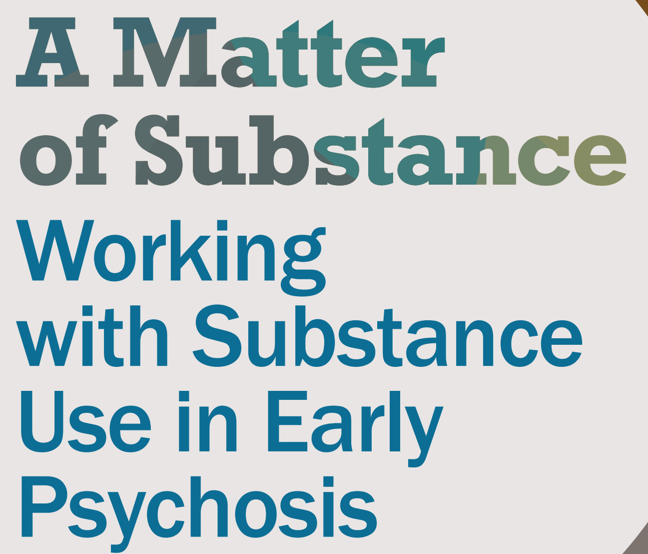
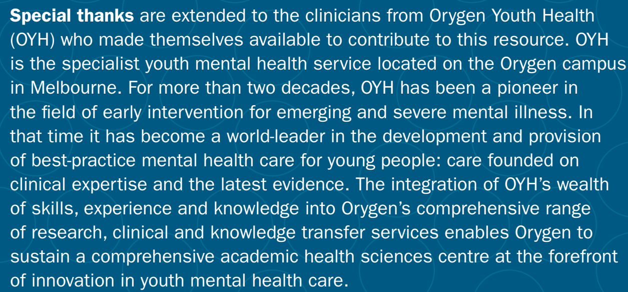


Orygen
The National Centre of Excellence in Youth Mental Health

EPPIC
Early Psychosis Prevention and Intervention Centre



Special thanks are extended to the clinicians from Orygen Youth Health (OYH) who made themselves available to contribute to this resource. OYH is the specialist youth mental health service located on the Orygen campus in Melbourne. For more than two decades, OYH has been a pioneer in the field of early intervention for emerging and severe mental illness. In that time it has become a world-leader in the development and provision of best-practice mental health care for young people: care founded on clinical expertise and the latest evidence. The integration of OYH's wealth of skills, experience and knowledge into Orygen's comprehensive range of research, clinical and knowledge transfer services enables Orygen to sustain a comprehensive academic health sciences centre at the forefront of innovation in youth mental health care.

The EPPIC National Support Program of Orygen, The National Centre of Excellence in Youth Mental Health has produced this document as part of its work to support the implementation of the EPPIC model within headspace, the National Youth Mental Health Foundation, in Australia.

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

This publication is copyright. Apart from use permitted under the Copyright Act 1968 and subsequent amendments, no part may be reproduced, stored or transmitted by any means without prior written permission of Orygen.

ISBN 978-1-920718-55-8

Suggested citation

Hughes A, Simpson R, Crlenjak C, Hetrick S, Nicoll M, Elkins K, Cementon E and Leceister S. *A matter of substance: working with substance use in early psychosis.* Orygen, The National Centre of Excellence in Youth Mental Health, 2015.

Acknowledgements

This manual was written by Ally Hughes, Raelene Simpson, Caroline Crlenjak, Sarah Hetrick, Mandie Nicoll, Kathryn Elkins, Enrico Cementon and Steven Leicester with contributions from Mark Hinton. Rosemary Purcell reviewed the content and provided guidance on drafts of this manual. The authors would also like to thank the PLATFORM team for their invaluable contribution to this manual.

Disclaimer

This information is provided for general education and information purposes only. It is current as at the date of publication and is intended to be relevant for Victoria, Australia and may not be applicable in other jurisdictions. Any diagnosis and/or treatment decisions in respect of an individual patient should be made based on your professional investigations and opinions in the context of the clinical circumstances of the patient. To the extent permitted by law, Orygen will not be liable for any loss or damage arising from your use of or reliance on this information. You rely on your own professional skill and judgement in conducting your own health care practice. Orygen, does not endorse or recommend any products, treatments or services referred to in this information.

Orygen, The National Centre of Excellence in Youth Mental Health

Locked Bag 10
Parkville Vic 3052
Australia

www.orygen.org.au

A Matter of Substance

Working with Substance Use in Early Psychosis

Introduction 6

About this manual 7

How to use this manual 8

Substance use and early psychosis 9

Substance use and substance use disorder 10

How do we define substance use disorders? 10

Harmful use and substance dependence 10

Substance use disorders and substance-induced disorders 10

Why is it important to address substance use in early psychosis? 13

Substance use and substance use disorder is common 13

Substance use impacts outcomes 14

Substance use and psychosis onset 15

The impact of substance use on symptoms of psychosis 15

The impact of substance use on social and other functioning 15

The impact of substance use on physical health 16

Why do young people with early psychosis use substances? 16

Models for working with young people with co-occurring psychosis and substance use 17

Stages of change 17

Pre-contemplation 18

Contemplation 18

Preparation 18

Action 19

Maintenance 19

Relapse 19

Harm reduction 20

Principles of harm reduction 20

Assessment of substance use in early psychosis 21

Overview 22

Assessing substance use in early psychosis 22

Aims of assessing substance use 22

When do we assess substance use? 23

How do we assess substance use? 24

Initial assessment and engagement 24

Screening, interview and self-reporting measures 24

Recording substance use 25

What do we assess? 26

Current and historical use of substance 26

Impact of use on psychological and physical health, functioning and risk 28

Formulation, goal-setting and treatment planning 31

Reasons for use 31

Readiness for change 32

Treatment planning 34

Interventions for early psychosis and substance use 35

Introduction 36

Evidence for efficacy 36

Interventions aimed at substance use 36

Interventions aimed at co-occurring psychosis and substance use 36

Harm reduction strategies 37

Specific strategies by substance and method of use 40

Cannabis 40

Alcohol 40

Amphetamines and methamphetamines 40

Heroin and other opioids 41

Benzodiazepines 41

Ecstasy/MDMA 41

Tobacco 42

Inhalants 42

Hallucinogens 43

Synthetic cannabis and other synthetic substances 43

Psychoeducation 45

Substance use and mental health recovery 45

Substance use and relapse 45

Substance use and interactions with medication 46

Substance use, physiological effects and physical health 46

Substance use and social and occupational functioning 47

Motivational interviewing (MI) 48

What is MI? 48

The ‘spirit’ of MI 48

Partnership 49

Acceptance 49

Compassion 49

Evocation 49

The process of MI 49

Engaging 49

Focusing 49

Evoking 49

Planning 49

Core interviewing skills (OARS) 50

Open questions 50

Affirm 50

Reflective listening 50

Summarising 51

MI strategies 51

Eliciting change talk 51

Decisional balance 52

Exploring importance and confidence 54

Developing a change plan 55

Cognitive–behavioural interventions 56

Why use cognitive–behavioural interventions to address substance use? 56

Understanding substance use from a cognitive–behavioural perspective 56

Cognitive–behavioural formulation for substance use and psychosis 56

Self-monitoring 59

Behavioural interventions for working with substance use and psychosis 59

Behavioural activation 59

Behavioural experiments 62

Stress management and coping 63

Understanding the relationship between substance use and anxiety symptoms 63

Normalising the physical and psychological impacts of anxiety 64

Relaxation and distress tolerance strategies 64

Cognitive interventions 64

New cognitive–behavioural and specialised interventions 65

Medical and case management interventions for substance intoxication and withdrawal 66

Managing acute intoxication 66

Managing withdrawal symptoms from substances 69

General strategies for managing withdrawal 71

Medical strategies for managing substance withdrawal 71

Opioid withdrawal 71

Alcohol withdrawal 71

Amphetamine withdrawal 72

Cannabis withdrawal 72

Benzodiazepine withdrawal 72

Nicotine withdrawal 72

Medical management of substance use in early psychosis 72

Prescribing principles in early psychosis and substance use 72

Maintenance pharmacotherapies 73

Interactions of substances with prescription medication 73

Tobacco 73

Alcohol 74

Cannabis 74

Opioids 74

Benzodiazepines 74

Amphetamines and methamphetamines 74

Inhalants 74

Relapse planning and prevention 75

Discussing substance use 'relapse' 75

What is a relapse 75

What is the relationship between a relapse and psychosis? 75

Develop a relapse plan or substance use management plan 75

Key considerations of working with substance use in early psychosis 78

Introduction 79

Engagement and the role of the clinician 80

Engaging young people in working around substance use 80

Clinician skill 81

Clinician attitudes towards substance use 81

Impact of psychosis and other co-occurring issues 82

Psychotic symptoms 82

Trauma 82

Individualised treatment 83

Explanatory models and expectations of the young person 83

Substance-induced psychosis 83

Working with families 84

Confidentiality and substance use 84

Input from specialised services 86

Shared care with alcohol and other drug services 86

Integrated specialised support 86

Service-level considerations 87

Resources 88

Resource 1. Physical effects of substance use 89

Resource 2. Substance use record 91

Resource 3. Timeline 92

Resource 4. The readiness to chnage steps 93

Resource 5. Harm reduction worksheet 94

Resource 6. Harm reduction plan 95

Resource 7. Decisional balance worksheet 96

Resource 8. The ingredients of change 97

Resource 9. Thought record 98

Resource 10 List of enjoyable activities 99

Resource 11. Substance use management plan – template 100

References 101

Introduction

Co-occurring substance use and mental health disorders are common, and are associated with significantly poorer outcomes compared to a single mental health disorder.

Substance use increases the overall morbidity and mortality of individuals with early psychosis, and therefore, managing substance use in young people with early psychosis is a critical aspect of treatment. The co-occurring conditions of substance use and mental health disorders are associated with numerous negative outcomes in treatment that should be acknowledged, such as increased rates of relapse and hospital readmissions, poor adherence to treatment, suicide, homelessness, legal issues, violence, increased risk of HIV and hepatitis B/C infection, and family stress.

Managing substance use and early psychosis requires a long-term perspective from both clinicians and services, and should be based on the needs of the young person and their family. The optimal treatment of young people with co-occurring substance use and early psychosis requires an integrated treatment program that combines psychosocial and pharmacological interventions delivered by a multidisciplinary team.

Young people with co-occurring substance use and early psychosis should have the opportunity to make informed decisions about their treatment in partnership with their treating team, case manager and doctor. Managing co-occurring substance use and early psychosis is an important part of recovery and should be incorporated into a comprehensive treatment and care plan for the young person.

About this manual

A matter of substance: working with substance use in early psychosis is aimed at mental health professionals working with young people with early psychosis. This manual is relevant for all clinicians working within early psychosis services. The content of this manual has been derived from international evidence and more than 20 years' experience of implementing and delivering early intervention to young people and their families with early psychosis at Orygen Youth Health Clinical Program.

This manual has been developed as part of an overall training program delivered by the EPPIC National Support Program (ENSP) that also includes face-to-face training and online learning modules. ENSP is assisting with the implementation of the Early Psychosis Prevention and Intervention Centre (EPPIC) Model in early psychosis services. The EPPIC Model has been developed from many years' experience at Orygen Youth Health Clinical Program and has been further informed by the Early Psychosis Feasibility Study Report written and published by the National Advisory Council on Mental Health in 2011, which sought international consensus from early psychosis experts from around the world. It is based on current research evidence, the experience of other early psychosis programs internationally and shaped by real world considerations. The EPPIC Model aims to provide early detection and developmentally appropriate, effective, evidence-based care for young people (aged 12–25 years) at risk of, or experiencing, a first episode of psychosis.

There are a number of core values and principles of practice that inform the EPPIC Model of care. Ideally, an early psychosis service should incorporate:

- easily accessible expert care
- a holistic, biopsychosocial approach to clinical interventions
- a comprehensive and integrated service approach
- evidence-based clinical practice that promotes recovery
- the presence of youth-friendly culture throughout the service (reflected in staff behaviour and attitudes and decor)
- a spirit of hope and optimism that is pervasive throughout service
- a family-friendly ethos contained in all aspects of service
- a service culture and skills that facilitate culturally sensitive care to all patients and families
- a high level of partnerships with local service providers.

Using partnerships with other organisations to help provide care to young people and their families is one of the 16 core components of the EPPIC Model. Developing and maintaining long-term partnerships with specialised alcohol and drug services can enhance the quality of treatment and care provided to young people and their families. For more information, please see the *EPPIC Model and Service Implementation* guide.

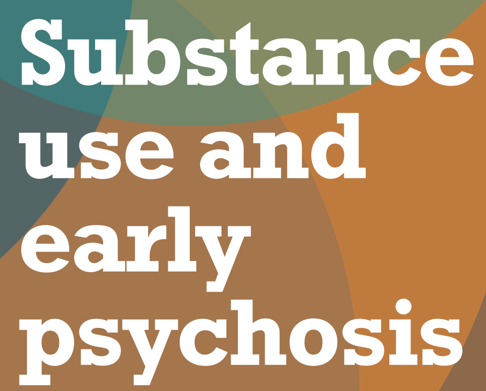
How to use this manual

This manual has four parts. Section 1, 'Substance use and early psychosis' introduces co-occurring substance use and early psychosis and outlines the importance of addressing substance use in this population. Section 2, 'Assessment of substance use in early psychosis', and Section 3, 'Interventions for substance use in early psychosis' focuses on clinical strategies for working with young people. Section 4, 'Key considerations of working with substance use in early psychosis' highlights the important issues when working with young people with co-occurring substance use and early psychosis.

