no substance use can be praised for staying away from drugs and rescreened during their next physical

What role can medical professionals play?

Referral

- ▶ Adolescents with substance use disorders or those that appear to be developing a substance use disorder may need a referral to substance abuse treatment for more extensive assessment and care. Follow-up
- ▶ For patients in treatment, medical professionals can offer ongoing support of treatment participation and abstinence from drugs during follow-up visits. Adolescent patients who relapse or show signs of continuing to use drugs may need to be referred back to treatment

Assessment: The basic approach

- ▶ Often young people are not very forthcoming with information until you win their trust
- ▶ If the young person is likely to suffer harm, and/or harm others, then strenuous attempts must be made to gain relevant information from any source
- ▶ However, if a crisis does not exist, then it is not justifiable to intervene without the consent of the young person, or to engage in any deceptive practises, which can permanently damage the young person's trust in health professionals

Assessment: The basic approach

- ▶ Must be conducted sensitively
- ▶ Use open-ended questions
- ▶ Take particular note of:
 - which drug(s) (think polydrug use) have been used immediately before their presentation (i.e., responsible for intoxication)
 - quantity and the route of administration (to assess potential harms)
 - past history of drug use (indicators of long-term harm)
 - the “function” drug use serves for them
 - environment in which drug use occurs (e.g., whether safe, supported)

What does the young person want?

- ▶ Determine why the young person is presenting now
- ▶ What does he or she perceive immediate needs to be?
- ▶ Try and meet his or her requests whenever possible as a starting point (even if far short of clinically ideal)
- ▶ Often young people are pre-contemplators in regard to their AOD use

FIRST AID CASE



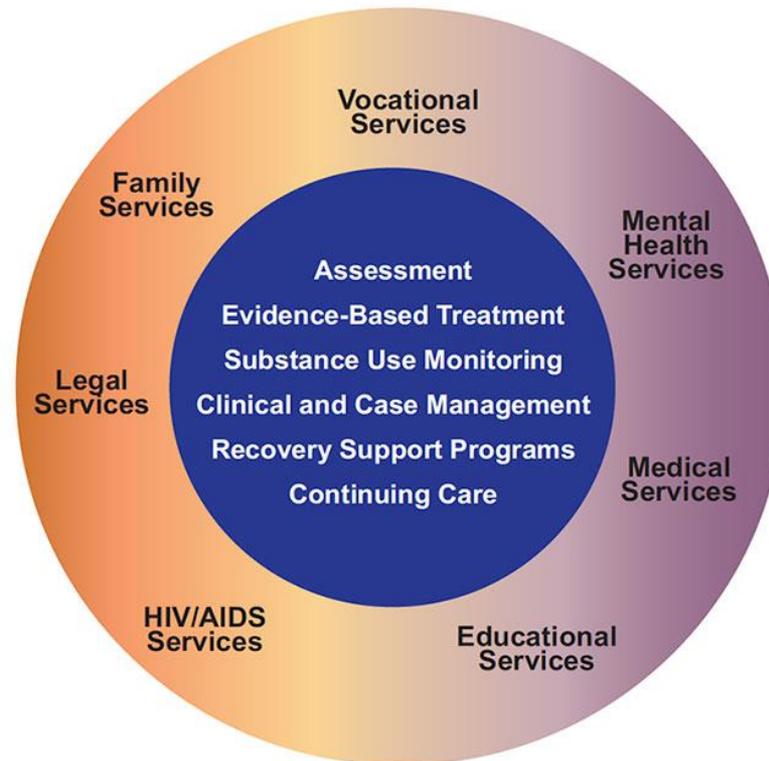
**Adolescent substance
use disorders:
Treatment**

Adolescent drug use: Treatment

- ▶ Only 10 percent of adolescents who need treatment for a substance use disorder actually get treatment
- ▶ Most teens with drug problems don't want or think they need help, and parents are frequently blind to indications their teenage kids may be using drugs or they may dismiss drug use as just a normal part of growing up

Components of comprehensive treatment of SUD

The best treatment programmes provide a combination of therapies and other services to meet the needs of the individual patient.