The majority of published literature in early psychosis and substance use has focused on cannabis, including its effects on illness onset, symptoms and functioning, and how to help individuals reduce their use of this substance. Therefore, while this manual considers all substance use broadly, most of the content pertains to cannabis. Where the evidence or clinical literature does exist for specific substances, these are referred to in the manual.

Clinical case scenarios are used throughout this manual to demonstrate what to do in a real-life clinical setting with a young person with co-occurring substance use and early psychosis. It is recommended that clinicians read this manual in conjunction with the ENSP manuals *A shared understanding: psychoeducation in early psychosis* and *Psychological interventions: why, how and when to use in early psychosis*.

Substance use and early psychosis



Substance use and substance use disorder

Substance use refers to the use of licit or illicit substances such as tobacco, cannabis, stimulants, hallucinogens, opioids and other drugs. Problematic substance use is the pattern of using alcohol or other psychoactive drugs that results in clinically significant impairment or has a clear negative impact on the individual and their families. For the purposes of this manual, substance use will be used more broadly and will reflect both definitions.

How do we define substance use disorders?

Harmful use and substance dependence

The tenth revision of the *International Classification of Diseases* (ICD-10) describes two distinct categories for substance use disorders: harmful use and substance dependence. Harmful use is the pattern of using a substance (or substances) that causes damage to health. The criteria for harmful use includes:[1]

- the substance use was clearly responsible for physical or psychological harm (including impaired judgment or dysfunctional behaviour)
- the nature of the harm can be clearly identified
- the pattern of use should persist for at least 1 month.

Substance dependence syndrome is defined as 'a cluster of physiological, behavioural and cognitive phenomena where the use of a substance (or many substances) becomes a higher priority than other behaviours'. The main characteristic of dependence syndrome is the strong, sometimes overpowering, desire to use alcohol, tobacco or psychoactive drugs. An individual is considered to have dependence syndrome if they have three or more symptoms occurring at some time within the previous 12 months (see Box 1).

BOX 1: **ICD-10 CRITERIA FOR SUBSTANCE DEPENDENCE SYNDROME**

- Strong desire to use the substance
- Impaired capacity to control behaviour around substance use that includes onset, termination and level of use
- A physiological withdrawal state when substance use is reduced or stopped
- Tolerance to the effects of the substance has been developed that results in increased amounts of the substance to achieve intoxication
- Preoccupation with the substance
- Persistent use despite clear evidence of harmful consequences

Substance use disorders and substance-induced disorders

Previously, the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) described two distinct substance use disorders: substance abuse and substance dependence with criteria for each of these disorders.[2] However the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorder* (DSM-5) groups the two DSM-IV

disorders into a single disorder called substance use disorder that is classified as mild, moderate or severe depending on the level of severity met by an individual. These are further categorised as the following:[3]

- mild substance use disorder is the presence of 2–3 symptoms
- moderate substance use is the presence of 4–5 symptoms
- severe substance use disorder is the presence of 6 or more symptoms.

An individual is considered to have substance use disorder if they have two of the 11 criteria within the same 12-month period.[4] For more information please see the DSM-5,[4] and Box 2 below.

Substance use disorders

A substance use disorder can be diagnosed according to the 10 classes of substances listed within the DSM, with the exception of caffeine.[4] For some substances, certain symptoms are less important or are not applicable. The criteria for substance use disorders can be clustered into four categories of impaired control, social impairment, risky use and pharmacological criteria (see Box 2).

BOX 2: **DSM-5 GENERAL CRITERIA FOR SUBSTANCE USE DISORDERS**[4]

Impaired control

- Using substances in larger amounts or over longer periods of time than originally intended.
- A persistent desire to cut down or regulate substance use and/or multiple unsuccessful efforts to decrease or discontinue use.
- Significant time spent obtaining the substance, using the substance, or recovering from its effects.
- Craving manifested by an intense desire or urge for the substance that may occur at any time but is more likely when in an environment where the substance previously was obtained or used.

Social impairment

- Failure to fulfil major role obligations at work, school, or home as a result of recurrent substance use.
- Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.
- Important social, occupational, or recreational activities may be given up or reduced because of substance use.

Risky use

- Recurrent substance use in situations in which it is physically hazardous.
- Continued substance use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

Pharmacological criteria

- Tolerance to the substance, indicated by requiring a markedly increased dose of the substance to achieve the desired effect or a markedly reduced effect when the usual dose is consumed.
- Withdrawal occurring when blood and tissue concentrations of a substance decline following sustained heavy use. Symptoms of withdrawal are very different across the classes of substances. Distinct criteria sets for withdrawal are outlined for each drug class within the DSM-5.[4]

Substance-induced disorders

Substance-induced mental disorders are described within the DSM-5 as 'potentially severe, usually temporary, but sometimes persisting central nervous system (CNS) syndromes that develop in the context of the effects of substances of abuse, medications, or several toxins'.[4] Substance-induced disorders include:

- substance intoxication
- substance withdrawal
- substance-induced mental disorders.

The criteria for substance intoxication and withdrawal vary broadly and depend on the substance used. Clinicians should be familiar with a range of common substances and refer to the substance-specific sections within the DSM-5.[4]

The general features of substance intoxication, withdrawal and substance-induced mental disorders are presented in Box 3.

The diagnosis and management implications of substance-induced psychosis in early psychosis services is further described in 'Key considerations of working with substance use in early psychosis' on page 79.

The National Alliance on Mental Illness in the US commented on the DSM-5's new definition of substance use disorder and stated 'that while the new definition highlights the importance of persistent use and the functional impact of substances, it does, however, fail to consider the important implications of alcohol and drug use in individuals with mental health disorders'.[5] For example, a young person without a mental health disorder may use substances 2–3 times a week or recreationally over the weekend where their use does not have a negative impact on functioning (at home, school or work) and this young person will not meet the threshold for the new definition of substance use disorder. Nonetheless, the same level of use for a young person with a mental

BOX 3: **DSM-5 GENERAL CRITERIA FOR SUBSTANCE INTOXICATION, WITHDRAWAL AND SUBSTANCE-INDUCED MENTAL DISORDERS**

General features of intoxication include:

- Onset of a reversible substance-specific condition in response to the recent substance use.
- Clinically significant problematic behavioural or psychological changes associated with intoxication (e.g. impaired judgement) that develop during or shortly after using a substance. These changes are due to the physiological effects of the substance on the CNS.
- Intoxication symptoms are not attributable to another medical condition or better explained by another mental disorder.

General features of withdrawal include:

- Onset of substance-specific and problematic behavioural changes that are both physiological and cognitive. These changes are due to the cessation of, or reduction in, a substance following heavy or prolonged use.
- Clinically significant distress or impairment in either: social, occupational or other important areas of functioning related to the substance-specific condition.
- Withdrawal symptoms are not attributable to another medical condition or better explained by another mental disorder.

General features of substance-induced mental disorders include:

- Presentation of symptoms consistent with a relevant mental disorder (e.g. depression, anxiety, psychosis) which cause clinically significant distress or functional impairment.
- Symptoms of the disorder developed during or within a month of substance intoxication, withdrawal or use of a medication that is capable of producing the mental disorder.
- Symptoms are not better explained by an independent mental disorder or occur exclusively during the course of a delirium. This may be determined by considering the duration of symptoms (e.g. persisting greater than 1 month) after the cessation of intoxication, withdrawal or use of medication.

health disorder can exacerbate symptoms and have a negative impact on long-term recovery, and therefore should be addressed by clinicians and services providing treatment and care to this young person. Substance use affects individuals in a variety of ways and clinicians should pay close attention to any substance use in young people with mental health disorders.

Several terms have been used to describe individuals who have co-occurring mental illness and substance use disorder such as 'dual diagnosis', 'dual disorders' and 'comorbidities'. For the purposes of this manual, the term co-occurring condition when referring to early psychosis and substance use disorder will be used.

Why is it important to address substance use in early psychosis?

Substance use and substance use disorder is common

The use of substances is common among young people in the general population (see Table 1),[6] and substance misuse is prevalent, being reported in over 50% of people with severe mental illness.[7-9]

Almost half of people with schizophrenia have been reported to have a substance use disorder.[10] For young people identified as being at ultra high risk (UHR) of developing psychosis, that figure ranges from 10 to 33% for the most common diagnosis of cannabis abuse or dependence.[11] For young people with first-episode psychosis (FEP), that figure ranges from 42% (cannabis misuse)[12] to 50% (cannabis use or dependence).[13]

Therefore it is likely that clinicians will be providing treatment in response to substance use to many of the young people they see in an early psychosis service.

The rates of substance use within the general Australian population compared to rates of substance use in young people with early psychosis are presented in Table 1. These rates include both UHR and FEP population groups.

Tobacco is the most commonly misused substance by young people (daily use = 13.4%), with higher rates reported in young people with early psychosis (daily use = 72% in FEP and up to 34.4% in UHR population, see Table 1). A meta-analysis conducted by Myles et al. reported that the rate of tobacco use is 6 times higher in young people with FEP than the general population (OR=6.04, 95% CI: 3.03–12.02; p<0.01).[14] It was also reported that regular tobacco use in this population begins 5 years before the onset of psychosis and remains constant over time.[14]

Alcohol use is a substantial concern for young people with early psychosis. While cannabis use in young people presenting with FEP is also prevalent, with rates up to 70% of all young people in one study using within 12 months prior to initial presentation.[15]

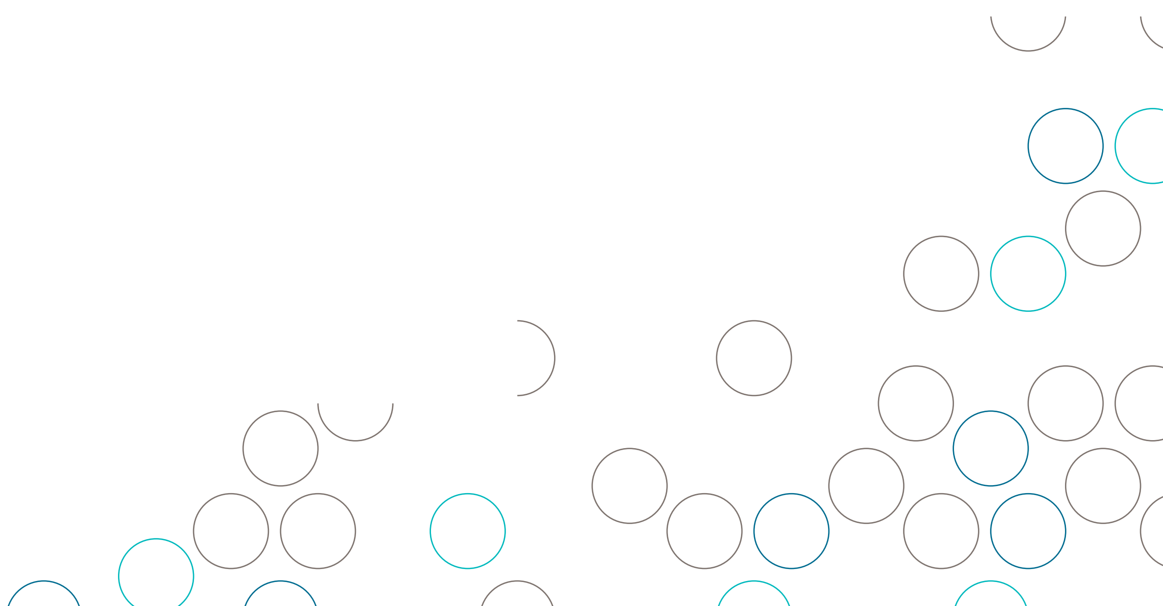


TABLE 1. **SUBSTANCE USE IN THE AUSTRALIAN GENERAL POPULATION, FEP AND UHR GROUPS**

SUBSTANCE	USE IN GENERAL YOUTH POPULATION[16]	USE IN YOUNG PEOPLE WITH FEP	USE IN YOUNG PEOPLE IDENTIFIED AS UHR
Tobacco	Daily use 13.4% in 18–24 years	Daily use ‖76.7%[12]	**16.7–34.4%[11]
Alcohol	Daily use ǂ1.1% in 18–24 years	Daily use §4%[15]	**17%–44%[11]
Cannabis	14.8% in 14–19 years *20.8% in 20–29 years	Regular use §73.8% in 15–25 years[15]	**33–54%[11]
Amphetamines	*2% in 14–19 years *5.7% in 20–29 years	§9.2%[15] 34%[17]	**3–7%[11]
Hallucinogens	*4.4 in 20–29 years	§6.2%[15]	**7–19%[11]
Ecstasy	*3.0% in 14–19 years *8.6% in 20–29 years	§9.2%[15]	†3%[18]
Any illicit drugs (including cannabis)	*17.6% in 14–19 years *27.3% in 20–29 years	§3.8%[15]	
Misuse of pharmaceutical drugs	*4.0% in 14–19 years *5.8% in 20–29 years		

*recent use refers to use in the previous 12 months; †lifetime use;
ǂrelative standard error of 25–50%, estimate to be used with caution; § n=130 young people with FEP;
‖ n=126 young people with FEP; ** meta-analysis data

Often young people will use a number of substances, which is referred to as polysubstance use. The published literature refers to polysubstance use in two ways: concurrent polysubstance use or simultaneous polysubstance use. Simultaneous polysubstance use is where individuals ‘combine two or more substances on the same occasion’ while concurrent polysubstance use is where ‘a minimum of two substances are used within the same time period, that is, during a 4-week period.[19] The reported rates of polysubstance use in young people with FEP reported in studies range from 44.1%[12] to 80.6%.[15,20]

Cannabis is most commonly used with alcohol and tobacco in terms of polysubstance use but can also be used with other illicit drugs, often as a way of ‘coming down’ off ecstasy,[21] heroin and/or cocaine. Polysubstance use is almost normative, with one study finding that 75% of young people using cannabis also used other substances.[20]

It is important to assess and try to address polysubstance use, as it has been associated with functional issues in the general population,[22] including failing to compete schooling.[23] In young people with FEP, polysubstance use is a strong predictor of suicidality making it an important clinical concern for this population.[24]

Substance use impacts outcomes

Substance use is a significant modifiable risk factor for a number of negative outcomes in young people with early psychosis, including the onset of an episode of psychosis, the severity and persistence of psychotic symptoms, the development of

additional psychiatric symptoms (e.g. depression or anxiety, disengagement from treatment, relapse, reduced social and occupational functioning[8,25] and physical health problems.

Substance use and psychosis onset

The use of substances early in life has been shown to increase the chance of developing a mental health problem.[26] However, the argument for a direct causal relationship between substance use and the onset of psychotic disorders remains a controversial, and as yet unresolved issue.

Studies investigating the relationship between cannabis use and onset of psychotic disorders have demonstrated that early initiation of cannabis use may increase the risk of developing an episode of psychosis, particularly in those people with a pre-existing genetic vulnerability and who have a greater severity of use.[27,28]

Bramness et al drew similar conclusions in their review of the relationship between amphetamine use and the onset of psychosis.[29] The authors argued that the stress–vulnerability model offers the best explanation for this relationship. As such, people with greater vulnerability to psychosis (e.g. those identified as UHR) may experience a trigger of psychotic symptoms and disorder after using amphetamines at lower doses or at lower chronicity than those with less vulnerability. The authors also suggest that regular amphetamine use may increase vulnerability to psychosis in those not previously identified as being at high risk. They also argued that young people who have an amphetamine-induced psychosis should be monitored closely and offered the same comprehensive treatment as those diagnosed with a primary psychosis.

Among those young people who do develop a psychotic disorder, cannabis use is associated with an earlier age of onset, with the average age of onset for cannabis users 2.7 years younger than that of non-users.[14,30] For those with broadly defined substance use, it is 2 years younger, and alcohol use alone is not related to earlier onset of psychotic illness.[31] There is also emerging evidence to suggest that daily cannabis use appears to increase the risk of early onset.[32,33]

The impact of substance use on symptoms of psychosis

For young people who have experienced a first episode of psychosis, substance use may affect the experience of psychosis, including increasing the severity and hindering the remission of symptoms.

Young people with psychosis who use substances have more severe positive symptoms than those who have never used substances,[34-37] and this effect is dose-dependent.[38] Substance use is also associated with increased levels of co-occurring depression and anxiety.[39]

Research shows that young people who continue to use cannabis after the onset of an episode of psychosis are less likely to engage in treatment, may have longer and more frequent hospital readmissions, are more likely to relapse and are likely to have poorer long-term outcomes.[27,40-43] People with co-occurring substance use and early psychosis are also at increased risk of suicide.[25]

The impact of substance use on social and other functioning

A return to normal social, vocational and interpersonal functioning is as important to a young person's recovery (from an episode of psychosis) as the remission of symptoms. Substance use can pose a significant barrier to functional recovery.

Substance use in the general population has been shown to negatively affect social functioning.[44] Among young people, cannabis use, particularly frequent use, is associated with increased risk of crime, illicit drug use, depression and suicidal behaviours.[45]

For young people with early psychosis, using cannabis leads to poorer functional outcomes, including social functioning, while reducing cannabis use has been shown to improve general functioning.[35,38,46] Using cannabis prior to onset of an episode of psychosis may also negatively affect a young person's academic functioning.[47]

Additionally, there may be significant impacts on financial functioning, given the cost of substance use, and substance use in psychosis is associated with violence, homelessness and victimisation.[25]

Overall this means that young people with co-occurring substance use issues may take longer to regain full functioning, and the usual 'tasks' of this developmental stage – such as developing friendships and intimate relationships, healthy

separating from parents, achieving educational and vocational goals, exploring identity and developing moral standards, values and beliefs, negotiating demands of increasingly mature roles and responsibilities, developing new skills in problem-solving, decision-making and planning – may be interrupted.

The impact of substance use on physical health

General health outcomes for young people with early psychosis are gaining increasing attention. For example, many early psychosis services aim to provide targeted lifestyle interventions that reduce or prevent physical health issues such as metabolic syndrome or type II diabetes as part of their overall treatment program.[48] There is a long-documented relationship between severe mental illness and increased disability and mortality as a consequence of physical health conditions such as cardiovascular disease, respiratory disease and cancer.[49] As in the general population, substance use is likely to play a role in the development of physical illnesses for young people with psychosis. This relationship may be exacerbated by higher rates of alcohol, cigarette and cannabis use in this population that have well documented risks related to physical health. In addition to respiratory and cardiovascular complications, substance use may also compromise attention and memory, and increase the risk of accidental injury.[50,51]

There are many specific physiological effects associated with substance use and this can depend on a number of factors, including:

- type or class of substance used
- method of drug use
- amount, purity and strength of the substance
- personal factors such as gender, age, ethnicity, weight and health
- tolerance (i.e. is the person used to taking the substance?)
- polysubstance use.

For detailed information about the physical effects of specific substances please refer to Resource 1.

It is important to remember that young people may be less motivated to reduce their substance use as they may regard some of these physical health risks as unlikely due to their long-term nature (e.g. over the next 10 years); therefore, clinicians will need to provide appropriate ongoing psychoeducation about the impact of substance use on the young person's health, while avoiding 'lecturing' or trying to alarm young people (see 'Psychoeducation' on page 45).

Why do young people with early psychosis use substances?

When working with young people around their substance use, it is vital that clinicians have a good understanding of why they use. The reasons for initial use may be different to the reasons for continued use. It's important to note however, that research has shown that young people with early psychosis begin using and continue to use substances largely for the same reasons as young people without early psychosis.[52-54]

These reasons include:[54-56]

- to facilitate social connections with peers
- to increase comfort in social situations and reduce social anxiety
- to relieve boredom
- to get 'high' or intoxicated
- to gain other perceived beneficial effects of using a substance, such as altering perceptions, enhancing mood, feeling more creative or experiencing increased confidence.

Some studies have investigated the self-medication hypothesis,[57,58] which suggests that individuals use substances in order to control or reduce symptoms of psychosis. In adults with chronic psychosis there has been some support for this theory.[59] In their review, Gregg et al reported that there was considerable variability in the reasons for use reported by individuals with psychosis, with between 0 and 42% of individuals reporting that they used drugs or alcohol to cope with symptoms of psychosis (e.g. hallucinations or paranoia) and between 0 and 48% reporting that they used substances to reduce or cope with medication side effects (e.g. to feel more energetic).[56]

Although this may be one reason for continued use, individuals have commonly tried or used substances prior to the onset of their psychosis[60] and also report the use of substances for pleasure and enjoyment.[61] Goswami et al found that individuals reported different reasons for using different substances.[58] For example, alcohol was more likely to be used for self-medication, while using opioids was most commonly associated with getting 'high' or pleasure-seeking.[58]

Within early psychosis populations, the reasons for substance use also vary. Archie et al found that young people with FEP reported using substances to regulate low mood, manage stress, or to be able to sleep and escape from personal problems but not specifically to cope with psychotic symptoms.[55] Qualitative research by Seddon et al support this perspective, with young people reporting sustained cannabis use to cope with negative affect rather than the amelioration of psychotic symptoms.[54] Given the extremely high rates of co-occurring psychosis and trauma in this population, it is possible that using substances may serve a more general 'coping' function for young people who do not have more helpful means of dealing with intense affect or dysphoria.[56]

It is also important to understand the reasons that motivate young people to change their substance use. For example in young people with FEP who used cannabis, Seddon et al reported that common reasons for reducing or abstaining from use included changes in the pattern of using by their social group, changes in life circumstances (e.g. loss of job or relationship), recognition of the negative impact on mental health (e.g. worsening psychotic symptoms), impact on general health, impact on relationships and financial reasons.

Given the lack of consensus on this issue, it can be assumed that each young person will have unique reasons for using substances that need to be assessed thoroughly. Clinicians will need to explore the young person's explanatory model for using substances as well as their explanatory model for psychosis (including their perception of the interaction between the two), to gain a better understanding about their reasons for use.

Models for working with young people with co-occurring psychosis and substance use

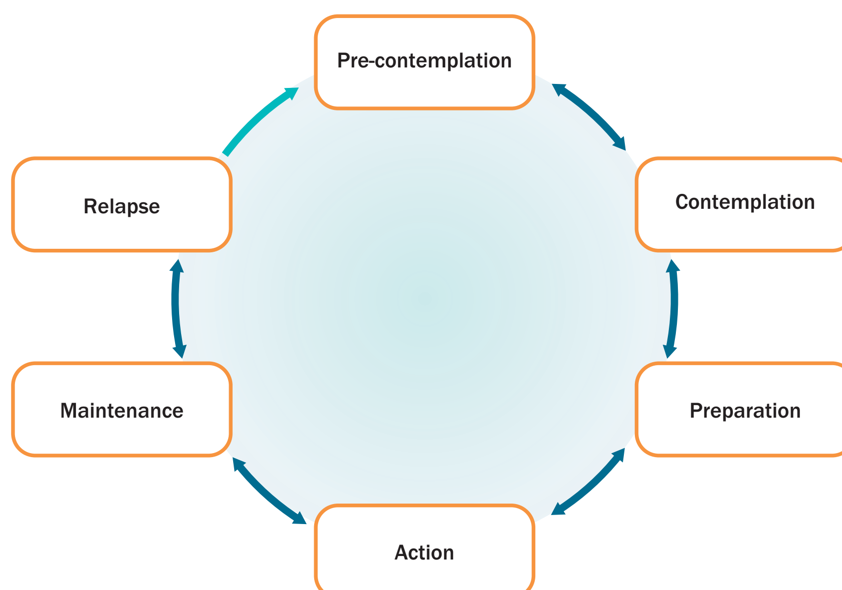
Stages of change

The stages of change model was developed by Prochaska and DiClemente in the late 1970s to describe the process of behaviour change.[62] Originally applied to smoking cessation, the model is relevant to substance use behaviour more broadly and can be used by clinicians who work with young people with early psychosis to inform how they select treatment approaches for substance use (see Figure 1 below). The model is valuable as it helps clinicians to understand where an individual may be with respect to their readiness and commitment to change.

The figure below depicts the model as a sequential process; however, in reality, it involves an individual moving back and forth between the different stages. The six stages of change are:

1. Pre-contemplation
2. Contemplation
3. Preparation
4. Action
5. Maintenance
6. Relapse

FIGURE 1. **SIX STAGES OF CHANGE**



Pre-contemplation

During this stage, young people are not seriously considering changing their substance use in the near future. They are most likely unaware of, or will not readily identify, the potential problems linked to their current behaviour.

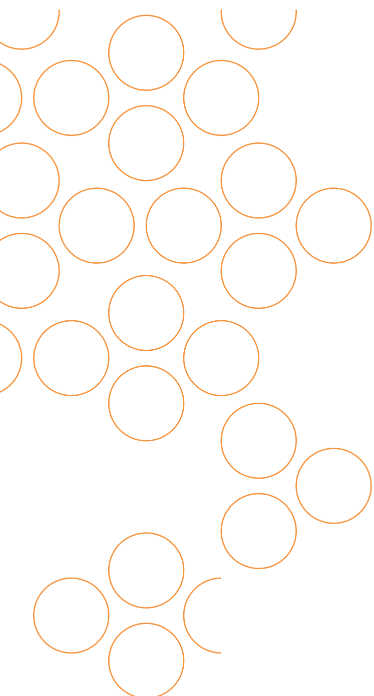
Characteristics of this stage are:

- current patterns of substance use are likely to continue
- benefits of substance use outweigh any perceived negative consequences
- potential positive aspects of change are reduced
- young people may be aware that others (e.g. family or friends) believe that there are problems related to their substance use but do not necessarily agree.

PRACTICE TIP

Increase the young person's awareness of the risks and problems with their current substance using behaviour and the potential benefits for change.

Provide harm reduction strategies to minimise the negative consequences of continued substance use.



Contemplation

Young people in this stage are likely to experience ambivalence about changing their substance use. They may report feeling that they 'could' or 'should' change at some point in the future, or if problems related to their use were to worsen. Young people may be aware of the benefits of changing (e.g. improved concentration and motivation) but are also very aware of the potential negatives (e.g. limited ways to cope with negative emotions).

During this stage:

- young people find the pros and cons for changing their behaviour relatively equal and are ambivalent about the change
- young people may remain in this stage for extended periods of time.

PRACTICE TIP

Encourage the young person to weigh up the pros and cons of changing their substance use.

Understand and explore reasons for ambivalence.

Discuss reasons for change and risks of not changing.

Use a strengths-based approach to increase confidence that young people have in their ability to change.

Preparation

Young people in this stage intend to take action to change their substance use in the near future. They may have already taken some steps towards change and planned how they will take action towards changing their substance use.

During this stage:

- benefits of change are considered to outweigh the benefits of continuing with the current pattern of substance use.

PRACTICE TIP

Support the young person to set clear goals and develop a realistic plan for making a change to their substance use.

Provide interventions that focus on developing strategies for planned action (e.g. activity scheduling, identifying high risk situations, relaxation training).

Action

Young people move from 'being ready' to acting on their plan for modifying their substance use. They may be open to receiving structured support and help from family, friends and professionals.

During this stage:

- changes to behaviour are conscious and require effort as new habits are formed
- temptation to return to previous patterns of use may fluctuate, and at times be quite powerful.

PRACTICE TIP

Validate small gains and help the young person to use short-term rewards to reinforce gains towards reduction or cessation of substance use.

Using cognitive–behavioural strategies may assist the young person to identify unhelpful thinking that may undermine attempts at changing their substance use.