**Evidence-based
approaches to
treating adolescent
with SUD**

Behavioural approaches

- ▶ Behavioural interventions help adolescents to actively participate in their recovery from drug abuse and addiction and enhance their ability to resist drug use
- ▶ Therapists provide incentives to remain abstinent:
 - modify attitudes and behaviours related to drug abuse
 - assist families in improving their communication and overall interactions
 - increase life skills to handle stressful circumstances and deal with environmental cues that may trigger intense craving for drugs

Behavioural treatments



Behavioural treatments shown to be effective in addressing substance abuse in adolescents are:

- ▶ Adolescent Community Reinforcement Approach (A-CRA)
- ▶ CBT
- ▶ Contingency Management (CM)
- ▶ Motivational Enhancement Therapy (MET)
- ▶ Twelve-Step Facilitation Therapy

Family-based approaches

- ▶ Aim to engage the family, including parents, siblings and sometimes peers, in the adolescent's treatment
- ▶ Involving the family can be particularly important, as the adolescent will often be living with at least one parent and be subject to the parent's controls, rules, and/or support
- ▶ Family-based approaches generally address a wide array of problems in addition to the young person's substance problems, including family communication and conflict; other co-occurring behavioural, mental health and learning disorders; problems with school or work attendance and peer networks

Family-based approaches

- ▶ Research shows that family-based treatments are highly efficacious
- ▶ Some studies suggest they are superior to other individual and group treatment
- ▶ Family-based treatments shown to be effective in treating adolescent substance abuse are:
 - Brief Strategic Family Therapy (BSFT)
 - Family Behaviour Therapy (FBT)
 - Functional Family Therapy (FFT)
 - Multidimensional Family Therapy (MDFT)
 - Multisystemic Therapy (MST)

**Adolescent SUD :
Pharmacological
approaches**



Pharmacology in adolescents with SUD

- ▶ While emphasis is put on psychosocial, pharmacotherapy is an important component for some patients
- ▶ As for adults, medication can be used for stabilisation, detoxification, relapse prevention and preventing complications
- ▶ However, in younger people pharmacotherapy for relapse prevention is less commonly used

Role of medications in treatment of SUD in adolescents

- ▶ Several medications are approved to treat addiction to opioids, alcohol, and nicotine in individuals 18 and older
- ▶ In most cases, little research has been conducted to evaluate the safety and efficacy of these medications
- ▶ However, some health care providers do use these medications “off-label,” especially in older adolescents



Pharmacology: Limitations

- ▶ A complicating factor is that pharmacotherapy is not generally licensed for use in 'younger' people, with age limits varying
- ▶ For example, in the UK, Acamprosate is licensed for over 18-year-olds, methadone is not licensed for children under age of 13, and buprenorphine is licensed for those aged 16 and over
- ▶ Doses of medication may need to be adjusted from those for adults, given the difference in pharmacokinetics and pharmacodynamics between adults and younger people
- ▶ Generally, guidance is that pharmacotherapy should only be used after careful assessment of risks and benefits, and in the context of a comprehensive treatment plan embracing various psychosocial approaches

Pharmacology: Alcohol dependence

- ▶ In the absence of any studies to inform guidance, approaches used in adults are an appropriate benchmark, although possibly with a lower threshold of admitting to hospital
- ▶ Chlordiazepoxide has been recommended, with need to consider what dose is appropriate



Opioid use disorders

- ▶ Buprenorphine: sometimes prescribed to older adolescents on the basis of 2 studies indicating its efficacy for this population
- ▶ Methadone: Used in some states of the USA, in selected cases, from 16 to 18 years, provided they have two documented failed treatments of opioid detoxification/drug-free treatment and have a written consent for methadone signed by a parent or legal guardian

Opioid use disorders: Buprenorphine

- ▶ An RCT compared buprenorphine with clonidine in detoxification of 36 opioid-dependent adolescents (13–18 years old)
- ▶ Buprenorphine improved retention in treatment for 1 month compared with clonidine (72% vs. 39%), provided more opiate-free urines (64% vs. 32%), and more started naltrexone afterwards (61% vs. 5%)

Recommendation for treating young people

British Association of Psychopharmacology

- ▶ There is limited evidence on which to base recommendations to guide specific pharmacological approaches
- ▶ However, it is important that pharmacotherapy is considered, particularly in alcohol, opioid or nicotine dependence, and ideally by a specialist multidisciplinary service
- ▶ Pharmacological treatment should follow the evidence base for the general adult population with appropriate dose adjustments for age-related pharmacokinetic and pharmacodynamic changes

Recommendation for treating young people

British Association of Psychopharmacology

- ▶ Younger people with harmful substance use, abuse or dependence should have full routine health screens with identification and treatment of psychiatric or physical health problems
- ▶ There should be a lower threshold for admission for inpatient assessment and treatment, for example for assisted alcohol withdrawal, opioid stabilisation in younger people

Minimising the negative consequences

Approaches aimed to minimise the negative consequences of substance use and to provide support have greater effect. Discuss:

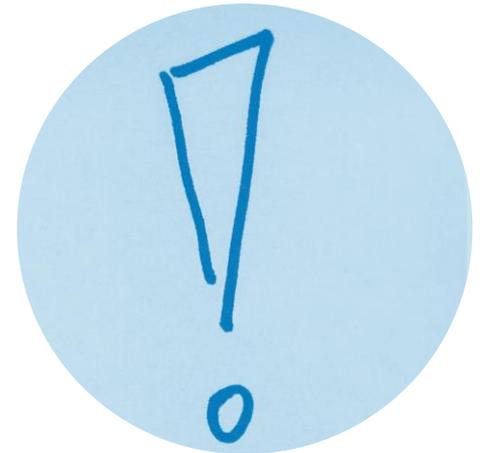
- ▶ Keeping safe when intoxicated
- ▶ First-aid knowledge, hydration
- ▶ Being aware of potential drug interactions
- ▶ Safe drug-using practices
- ▶ Using in safe places, with known and trusted people
- ▶ Planning drug use and activities while intoxicated
- ▶ Monitoring consumption and thinking about unwanted consequences of use

Role of recovery support services in treatment of SUD in adolescents

- ▶ Adolescents may benefit from participation in self/mutual-help groups e.g., 12-step programs – reinforce abstinence
- ▶ Peer recovery support services and recovery high schools provide a community setting where fellow recovering adolescents can share their experiences and support each other in living a drug-free life

Role of recovery support services in treatment of SUD in adolescents

- ▶ Recovery support services are not a substitute for treatment of SUD
- ▶ There is also sometimes a risk in support-group settings that conversation among adolescents can turn to talk extolling drug use



Parental involvement

- ▶ Parental involvement can be extremely important to success of treatment with adolescents and is generally a desired part of treatment
- ▶ However, It is inappropriate for parents to dictate the terms of treatment. Remember: the young person, not the parent, is the patient!
- ▶ Respect and acknowledge the parent's concerns about the child's drug use, but insure treatment is designed to meet the needs of the youth

Parental involvement

- ▶ Reassure parents/caregivers that a harm minimisation approach is effective
 - reducing the risks is the priority until the young person decides he or she wishes to moderate substance use
- ▶ Reduce the parents' sense of guilt
 - seldom are parents responsible for their child's drug use
 - drug use is far from unusual in young people
- ▶ Offer information, support, counselling and referral

Let's think!



Case study

- ▶ What may be Sue's main concerns?
- ▶ What are your main concerns?
- ▶ What would you advise?

Your patient, Sue, confides in you about her 14-year-old son: "I was putting Jason's clothes away in his drawer a few days ago, and I found a bong." She asks you, "How concerned should I be? What do I say to him?"



**Do girls and boys
have different
treatment needs?**

Do girls and boys have different treatment needs?

- ▶ Adolescent girls and boys may have different developmental and social issues that may call for different treatment strategies or emphases
- ▶ Girls with substance use disorders may be more likely to also have mood disorders such as depression or to have experienced physical or sexual abuse
- ▶ Boys with substance use disorders are more likely to also have conduct, behavioral and learning problems, which may be very disruptive to their school, family or community

Do girls and boys have different treatment needs?

Treatments should take into account:

- ▶ The higher rate of internalizing and traumatic stress disorders among adolescent girls
- ▶ The higher rate of externalizing disruptive disorders and juvenile justice problems among adolescent boys
- ▶ Other gender differences that may play into adolescent substance use disorders



Unique treatment needs of adolescents

What are the unique treatment needs of adolescents from different racial / ethnic backgrounds?

- ▶ Consider the unique social and environmental characteristics that may influence drug abuse and treatment for racial/ethnic minority adolescents, such as stigma, discrimination and sparse community resources
- ▶ Issues of culture of origin, language and acculturation are important considerations for treatment



Questions

Wrap-up



- ▶ How does alcohol and drug use impact young people?
- ▶ Who is at bigger risk of using drugs among adolescents?
- ▶ What behavioural treatments have shown to be effective in addressing substance abuse in adolescents?
- ▶ To what extent should parents be involved in treatment process of adolescents?

Post-assessment



What is your “take-away”?

- 
- ▶ What was the most meaningful to you in this training?
 - ▶ What will you take away with you?
 - ▶ What did you enjoy the most?
 - ▶ How will you use this information?
 - ▶ What skill(s) do you think you will begin to practice in your work?
 - ▶ What would you like to share in closing?

Thank you for your time!

End of module 3

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