Maintenance

Once young people are at this stage they are likely to feel comfortable with the changes they have made. There is generally less effort or preoccupation with sustaining change behaviour.

During this stage:

- young people will have the opportunity to respond to triggers or challenging situations using the strategies they have developed
- young people may experience a 'slip' or recurrence of substance using behaviour. They may be able to put strategies in place and remain in the maintenance stage, or they may experience a relapse.

PRACTICE TIP

Assist the young person to identify strategies to respond to 'lapses' or 'relapse.'

Relapse

Relapse is not defined as a distinct stage within the original model but is considered to be something that young people whose goal is abstinence from substance use are likely to experience. For young people whose goal is to reduce or minimise harm related to their use the concept of 'relapse' may be limited. Instead it can be helpful to discuss recurrences or lapses into previous patterns of substance using behaviour.

During this stage:

- young people may lose confidence in their ability to sustain changes to their substance use
- young people may move to an earlier stage of change for a period of time following relapse.

PRACTICE TIP

Encourage the young person to identify a sustained return to substance use.

Support the young person to respond to their return to substance use.

Normalise the experience of relapse and frame it as a learning opportunity as it is important to minimise the risk of a young person feeling that they have 'failed'.

Revise relapse plans to take into account any new information about situational or personal triggers that may lead to further substance use in the future.

Harm reduction

Harm reduction refers to the principles that underpin policy regarding the way society views drug problems, public health approaches and programs, and specific interventions designed to reduce the health, social and financial harms associated with substance use. This framework underpins all Australian Government alcohol and other drug policies.[63]

Principles of harm reduction

The harm reduction approach recognises that it is more effective to reduce the harms associated with substance use than attempts to eliminate the use of substances altogether.[63] It aims to prevent or reduce the risky activities that can result in harm, for example, preventing or reducing the transmission of hepatitis C in individuals who inject drugs by providing sterile injecting equipment, information about safer injecting and avoiding sharing or re-using equipment.[63]

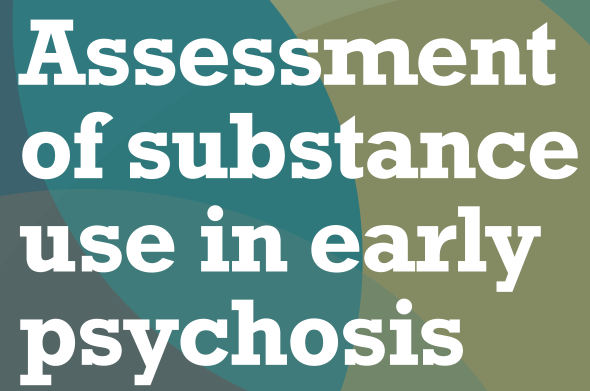
In other words, harm reduction refers to programs and policies that aim to reduce the harms associated with drugs but not the drugs *per se*.[64] The key principles of harm reduction are:[64]

- that the primary goal is to reduce harm rather than use of the drug
- the approach is an evidence-based analysis with the net result being a reduction in harm
- to recognise that drugs are a part of society and will never be completely eliminated
- that this approach is part of a wider public health framework
- that priority is placed on immediate, achievable goals with individuals
- that pragmatic values underpin this approach.

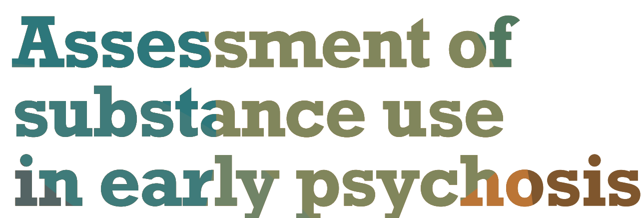
Clinicians working with young people with co-occurring substance use and early psychosis should be mindful that the use of substances is common within this age group and that young people are often reluctant to give up using substances altogether. Collaborative decision-making should be used with the young person towards setting realistic goals towards reduction or cessation. It is important to explain to young people that there may be lapses and relapses of use and that this is okay. However, it is equally important to remember that promoting abstinence is a valid and legitimate goal within the harm reduction framework.

PRACTICE TIP

Clinicians should take a non-judgmental approach towards the young person's use of substances that should neither condemn nor condone the use. Nonetheless, clinicians should always clearly communicate the benefits for reducing substance use and how it can help with everyday functioning.



Assessment of substance use in early psychosis



Overview

This section describes the aims of assessing substance use and outlines when, how and what information should be collected to inform a range of interventions targeting substance use in young people with early psychosis.

A case scenario, ‘Kate’, will be used in this section to demonstrate how to assess substance use in a real-life clinical setting. The scenario presents simple dialogue between a clinician and a young person and demonstrates how to use some of the assessment tools for substance use.

Assessing substance use in early psychosis

Once a young person has been referred to a case manager within an early psychosis service, a comprehensive biopsychosocial assessment should be completed during intake to the service. The biopsychosocial assessment should consider the following information:

- psychotic symptoms
- co-occurring symptoms such as depression, anxiety and substance use
- the impact of symptoms on social and occupational functioning.

Please see the ENSP manual *‘Let me understand’: assessment in early psychosis* for information on a comprehensive assessment in early psychosis services.

It is the role of all clinicians working with young people with early psychosis to routinely ask about their use of alcohol and other substances, including prescribed or non-prescribed use of licit and illicit drugs.

Aims of assessing substance use

There are multiple aims in assessing substance use, one of which may be to determine whether the young person meets the criteria for a substance use disorder. However, for young people with early psychosis, what constitutes problematic use may differ from person-to-person. Most importantly, assessing substance use should aim to inform an individualised formulation that can guide treatment interventions to reduce distress and functional impairment for the young person.

To do this, clinicians should obtain the following information:

- type, pattern and frequency of substance use
- the impact of substance use on:
  - mental health
  - physical heath
  - social and occupational functioning
  - relationships
  - financial and legal issues
- risk related to substance use
- situational or personal triggers for use
- explanatory model about relationship between substance use and psychosis
- reasons for use
- readiness to change.

When do we assess substance use?

Assessing substance use is a longitudinal process that should begin at intake and initial assessment with the early psychosis service and continue over the young person's episode of care. This involves regular monitoring even if psychotic symptoms have resolved, as the level of use may fluctuate over time. As substance use among this population group is high, continued screening and assessing of substance use should be considered a core part of treatment.

Substance use should be considered at every review and at any point when there is a significant change in the young person's mental state. For young people who have reported that they do not use substances at initial assessment, it is also important to assess whether they may have started using substances.

Regularly assessing and monitoring the young person's substance use will help the clinician revise the formulation and treatment plan, and determine whether interventions for substance use are successful or not. It will also highlight any functional gains achieved by the young person changing their substance use, which should be used as feedback and reinforce the positive impact of changing their use.

Assessing substance use should be performed in different environments, at different time points and in different contexts such as during admission to an inpatient unit, in community settings, alcohol and drug detoxification or rehabilitation settings and in the home.

'It's important to keep assessing substance use throughout the time you are working with a young person. A young person's use of substance can change a lot and depends on so many different things … and it's not something they always want to bring up with you [their treating team].'

Senior clinician
EPPIC, Orygen Youth Health Clinical Program

How do we assess substance use?

Initial assessment and engagement

The initial assessment of substance use is likely to be part of a broader psychiatric interview when young people are first referred to an early psychosis service. This is often confusing and overwhelming for young people as it may be the first time they are in contact with a mental health service. As a result, young people may be reluctant to admit using substances or disclose the full extent of their use. They may be concerned about privacy and confidentiality and worry about the consequences of disclosing their use, such as the reaction of their parents or getting in trouble with police. For young people experiencing florid psychotic symptoms, their ability to expand about their substance use may be limited. In addition to these more general issues (which are covered extensively within the ENSP manuals; *'Let me understand': assessment in early psychosis* and *Get on board: engaging young people and their families in early psychosis*) young people may fear stigma or judgment from clinicians, family or friends about their substance use.

PRACTICE TIP

- Being clear about what you are asking and why.
- Explaining that information the young person shares with you about their substance use is confidential and discussing the limitations of this related to risk to self and others.
- Expecting that the young person uses alcohol or drugs and adopting a non-judgmental attitude.
- Introducing less challenging topics first (e.g. asking about use of legal substances such as alcohol or nicotine before moving on to illicit drugs)
- Assuming that (at least initially) the young person may minimise their use.

> 'Case managers should make it clear at the very beginning that they will not judge and that it is quite normal for young people with mental health problems to also have alcohol and drug problems.'
>
> Young person,
> EPPIC, Orygen Youth Health Clinical Program

Screening, interview and self-reporting measures

When assessing substance use, clinicians may need to use many different methods, for example, screening tools, diagnostic interviews, self-reporting measures, behavioural observations and physiological monitoring tools, and gather collateral information from family and friends. This means that the assessment can be both complex and long. It is important that clinicians use multiple methods because none have perfect reliability and using a range of sources improves the clinician's confidence in the data.

Screening for the use of alcohol and other substances should be carried out with all young people either through interviewing or using self-reported measures (paper and pencil questionnaires, computer-assisted surveys and even interactive voice recordings). A wide range of screening tools are available for use, some of which are specific to a particular drug and others that screen for a variety of substances.

Box 4 contains a number of recommended screening and assessment tools for use with young people.

BOX 4. **SUBSTANCE USE SCREENING AND ASSESSMENT TOOLS**

Screening tools

- Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) (WHO ASSIST Working Group, 2002)
- Drug Abuse Screening Test (DAS)[65]

Clinician-rated scales for diagnosis

- Structured Clinical Interview for DSM-IV (SCID)[66]
- Dartmouth Assessment of Lifestyle Instrument (DALI)[67]

Self-report scales for diagnosis

- Computerised Interview for Diagnosis I (CIDI)
- Leeds Dependence Questionnaire (LDQ)[68]
- Timeline Follow–Back Method (TFBM)[69,70]

Clinician-rated scales for assessing use

- Alcohol Use Disorders Identification Test (AUDIT)[70]
- Addiction Severity Index (ASI)[71]

Self-report scales for assessing use

- Short Alcohol Dependence Data Questionnarie (SADD)[72]
- Severity of Dependence Scale (SDS)[73]

Recording substance use

Given the challenges of obtaining an accurate recall of past use it may be useful to ask young people to begin using a record. Regularly using a self-report measure or substance use recording is a helpful way of gaining a more accurate and longitudinal picture of the young person's substance use. Substance use records may help the young person to develop insight into their triggers or reasons for use as well as an objective view of how much they are actually using. However, it is important for clinicians to consider how young people may interpret requests to monitor their substance use. Young people who are motivated to change their use are more likely to understand and agree with a rationale for this type of self-assessment. For others who are less motivated for change, there will be little reason for them to engage with this exercise and they may interpret it as controlling or stigmatising by the clinician. An example of a substance use record is provided in Table 2. A substance use record template can be found in the resources section (Resource 2.) for use in clinical practice.

TABLE 2. **SUBSTANCE USE RECORD**

DAY AND DATE	TIME	WHERE WAS I AND WHO WAS I WITH?	HOW WAS I FEELING?	HOW MUCH DID I USE?	HOW DID I FEEL AFTERWARDS?
Fri 23/3	5.30 p.m.	At my house after work. With Vinnie and two other friends.	Tired and stressed. Wanted to relax.	3 cones	I felt more relaxed and social with friends. Fell asleep really quickly.
Sat 24/3	10 a.m.	In my room, alone.	Agitated, anxious. Wanted to go back to sleep.	2 cones	Went back to sleep. When I woke up I felt worse and angry at myself for wasting the day

What do we assess?

Current and historical use of substance

Clinicians can choose not to use a standardised assessment when assessing substance use, but will need to remember to ask about a wide variety of different substances. A useful way of remembering the substances is the mnemonic TACO, which stands for tobacco, alcohol, cannabis and other drugs. The first three substances are most commonly used by young people with early psychosis while the others are used less frequently. The other drugs category includes:

- cocaine
- ecstasy or MDMA
- heroin (smoking and injecting), opium
- amphetamines (speed, Ritalin), methamphetamines (ice, crystal meth)
- club drugs (ketamine, GHB)
- prescription drugs (benzodiazepines, oxycodone, cold medicines preparations)
- hallucinogens (LSD, mushrooms)
- inhalants (paint, lighter fluid, petrol)
- other synthetic drugs such as synthetic cathinones (e.g. bath salts)
- anabolic steroids
- khat (also spelt ghat).

If the young person has used substances, ask them about the following information for each substance they are using currently using (in the past month) or have used in the past (Table 3).

Age of first use and relationship to psychotic symptoms and other significant life events:

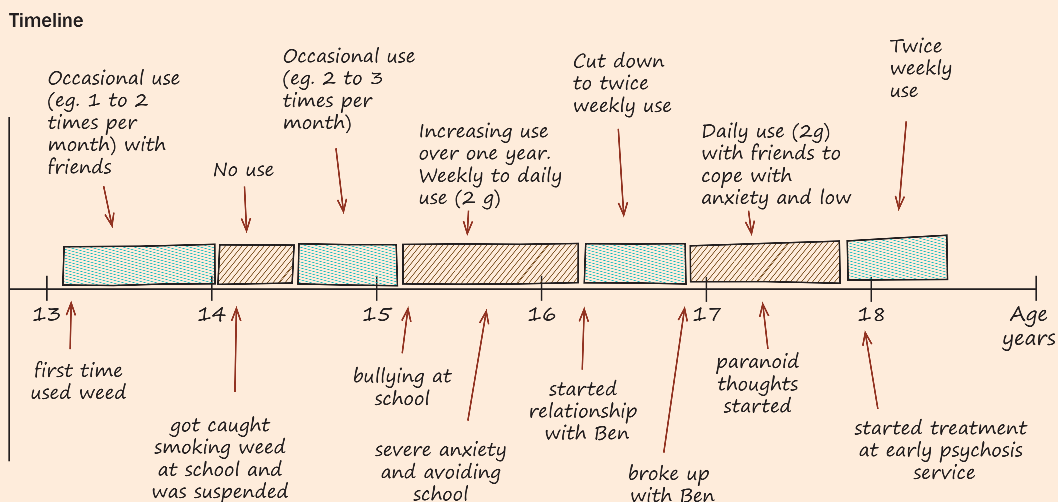
- Using a timeline to record this information can help clinicians better understand the young person's use especially if they are using, or have used, a number of different substances. The timeline should also contain other information such as significant situational triggers, the experience of psychosis, co-occurring conditions or social and occupational difficulties. An example timeline for young person Kate can be seen in Figure 2. There is a timeline template for use in clinical practice in the resources section (Resource 3.)

KATE

CASE SCENARIO

Kate is an 18-year-old woman living with her mum and two older brothers on the Gold Coast, and is currently completing a hairdressing apprenticeship. Kate was referred to the early psychosis service following a 6-month period of worsening paranoid thoughts, anxiety, low mood which was precipitated by a relationship break-up and increased cannabis use. Since her referral, she has experienced a reduction in psychotic symptoms but continues to experience difficulties with low mood, anxiety and reducing her cannabis use.

FIGURE 2. **SUBSTANCE USE TIMELINE FOR KATE**



Quantity, frequency, duration and pattern of use

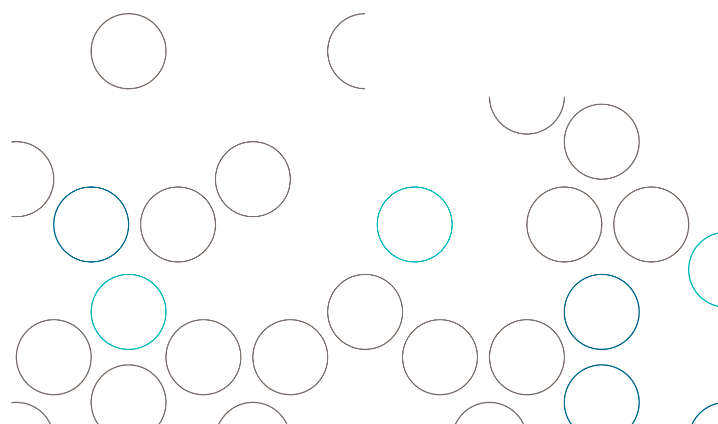
- Using a range statement or a Likert scale (e.g. 0=no use in the past month; 6=used multiple times in one day) helps clinicians to gain more accurate information about frequency. Gathering information in this way on a regular basis also means that small changes and gains can be validated and reinforced rather than being lost through vague recording.
- Quantifying a young person's use can offer challenges as there is no standard measure of most illicit substance intake and the strength of the product varies enormously. Unlike cigarettes or alcohol, cannabis and speed are not purchased in standard quantities or strengths and therefore it is difficult to standardise use across users. However, it is possible to monitor a young person's use and compare changes in use from baseline to mid and endpoints in treatment.

How young people use substances

- Enquiring about the route of administration or method of use for each substance including:
  - oral
  - smoked (cigarette, joint, pipe, bong)
  - snorted
  - inhaled
  - injected.

TABLE 3. **CURRENT AND HISTORICAL SUBSTANCE USE ASSESSMENT FOR KATE**

SUBSTANCE CATEGORY	AGE OF FIRST USE	METHOD OF USE	FREQUENCY OF USE IN PAST MONTH	FREQUENCY OF USE IN PAST WEEK	AMOUNT USED PER WEEK	LAST USE
			0 = nil use 1 = 1 x month 2 = 2–3 x month 3 = 1–2 x week 4 = 3–6 x week 5 = daily 6 = >1 daily	0 = nil use 1 = 1–2 x week 2 = 2–3 x week 3 = 3–6 x week 4 = daily 5 = >1 daily	e.g. cost per week, number of cigarettes per week	
Tobacco	12	Smoked	6	4	60 cigarettes	Today 15/06
Alcohol	12	Oral	3	1	6–8 standard drinks	Sat 10/06
Cannabis (including synthetic)	13	Smoked (bong)	5	2	$150	Mon 12/06



Withdrawal and cravings

The following questions may be helpful to explore whether young people experience any withdrawal symptoms or cravings for particular substances:

- In the last 4 weeks have you cut down on or gone without (substance)?
- If you have cut down or gone without, did you feel any negative physical or psychological effects of this?
- What are the physical or psychological effects you experienced? Examples include being irritable, anxious or having depressed mood, nausea, difficulty falling asleep, vivid dreams, headache, excessive sweating, tremors or shaking hands, heart palpitations, loss of appetite or experiencing cravings.
- In the last 4 weeks have you felt uncomfortable about or craved (a substance) at different times when it is not available?
- If so, how often did this occur (e.g. one only, once a week, daily)?
- When you experienced these negative effects did you use (substance) to reduce or prevent them from happening?

Table 13 in the 'Management of intoxication and withdrawal' section on page 70 outlines specific withdrawal symptoms for a range of substances.

Previous treatment for substance use

- Has the young person has ever sought help for, or received treatment for, substance use problems?
  - If so, where and what kind of treatment?
- Did the young person feel that this was a successful or helpful experience? If not, why not?

Family history of substance use issues

- Has anyone in the young person's family previously used substances? If so, who?
- Would the young person say that anyone in their family has a problem with substance use?
- Has anyone in the young person's family received treatment for their substance use?

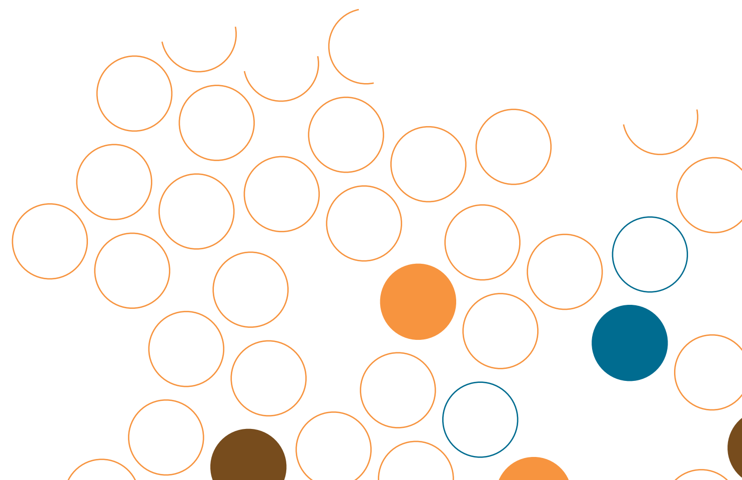
Impact of use on psychological and physical health, functioning and risk

The impact of substance use on mental health

Young people who have insight about the relationship between their substance use and their mental health are more likely to be motivated to change their use. Although there is a clear relationship between particular substances and the onset and maintenance of psychotic symptoms (e.g. cannabis and stimulants), not all substances will have a negative impact on the young person's experience of psychosis. It is important not to overstate this and instead explore how the young person's substance use impacts more broadly on their mental health (e.g. depression, anxiety or trauma symptoms).

The following questions may assist in eliciting the young person's explanatory model about the relationship between substance use and their mental health, including psychosis:

- What do you know about (substance)?
- Why do you use (substance)?
- How does (substance) affect you?
- Does (substance) have the same effect on you that it does on others?
- What are your plans regarding (substance) use in the future?
- Do you think that (substance) affects your experience of psychosis or other aspects of your mental health at all?
- What have you noticed among others who use (substance) and who also have psychosis or other mental health problems?



The impact of substance use on physical health

Substance use is associated with increased morbidity and mortality in young people with early psychosis. The physical harms associated with substance use in young people are due to intoxication and high levels of use in the short-term such as binge drinking leading to injury, accidents, violence, or deliberate self-harm. The physical harms associated with prolonged substance use (>10 years' use) can impact on the quality of life on individuals with early (or persisting) psychosis such as respiratory illness associated with tobacco use and liver damage associated with alcohol use. The physical harms can vary depending on:

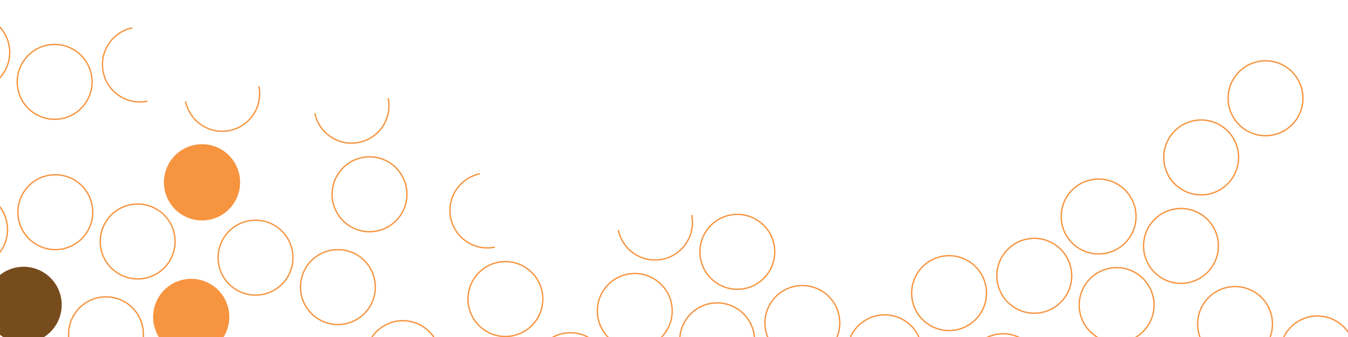
- the type of substance used
- how many substances are used
- the route of administration of the substance(s)
- how frequently the substance(s) is used
- how long the substance(s) has been used.

Clinicians should ensure that young people who use substances receive the appropriate follow-up assessment as required from either medical staff or from the young person's GP. Investigations that focus on the short-term effects of intoxication and the invasive routes of administration such as intravenous drug use should be considered as part of a comprehensive general health assessment. Physical health investigations should be tailored depending on the substance being used; for example, a liver function test for prolonged and excessive alcohol use or a urine drug screen to corroborate the young person's reported illicit drug use.

A list of potential physical health examinations that could be considered for young people is presented in Table 4.

TABLE 4. **POTENTIAL PHYSICAL HEALTH EXAMINATIONS FOR DIFFERENT SUBSTANCES**

SUBSTANCE	TYPE OF EXAMINATION
Alcohol	Liver function tests Nutrition assessment Cognitive screening questionnaire Observe for signs for head injuries first and consider specialised assessment STIs
Tobacco	Respiratory tests Blood pressure
Cannabis	Respiratory tests Oral health assessment by a dentist STIs
Amphetamines	Skin and vein injury (if injecting) STIs HIV and hepatitis B and C tests (if injecting) Oral health assessment by a dentist Physical examinations to measure heart rate, blood pressure and other cardiovascular effects
Opioids	Investigations for STIs and skin injuries as described above



The impact of use on social and occupational functioning

Substance use may impair a young person's ability to attend school or work and affect their personal relationships with family and friends. They may withdraw socially and be irritable or even aggressive towards others while intoxicated or withdrawing from substances. Problematic substance use may also lead to financial or legal difficulties for some young people, who may be in debt or engaged in illegal behaviour such as dealing or distributing substances to maintain their personal use.

The following questions can be used to develop an understanding of how a young person's functioning and relationships are impacted by their substance use.

General functioning

- In the last 4 weeks have you found that after you used (substance) you were unable to get things that you needed to do done?
- In the last 4 weeks have you cut back on important activities (work, school, spending time with family or friends) because of your substance use?

Relationships

- What do important people in your life (e.g. family and friends) think about your use of (substance)?
- How has your use of (substance) impacted on your relationships with others?
- Has substance use ever caused problems in relationships with others? If so, did you continue to use (substance)?

Education and occupation

- Does your substance use affect your ability to find a job?
- If currently employed, does your substance use affect your ability to attend work regularly and do your job?
- Does your substance use make it difficult for you to attend school or to complete homework?
- Have you experienced problems at school or work (such as being suspended or expelled) as a result of your use of (substance)?

Financial

- How do you afford your use of (substance)?
- Does your use of substances ever mean that it is difficult to pay for essential things such as the rent, bills, food, transport etc?
- How much money do you spend on buying (substance) per week?

Legal

- Have you experienced any trouble with the law as a result of using (substance)?

Substance use and risk to self, others and risk-taking behaviour

Clinicians should regularly assess the risk of behaviours of young people when they are using substances. Just as young people may find it difficult to recognise that their substance use may have long-term physical effects, they can also underestimate their risk-taking behaviour, or ignore this behaviour altogether, believing they are immune from harm after using substances. Information about risk to self and others is important to collect as part of a general risk assessment but may form the foundation of later interventions such as psychoeducation and harm reduction.

Some examples of risks related to specific substances can be found in Box 5. Individuals who use a number of substances are more likely to engage in risky behaviours such as unsafe sex or driving while under the influence of substances.[74]

BOX 5: **RISK RELATED TO SPECIFIC SUBSTANCES**

- Overdose (e.g. heroin and detox)
- Aggression (e.g. ice and amphetamine and cannabis withdrawal, alcohol intoxication)
- Accidental injury (e.g. any substance use when driving)
- Slowed heart rate and respiration (e.g. use of dual depressants such as alcohol and diazepam)
- Side effects from combining licit substances and medication (e.g. SSRI and ecstasy)

There may be specific risks related to the method of substance use that the young person is unaware of (for example, using a plastic bong made out of a coke bottle creates toxic fumes that the young person then inhales) or the context in which they use (for example, a young person who uses substances when alone may overdose or injure themselves and be unable to seek help).

It is important to explore with the young person the risks to themselves or others that are related to the general physical and mental health impact of their use (e.g. becoming more paranoid), their behaviour when using (e.g. engaging in unsafe sex), the environmental or social context (e.g. vulnerability to others) and their method of use (e.g. using shared needles) (Figure 3).

FIGURE 3. **RISKS RELATED TO SUBSTANCE USE**

Some useful questions for clinicians to ask young people related to their risk include:

- Do you drive (or operate machinery) when stoned/high/intoxicated?
- Do you have unsafe sex when stoned/high/intoxicated?
- Tell me a little bit about your smoking, for example, what type of bong do you use?
- Do you become drowsy after smoking cannabis?
- Do you ever use drugs when you are alone?
- Have you ever found yourself in a dangerous or risky situation because you were buying or using alcohol or drugs?
- Do you ever combine multiple substances when you are high/stoned/intoxicated?
- Do you ever feel unsafe when using substances because of where you are or who you are with?

Formulation, goal-setting and treatment planning

Once clinicians have conducted an assessment of the type, frequency and impact of substance use for the young person they can begin to develop an understanding of factors that may maintain substance use as well as the young person's readiness for change.

Young people use, and continue to use, substances for a wide range of reasons. Without a clear understanding of the young person's reasons for continued substance use and any existing motivation for change, targeted interventions are unlikely to be effective. Developing a collaborative understanding and formulation of the young person's reasons for use (including personal and situational triggers) and their current motivation for change will guide the selection of specific goals and interventions that are appropriate to the young person's stage of change.

Reasons for use

Using substance use records (see Resource 2) and/or some of the following questions can help contextualise the young person's substance use:

- Can you tell me about the times or places when you are most likely to use (substance)?
- Who do you use (substance) with? Can you tell me what it is about that person or group of people that leads to you using more often?
- Are there particular triggers that lead to cravings or urges to use (substance)?
- Are there times when you are more likely to use (substance) because of how you feel emotionally (e.g. sad, lonely, excited)?
- Can you tell me what the benefits to you are of using substances?
- What do you like or enjoy about using substances?
- Can you tell me what some of the negative outcomes of using substances for you?

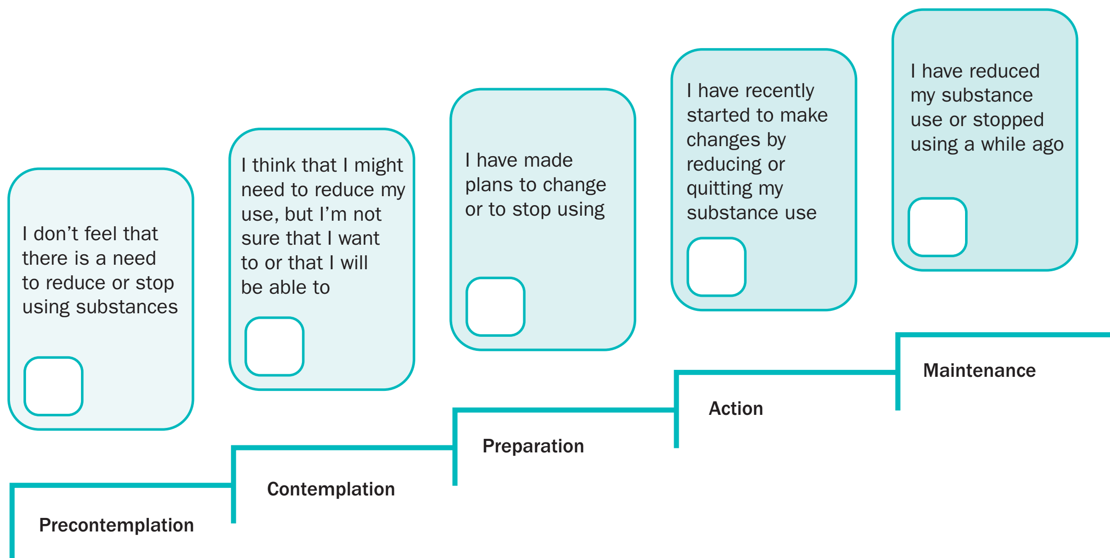
Readiness for change

There is no single way of assessing a young person's readiness for change although a range of questionnaires have been developed, many of which aim to assess the stage of change for individuals with respect to a particular problem. Some examples of self-report questionnaires that are likely to be clinically useful include:

- The Readiness to Change Questionnaire (RTCQ)[75]
- Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES)[76]

In addition, a commonly used self-report scale is the Contemplation Ladder,[77] which was originally designed to measure readiness to quit smoking. This method is easy to use and provides a simple visual guide to aid clinicians and young people to discuss how ready the young person is to change their substance use. This method has only been validated as a measure for use in relation to smoking behaviour but has been adapted for clinical use in relation to a number of substances. Figure 4 contains a simplified and adapted version of this tool that can be used to estimate readiness to change for any substance. A worksheet to use in clinical practice can be found in the resources section (Resource 4).

FIGURE 4. **THE 'READINESS TO CHANGE' STEPS.**[77]

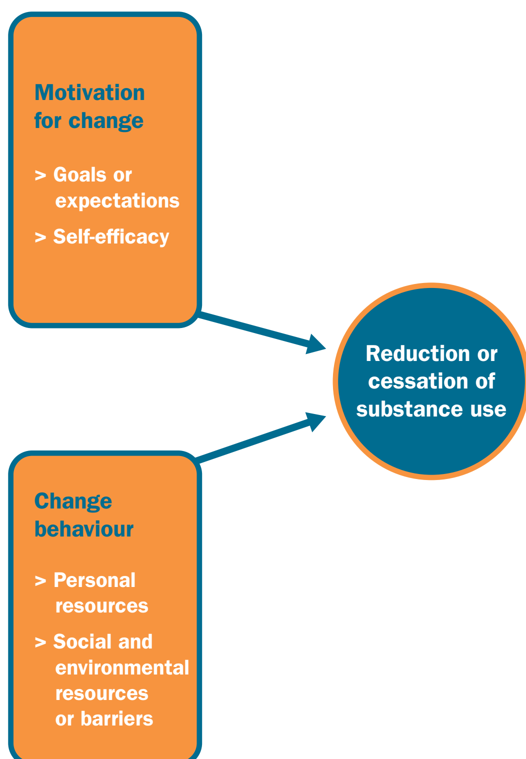


(adapted from Biener and Abrams, 1991)

Personal factors, such as the young person's goals or expectations about their substance use and their self-efficacy to achieve their goals will both impact on the young person's motivation to change. In addition, the young person may need to develop new skills to make behaviour changes.

Environmental and contextual factors, such as the young person's social supports will also impact on their capacity to act on their goals. Figure 5 outlines the relationship between these factors, which determine whether there is actual change by reduced substance use or cessation.

FIGURE 5. **FACTORS INFLUENCING MOTIVATION TO CHANGE, CHANGE BEHAVIOUR AND REDUCTION OF SUBSTANCE USE**



(adapted from Carey et al., 2001)

Clinicians should explore the internal and external drivers for change as well as the young person's previous or current efforts to make changes to their substance use.

Consider with the young person the following:

- What is the young person's goal about their substance use (e.g. continued use with no change, reduced or modified use or cessation)?
- How much does the young person believe that they can achieve their goal?
- What skills or personal resources will enable the young person need to achieve their goal (e.g. relaxation techniques)?
- What social and contextual factors exist for the young person that are resources (e.g. supportive family) or barriers (e.g. living with other substance users)?

KATE

CASE SCENARIO (CONTINUED FROM PAGE 27)

Case manager (CM): We've been talking for a while now about some of the ways that your cannabis use has impacted on your mental health, including your experience of psychosis.

Kate: Yeah, I know. It's just been really hard to cut it out completely, especially because I feel so shit about myself at the moment.

CM: Yes, you've said that for a long time smoking weed has kind of been your 'crutch' when difficult stuff happened in your life. It makes sense that it would be hard to change that … I suppose I was curious about what you do want to do about it? Do you have an idea of whether you want to reduce your use?

Kate: Definitely. It is actually really important to me to stop using completely, because I think it really was one of the things that led to me feeling so paranoid. Since I've reduced how much I use my thoughts make a lot more sense.

CM: It sounds like you've identified some really clear reasons that are motivating you at the moment. I wonder how much you feel that you can stop completely?

Kate: Well, I think I've shown myself that I can reduce my use. I've done that before. It's more about knowing what to do when I feel really low, or when I can't sleep because I'm worrying.

CM: Ok, so knowing that you have some alternatives to smoking during difficult times would mean that you would feel more prepared to stop using?

Kate: Yup, I think so … I mean sometimes it is also when I'm just hanging out with friends and it is just fun.

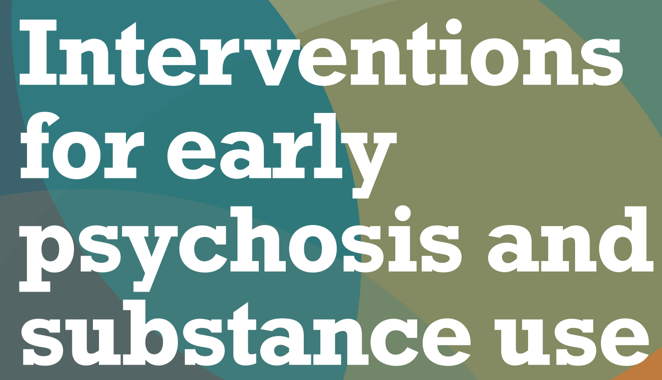
Treatment planning

Once you have established with the young person what their expectations and goals are around their substance use, more specific approaches and interventions can be selected.

For young people who are expressing motivation to change their substance use, such as Kate, the focus of treatment interventions is likely to be very different to that used with young people who have a goal of 'no change' or who do not feel confident in their ability to change. Some examples of how to select appropriate interventions based on the young person's readiness to change are summarised in Table 5.

TABLE 5. **TREATMENT INTERVENTIONS BASED ON READINESS TO CHANGE**

GOAL	SELF-EFFICACY	RESOURCES AND BARRIERS	TREATMENT INTERVENTIONS
Cease cannabis use	Moderate confidence, previous experiences of reducing use	New strategies and skills required to cope with low mood Friendship group engaged in regular use	Cognitive–behavioural therapy (CBT) – cognitive strategies Stress management Problem-solving Medical interventions (mood and sleep)
Reduce alcohol use but not quit	Low confidence in ability to reduce use	Living in share-house with other heavy drinkers Has interest in getting a job	Harm reduction Psychoeducation Motivational interviewing
No change, expects to continue current use of ice	'I could quit if I wanted to, but I don't want to'	Homelessness or couch-surfing Ongoing psychotic symptoms Limited external supports	Harm reduction Case management interventions and problem solving



Interventions for early psychosis and substance use

Interventions for early psychosis and substance use

Introduction

This section introduces harm reduction strategies, as well as clinical interventions for working with young people with co-occurring psychosis and substance use including: psychoeducation, motivational interviewing, cognitive–behavioural interventions, managing intoxication and withdrawal and medical treatments. Evidence for the efficacy of the interventions, the principles of the interventions and practical examples are also presented.

Evidence for efficacy

Interventions aimed at substance use

Overall, the evidence for psychosocial interventions for substance use disorders is mixed, with minimal support for any specific intervention over others.[8,78,79] Some evidence suggests that motivational interviewing may be effective for substance use compared with no intervention in young people without a mental health disorder.[80,81,82,83] A review of meta-analyses examining the efficacy CBT for a range of psychological disorders (including substance use disorder and schizophrenia and psychosis) showed CBT to be an effective intervention for substance dependence, cannabis dependence and smoking cessation.[84]

A range of interventions for adolescent alcohol use, including motivational interviewing, CBT-based interventions, assertive continuing care, family therapy, and parent-directed interventions, have also been shown to have positive effects on substance use.[85,86] Finally, there is burgeoning interest in internet-based interventions, mostly for problematic alcohol use, and have shown some small effect,[87] however, there is a lack of more studies are needed to understand whether these interventions are effective in substance use disorders.

Interventions aimed at co-occurring psychosis and substance use

Few studies have evaluated the efficacy of interventions in individuals with co-occurring substance use and psychotic disorders, with mixed results reported. The evidence for the efficacy of interventions in young people with co-occurring substance use and early psychosis is also limited. Therefore of the majority of the limited evidence for the efficacy of interventions for substance use in people with psychosis comes from studies in people with schizophrenia spectrum disorders, non-affective psychotic disorders and psychotic disorders. These studies show that in people with schizophrenia spectrum disorders, motivational interviewing interventions, with or without a CBT component, may be beneficial in reducing the amount of cannabis that is used (but not frequency of use) and improving positive symptoms.[9] For people with excessive alcohol consumption, these interventions, as well as assessment interviews, are also effective in reducing alcohol consumption, with longer interventions also reducing depressive symptoms and improving functioning.[7]

However, in the largest trial to date (MIDAS), participants with non-affective psychotic disorder were randomly allocated to either motivational interviewing and CBT (n=164) or treatment as usual (n=163); there were no differences in terms of the frequency of substance use or the perceived negative consequences of misuse at the 2-year follow-up, although the intervention had a statistically significant effect on amount used per substance-using day. Overall, the intervention did not improve outcome in terms of hospitalisation, relapses, psychotic symptoms, self-harm, or functioning.[88] Similar findings were found in a more recent, but smaller study.[89] Other smaller trials in early psychosis samples have similarly shown that psychological interventions such as motivational interviewing or CBT (added to standard comprehensive care) can produce short-term reductions in cannabis use,[90,91] or improve quality of life[92] but do not achieve longer-term reductions in substance use.

Several low-quality (small) studies have also been conducted in young people with early psychosis. For example, Kemp and colleagues compared a brief manualised CBT for substance abuse (n=10) with treatment as usual (n= 6). Both groups reduced their substance use across the trial; however, those exposed to the active treatment improved significantly on measures of the frequency of cannabis and alcohol abuse.[93] In another study of 25 inpatients with early psychosis and non-opioid drug use, a brief motivational intervention resulted in less substance use compared to treatment as usual at 6 months follow-up.[94]

Harm reduction strategies

Strategies for reducing harm associated with substance use can broadly be understood as:

- education to prevent young people from starting to use substances
- education about strategies that will minimise the harm associated with using substances.

Talking to young people about not starting to use substances (in cases where no use is present) is important, and should be included as part of any young person's treatment. In particular, this discussion becomes relevant if the young person is prescribed medication as part of their treatment plan, in which case they should at least receive information about the potential drug interactions. Having open and regular discussions about this topic means that young people are more likely to ask their case manager or doctor about the harms associated with a particular drug before using it. This provides an opportunity for the young person and clinician to discuss the pros and cons of potential use, increasing the likelihood that the young person will come to a decision about their use that will support their health and wellbeing.

Talking to young people who are already using substances can be challenging but is an important first step in addressing substance use. Explicitly talking to young people about reducing harm of using substances can be a good way of starting a discussion about their use, and may eventually provide opportunities to explore changing their behaviour around their use. For more information see 'Stages of change' on page 17 and 'Motivational interviewing' on page 48.

Reducing harm can be discussed in terms of physical and psychological health and wellbeing, social wellbeing, and financial implications. It is also useful to talk to young people about having a plan about how to reduce harm at different stages of using: before, during use, during intoxication and after intoxication. Resources for assessing harm and a harm reduction plan can be found in the 'Resources' section. This helps both young people and clinicians consider the specific context and risks of each of these situations. An example is provided in Table 6.

TABLE 6. **AN EXAMPLE OF A HARM REDUCTION PLAN FOR ALCOHOL**

SUBSTANCE: ALCOHOL	POTENTIAL HARM	HARM MINIMISATION STRATEGIES
General	*Bad for my mood*	*Limit alcohol on days when my mood is already low.*
	Bad for general health	*Take vitamin supplements*
		Plan to drink less in each sitting (gradual reduction)
		Add alcohol free days
		Delay drinking until after midday
	Financial – run out of money for other things such as bills	*Budget for alcohol after basics are covered.*
Before (obtaining alcohol)	*Walking the streets late at night alone*	*Go out with friends rather than alone*
Intoxication	*Drive a car*	*Give my keys to mum/dad before going out, plan transport in advance. Don't drink and drive.*
	Ride my bike	*Limit alcohol if I need to ride somewhere*
	Get into fights	*Drink with mates who'll keep me safe. Avoid drinking if already angry or upset.*
	Auditory hallucinations get worse	*Let case manager know if auditory hallucinations worsen. Stay safe with mates.*
	Sexually promiscuous without using protection	*Always carry condoms and use them.*
Afterwards	*Hangover/blackouts*	*Eat and hydrate well before drinking, alternate with non-alcoholic drinks, and be well rested prior to drinking.*
	Vomiting and sick the next day – unable to go to work and concentrate	*Schedule drinking days to minimise impact on work.*

General strategies should be considered regardless of the substance that is being used. These strategies should consider things that affect the young person's physical health and wellbeing and their financial and social wellbeing. It is useful to discuss a range of practical strategies that support the young person to reduce the general impact of their substance use. Box 6 on page 39 describes some of these strategies in more detail.

BOX 6: GENERAL STRATEGIES TO MINIMISE HARM ASSOCIATED WITH SUBSTANCE USE

Physical health

- Make sure that the young person is aware of needing to keep up their physical health, especially as long term substance use can impact on the immune system.
- Discuss sleep, and scheduling days or times to catch up on sleep, especially if using stimulants.
- Consider discussing nutritional or vitamin supplements, especially if the young person has a nutritionally poor diet.
- Personal hygiene can deteriorate in periods of heavy use. Make sure the young person is showering regularly and washing/changing their clothes if possible to avoid skin conditions or infection.
- Encourage scheduling of 'abstinence days' as regularly as possible or encourage the young person to consider delaying their use.
- Encourage the young person to delay and gradually cut down their use of the substance over time.

Safety

- Discuss with the young person the safety issues of their use, such as who they use with, where they use or where/ from whom they obtain the substance.
- Encourage the young person to use with people who may potentially prevent them from engaging in risky behaviour such as driving, or who will call for help/ medical assistance if needed.
- Encourage the young person to avoid impulsive use – plan where they will be using to make sure the location is as safe as possible.
- Encourage the young person to plan obtaining the substance – going during the daytime, going with a friend if possible, and calling beforehand to check whether there might be others in the pick-up location.
- Encourage them to stick with a 'regular' supplier – this will mean that the purity or consistency of the substance is unlikely to change significantly.

Social implications of use

- Housing – are they at risk of losing their house due to financial problems?
- Ability to engage in school/work – consider scheduling use around these activities, for example by delaying use until after school or work, or abstaining from use on work/school days.
- Friendships/relationships – encourage the young person to plan 'substance free' activities with friends or family, and encourage the young person to spend less time with others that use substances if possible.
- Legal consequences – discuss the potential legal implications of substance acquisition, use and supply.

Financial implications of use: money for food, bills etc.

- Make a budget with the young person, making sure to cover their basic expenses.
- Consider helping the young person to set up direct debit options for bills.
- Make a plan about how to avoid getting into situations where they are 'in debt' to their supplier.
- Assist the young person to plan how they can 'pace' their use so that they don't run out of the substance before they have money to purchase it again.

Specific strategies by substance and method of use

This section briefly outlines some of the specific harm reduction strategies that can be discussed with young people as part of their personal harm reduction plan. These strategies will focus on reducing harm in terms of the way that the substance is used, and focus on physical harm rather than psychological harm. These strategies (unless otherwise specified) have been developed or endorsed by ReGen, the Australian Drug Foundation's Druginfo, SUMITT and the Drug and Alcohol Recovery and Education Centre. For more information, please see www.regen.org.au, www.druginfo.adf.org.au and www.watershed.org.au.

Cannabis

Classified on their own because they act like a hallucinogen but also produce depressant effects. Includes marijuana, hash, hash oil and synthetic cannabis products.

Strategies:[95-97]

- Avoid using cannabis as a 'come down' from using stimulants or similar drugs. Cannabis increases heart rate, which can be particularly dangerous for people who have cardiac abnormalities or high blood pressure.
- Ingesting cannabis by using it in cooking is the least harmful way to use the substance in terms of its effects on overall physical health.

Smoking:[95-97]

- Avoid mixing cannabis with tobacco – this exposes the young person to the harms associated with tobacco use.
- Smoke joints rather than bongs – using bongs exposes the young person to the risk of water vapour entering the lungs.
- If using a bong or pipe – avoid plastic, rubber, wood or aluminium: these substances can give off toxic fumes. Glass, stainless steel and brass are considered safer.
- If using a bong or pipe – clean it regularly and change the water.
- Choose a bong that has the mouthpiece at least 20 cm away from the water surface to minimise the chances of water vapour entering the lungs.
- Don't hold the smoke in your lungs – breath holding does not increase the intoxication effect but does increase the amount of tar deposited in the lungs.

Ingesting:[95-97]

- Encourage using smaller amounts as compared with smoking – ingesting orally results in far greater quantities of THC in the bloodstream when compared with smoking.
- Encourage using a small amount to begin with and wait up to 90 minutes before having any more; orally ingesting produces a different 'high'.
- Inform the young person to be prepared for a longer effect, between 4–2 hours. Avoid driving or any other dangerous activities for a longer period of time after intoxication.
- Inform the person to wait 2–3 hours for the substance to reach its peak.

Alcohol

Alcohol is a CNS depressant and young people should be cautioned about combining alcohol use and other drugs, particularly other CNS depressants.

Strategies:[98-100]

- Avoid binge drinking.
- Avoid impulsive drinking.
- Plan a few alcohol free days each week.
- Avoid combining alcohol with other substances, particularly other CNS depressants such as benzodiazepines or opiates (heroin).
- Alternate alcoholic and non-alcoholic drinks.

Amphetamines and methamphetamines

Amphetamines are CNS stimulants and include amphetamines (speed) and methamphetamines (ice) and dexamphetamine (Dexedrine, Adderall or similar) Amphetamines are commonly used by ingesting, snorting, smoking or injecting. The effects are generally felt immediately (if injected or smoked) or within 30 minutes (if swallowed or snorted).

Strategies:[74,101-103]

- Discourage injecting.
- Encourage healthy eating, sleep and exercise.
- Discourage use of other substances such as alcohol.
- Encourage vaccination for blood borne viruses (hepatitis B and C).

Smoking:[74,101-103]

- Avoid sharing smoking equipment.

Snorting and ingesting:[101-103]

- Encourage smaller amounts of use and wait for effect before using more.

Injecting:[74,99,100,102,103]

- Encourage engagement with needle and syringe programs.
- Use clean injecting equipment, including needles, syringes, filter, new swabs, new sterile water, clean tourniquet, clean hands and a clean space to work in.
- If the young person must reuse equipment, encourage them to clean it thoroughly with bleach and water after use, and store in a clean, safe place.
- Encourage use of a filter to filter out impurities and bacteria.
- Encourage immediate disposal of equipment after use in a sharps container.
- Encourage alternating injecting sites, proper injecting techniques and antibacterial skin wipes.
- Encourage basic hygiene such as washing hands in warm soapy water thoroughly
- Avoid handling anyone else's equipment.
- Encourage early wound, infection or abscess care.
- Discourage groin injection.

Heroin and other opioids

Opioids are a group of drugs that act as CNS depressants and include heroin, morphine, oxycodone, codeine, methadone and buprenorphine. Heroin can be smoked, snorted or injected.[104]

Strategies:[105,106]

- Smoking heroin is safer than injecting.
- Discourage use with other CNS depressants such as alcohol or benzodiazepines.
- Know your source – stability and consistency of the product is important to know how pure it is.
- Encourage using smaller amounts, particularly if re-commencing use after a period of abstinence.

Injecting:

See 'Injecting' in amphetamines above.

Benzodiazepines

Benzodiazepines are a class of drugs that act as a CNS depressant and are commonly prescribed to help sleep and to reduce anxiety and stress.

Benzodiazepines can be short, intermediate or long acting in nature.[107-109] Therefore, the time it takes for drug effects to emerge and how long the drug stays in the body will depend on the type of benzodiazepine taken.

Key harms can include tolerance and dependence and significant withdrawal symptoms.

Strategies:[107-109]

- Encourage smaller doses.
- Inform the young person effects can occur within the hour and, especially with continued use of longer-acting forms, have the potential to last from days to weeks. Encourage the young person to avoid activities such as driving when using.
- Discourage use with other CNS depressants (such as alcohol) as this can increase the risk of breathing difficulties and overdose.
- Encourage graded cessation. Abrupt cessation can lead to significant withdrawal symptoms.
- Substitute short- to long-acting benzodiazepines as they can act as a useful first step towards cessation.

Ecstasy/MDMA

Ecstasy is a stimulant drug, however may not contain any methylenedioxymethamphetamine (MDMA). Ecstasy may contain paramethoxyamphetamine (PMA), ketamine, N-methoxybenzyl (NBOMe), methylone or other substances.[110,111]

Ecstasy is generally consumed orally, but can also be snorted and injected. Effects are usually felt within 20–30 minutes and can last up to 6 hours. Tablets come in a variety of colours and are usually stamped with a design. Though pills may look the same, there is no guarantee they will be of the same quality or contain the same substances. MDMA crystals can also come in capsule form and are generally off-white or yellow in colour.[110,111] Key harms can include dehydration, elevated heart rate, temperature and blood pressure, breathing problems and I more severe cases kidney failure, heart attack and brain haemorrhage.[110,111]

Strategies:[110,111]

- Encourage smaller doses and not using again until the first dose wears off. Higher doses will not increase the sought-after effects but will more likely result in negative effects.
- If a young person does use more, discourage taking pills from different batches to avoid the

possibility of the ingredients in different batches interacting badly.

- Remain hydrated and encourage the sipping of water. Inform the young person of dangers associated with drinking excessive amounts of water or other fluids.
- Ecstasy use is commonly associated with increased sexual activity.[111] Encourage safe sex behaviour.
- Ecstasy can take away tiredness and thirst, which can result in overheating and dehydration – especially when dancing for long periods of time. If a young person is using in these circumstances, inform them of the following:
  – wear loose clothing
  – try to avoid alcohol consumption; it will contribute to dehydration.
  – take breaks from dancing to rest and cool off.
  – splash cold water on the face to cool down.
- Allow time for recovery. Encourage good nutrition and ample rest, especially following intoxication.
- Inform of the difference between ecstasy and 'liquid ecstasy' (GHB/fantasy). GHB is in fact a CNS depressant and has very different effects and risks of overdose to ecstasy.

Snorting:[110,111]

- Avoid sharing snorting equipment.
- Discourage snorting off poorly cleaned or unfamiliar surfaces or equipment.

Injecting:[110,111]

See 'Injecting' in amphetamines on page 41 for further information.

Tobacco

Tobacco products include cigarettes, cigars and loose pipe tobacco as well as smokeless varieties such as chewing tobacco and wet and dry snuff. It is made from the dry leaves of the tobacco plant and main methods of use are smoking, chewing and inhaling.[112]

The main chemical in tobacco is nicotine, which is a highly addictive CNS stimulant. Along with nicotine, tobacco products generally contain a large number of other, harmful, chemicals that can greatly increase the risk of cancer, cardiovascular disease, respiratory disease and reduce life expectancy.

Strategies:[112]

- Encourage use of nicotine replacement therapy products (patches, gum, lozenges).
- Inform the young person that tobacco can interfere with the metabolism of certain antipsychotic drugs, such as clozapine.

Smoking:

- Encourage cutting down on the number of cigarettes smoked per day.
- Encourage reduction in the rate of inhalation.
- If rolling their own cigarettes, encourage the use of filters and minimising the amount of paper used.

Inhalants

Inhalants are any volatile substance that can be inhaled to produce intoxication. Due to the variety of different substances, it is difficult to categorise the effect these substances can have. Generally, substances such as solvents, aerosols, gases and nitrates are used.[113] The key harms associated with the use of inhalants includes suffocation, choking, respiratory depression, burns, seizures, and 'sudden sniffing death' from sudden exercise or alarm. Sudden sniffing death can occur because of the already sensitised heart being exposed to adrenaline (through exercise or being frightened), causing cardiac arrest.[113]

- Some volatile substances are more harmful than others; glue and nitrous oxide are less risky due to being used in small doses.
- Toulene and petrol – long-term use more likely to cause cognitive impairment/neurological damage.[114]
- Aerosols, butane – highest risk for sudden death.

Strategies:[115,116]

- Discourage people from using volatile substances at all, especially when alone.
- Discourage the use of plastic bags to avoid suffocation.
- Discourage people from using volatile substances in small, enclosed spaces.
- Avoid using in risky situations (near roads, water or open flames).
- Avoid more dangerous substances (i.e. butane and aerosols).
- Avoid smoking when using volatile substances.
- Avoid exercise during or after using volatile substances.
- Avoid surprising or chasing the person if they are intoxicated.

Methods of inhaling that can significantly increase risk of harm:

- Spraying directly into the mouth – may freeze or swell larynx/throat
- Plastic bag over the head, putting a container against face while lying and lying on a soaked mattress all increase the risk of suffocation.
- Filling a vessel (sink/bathtub) in a closed room increases the risk of displacement of oxygen and consequently death.
- Heating substances – increases the risk of explosion, fire and burns.

Hallucinogens

Hallucinogens intensify sensory experiences, affect perception, create disorientation, increase heart rate and sensory activity and muddle perceptions of reality. They include LSD, PCP, ketamine and naturally occurring hallucinogens such as magic mushrooms and mescaline (which can also be manufactured synthetically).[117]

Most hallucinogens are ingested either in the form of a tablet, a liquid, boiled into a tea or eaten or chewed (e.g. mescaline or mushrooms) or in substance-soaked tabs (LSD). Others are also injected, snorted and smoked (such as ketamine, PCP and LSD). Effects, commonly referred to as 'trips', are felt as quickly as 5–10 minutes (sooner if injected) and can last up to 12 hours.[117]

Strategies:[117]

- Use a small amount the first time and use less than more experienced users who have developed a tolerance and have better understanding of the effects.
- Effects can be uncomfortable and frightening. Encourage use in a safe and comfortable environment.
- Encourage one person in the group to stay sober/straight or take a small dose to be able to respond to unexpected or emergency events.
- Encourage occasional use and regular, substantial breaks between trips.
- Know your source – this is especially important for magic mushrooms as they should only be taken when picked by a trusted source who is very experienced in telling the difference between magic and toxic mushrooms.
- Avoid using with other substances.

Injecting and snorting

- See sections 'Injecting' in in amphetamines section on page 41 and 'Snorting' in ecstasy section on page 42 for further information.

Synthetic cannabis and other synthetic substances

Synthetic substances are products manufactured to mimic or produce similar effects to existing illegal drugs such as cannabis, methamphetamine and ecstasy.[118] The most common synthetic substances include 'synthetic cannabis' (e.g. Spice, K2 and Kronic), 'herbal highs and party pills' and 'research chemicals' (e.g. bath salts). Synthetic cannabis is used in the same method as cannabis and other synthetic substances can be smoked, ingested, snorted, inserted anally or injected.[118]

Though these are generally promoted or marketed as safe alternatives, in reality, the effects can be just as harmful as established illegal substances.[118,119] Often, ingredients in synthetic substances are unknown, and no dose advice is provided.

Strategies:[118]

- Encourage a very small dose first to gauge strength and effect. Allow the prior dose to wear off before gradually, slowly increasing any subsequent doses.
- Avoid taking synthetic cannabis on its own – take with a mixer (e.g. herbs).
- Avoid inhaling synthetic cannabis via bongs or pipes as this can increase overdose risk.
- Avoid taking synthetic substances in combination with alcohol and other substances (especially stimulants).
- Synthetic substances can contain high quantities of caffeine. Avoid caffeine consumption (e.g. coffee, energy drinks) as this can increase the risk of caffeine overdose.

For other harm minimisation strategies related to use of synthetic substances, please refer to other methods of use throughout this section.

KYLE

CASE SCENARIO

Kyle is a 17-year-old male living with his older cousin in Salisbury in the northern suburbs of Adelaide. He has been attending the local early psychosis service for the past eight months following the onset of FEP. Kyle was referred following an inpatient admission for treatment of acute psychosis, including command auditory hallucinations and thought disorder. At initial assessment Kyle presented with poor self-care, worsening over the last month. He was started on 2 mg risperidone daily and after 2 months, Kyle no longer heard voices, did not exhibit thought disorder and began working with his case manager on an application to a TAFE course. However, over the last 3 months Kyle's case manager observed a gradual decline in functioning, appearing dishevelled, missing appointments and reporting lowered mood. Last month he required another 10-day admission due to severely depressed mood and suicidality accompanied by a re-occurrence of positive symptoms (command auditory hallucinations). Kyle's dose was increased to 3 mg daily and he was discharged from hospital. In his session today, Kyle reveals to his case manager that he has been using ice.

CM: I really appreciate you sharing that with me Kyle. Can you tell me how do you use ice?

Kyle: I usually inject, it's the best way … a quicker hit.

CM: How long have you been injecting for?

Kyle: A few months I guess. Robbie, my mate, showed me how.

CM: Did Robbie go through what you need to do to keep yourself safe when you inject?

Kyle: Well, I know not to share needles if that's what you mean?

CM: That's a great start. What do you do with them when you're finished?

Kyle: Robbie's got a special box, but when he's not around I just wash it and wrap it up so I can use it again.

CM: OK, it sounds like the box you are talking about is a 'sharps box'?

Kyle: Yeah, that's it … like a yellow plastic one.

CM: It is great that Robbie has one of those and it would be really fantastic if we could get you one too. I wonder if it would be ok for us to talk a bit about how to use needles in a way that is safer?

Robbie: Yeah, sure. I kind of thought you might get angry or something when I told you and just tell me to cut it out … but it would be good to do that.

CM: I'm not here to tell you what to do. I wonder if at some point we can talk more about the reasons why you are using ice, but today my main aim is to help to minimise the risks that you might be exposed to. The reason I think that the sharps box is a good idea is that it's not safe to just wash and wrap a needle. Also, reusing equipment isn't great even if you aren't sharing the needle because of the risk of infection, so if you can avoid it then, that's better. Would you like me to get you a sharps box?

Kyle: Yeah that would be OK.

CM: I'll also get you some information on Needle and Syringe Programs in your area so you can access needles for yourself.

Kyle: Thanks.

CM: So did Robbie tell you about how to look after your injecting sites to prevent them getting infected?

Kyle: I've been OK so far… but no, I don't really know what to do.

CM: OK, well firstly using clean injecting equipment but also … [case manager goes on to explain good injecting practices and hygiene].

Kyle: That's a lot to think about. I just want to get high. I don't really care about all of that when I'm buzzing.

CM: OK, I see what you mean, but to protect your health this stuff is really important. You could get a really serious infection, like HIV or hepatitis, and in some extreme cases people have to get their limbs amputated because of infected wounds. If you can get into good habits now, then you can save yourself a lot of hassles.

KYLE

CASE SCENARIO (CONTINUED)

Kyle: Yeah, right. I don't want that shit happening.

CM: Also, I know you've said that you inject because it gives you a quicker hit. But did you know that you get a hit from smoking ice as quickly as from injecting it, then you don't have to worry so much about infections?

Kyle: Really? I didn't know that. Yeah I suppose injecting does scare me a bit. Robbie's always got something wrong, an infection or something, where he's been injecting.

CM: OK, so maybe smoking might be a better option for you? It's still important not to share your equipment and keep it clean, but usually that's less effort than with needles.

Psychoeducation

A large proportion of the young people who present to early psychosis services will have engaged in substance use or misuse at some time, and are likely to continue to use substances, particularly alcohol and tobacco. The role of education about substance use is to discuss the interaction of:

- substance use and the young person's mental health and recovery
- substance use and the young person's physical health
- substance use on the young person's social and occupational functioning.

As with all psychoeducation, the approach that a clinician takes needs to be informed by case formulation, both at the level of the problem being discussed (in this case, substance use) and at the level of the individual's overall presentation.

Substance use and mental health recovery

It is important to discuss the impact of substance use on mental health, symptoms and recovery with the young person. Young people in early psychosis services – especially those in the UHR cohort – should understand that substances such as cannabis or cocaine (among others) not only put them at higher risk of developing psychotic symptoms, but have also been shown to worsen symptoms in those who already affected.[24,120]

Substance use and relapse

For those young people who have recovered well from FEP, discussing the role of substance use in relapse will be especially relevant. Research has demonstrated that using substances such

PRACTICE TIP

When discussing substance use and its impact on mental health in general, it may be useful to use analogies such as diabetes to explain the negative relationship. Diabetes is not necessarily caused by sugar consumption, however, consuming high amounts of sugar will lead to an increased risk of developing diabetes. Similarly, using substances such as cannabis increase the risk of developing psychosis, and may precipitate psychosis onset.[121]

Some individuals may be more prone to developing diabetes or mental illness than others, due to factors such as family history, however, it is difficult to predict who these people are before the onset of sub-threshold or threshold symptoms. In the case of diabetes, once it has developed, some people may be able to control it using lifestyle factors only (diet and exercise) whereas others will need to take medication in combination with lifestyle factors to control symptoms. In either case, lifestyle factors are incredibly important in the management of the disorder. In the case of psychosis, we know that there are a range of interventions that promote recovery – physical health, psychological coping, occupational and social interventions, medication, family support and abstaining from alcohol and other drug use – however it is when these are combined, that the best recovery can be achieved.

as cannabis, can lead to a worsening symptoms profile over time,[120] and increases the risk of relapse.[122] Often, young people with psychosis will say that substance use helps them to cope or deal with symptoms such as poor sleep, low mood or anxiety in social settings. This may be true during the short-term (when peak intoxication occurs) and young people may find it difficult to identify medium- or long-term effects of using substances. Therefore, psychoeducation about substance use and mental health needs to focus on the short-, medium- and long-term impact of substance use and withdrawal on mental health, not only in terms of psychosis and relapse, but also in terms of impact on other common mental health problems in this group, such mood, anxiety, anger, irritability and motivation. Table 12 in the 'Medical management of substance use' on page 66 outlines some of the psychological effects of substance use, which may be a useful starting point for clinicians when discussing the relationship between substance use and mental health.

Substance use and interactions with medication

Young people prescribed medication will need to be informed about the interactions between their substance use and medications they are prescribed. In particular, alcohol may worsen extrapyramidal side effects, or some stimulants may have a different effect if taking antipsychotic medication. Tobacco and caffeine use must also be discussed. People often associate caffeine with drinking tea and coffee, however caffeine can be present in many foods and drinks, such as soft drinks, energy drinks and chocolate. This can be especially important to discuss with those young people who experience anxiety or poor sleep. Tobacco is often neglected because the harms associated with smoking are seen to less proximal (e.g. in the future) when compared with other substances. Clinicians should always discuss tobacco and nicotine consumption with young people, especially with those who are prescribed clozapine, as nicotine is known to decrease serum clozapine levels, and a change in dose may be needed depending on whether the young person has changed their tobacco smoking habits. For more information on the relationship between clozapine and smoking, please refer to the ENSP manual *Medical interventions in early psychosis: a practical guide for early psychosis clinicians*.

Substance use, physiological effects and physical health

Physical health is equally important to discuss with young people who are using substances. Often it is easier to discuss physical health complications when talking about substance use because:

- young people often don't acknowledge or have insight into the connection between substance use and mental health
- young people usually know that substance use is bad for physical health but don't know the specific ways the substance damages their physical health.

For example, because of widespread Australian public health approaches to smoking, most young people know that smoking tobacco causes lung cancer, and that it contributes to host of other cancers. However these campaigns often focus on the long-term, end-stage effects of smoking – something that young people find difficult to relate to their own lives, and something they often think will never happen to them. Therefore, it may be useful for psychoeducation to focus on discussing the early or intermediate signs of physical health damage. Some examples include:

- Dry mouth – over time this can contribute to bad breath, yellowing teeth, gum disease, and tooth loss.
- Cold hands – a sign of poor peripheral circulation: for young men it may be useful to relate this early vascular damage to impotence, for young women similarly reproductive issues or premature skin damage and ageing.
- Frequent colds, asthma, coughing, wheezing or trouble breathing: indicate respiratory health is already affected. This can eventually lead to emphysema or chronic obstructive pulmonary disease eventually leading to death.

Although these health complications seem minor compared to more serious cancers and heart disease, making the link between the two can highlight that physical health changes happen early during substance use. Smoking tobacco has been used here as an example, however this strategy (of linking minor physical health changes with longer term effects and outcomes) can be used with any substance.

Aside from the physical health complications of using substances, it is also important for young people to know about the immediate physical and physiological effects of using substances and of substance withdrawal. Resource 1 outlines some

physiological effects of substances commonly used by young people. If young people are continuing to use substances, psychoeducation about the physical effects of different substances can help them to use more safely. For example, in young people who misuse benzodiazepines, it is especially important to provide education about the interactions with other CNS depressants such as alcohol and opioids.

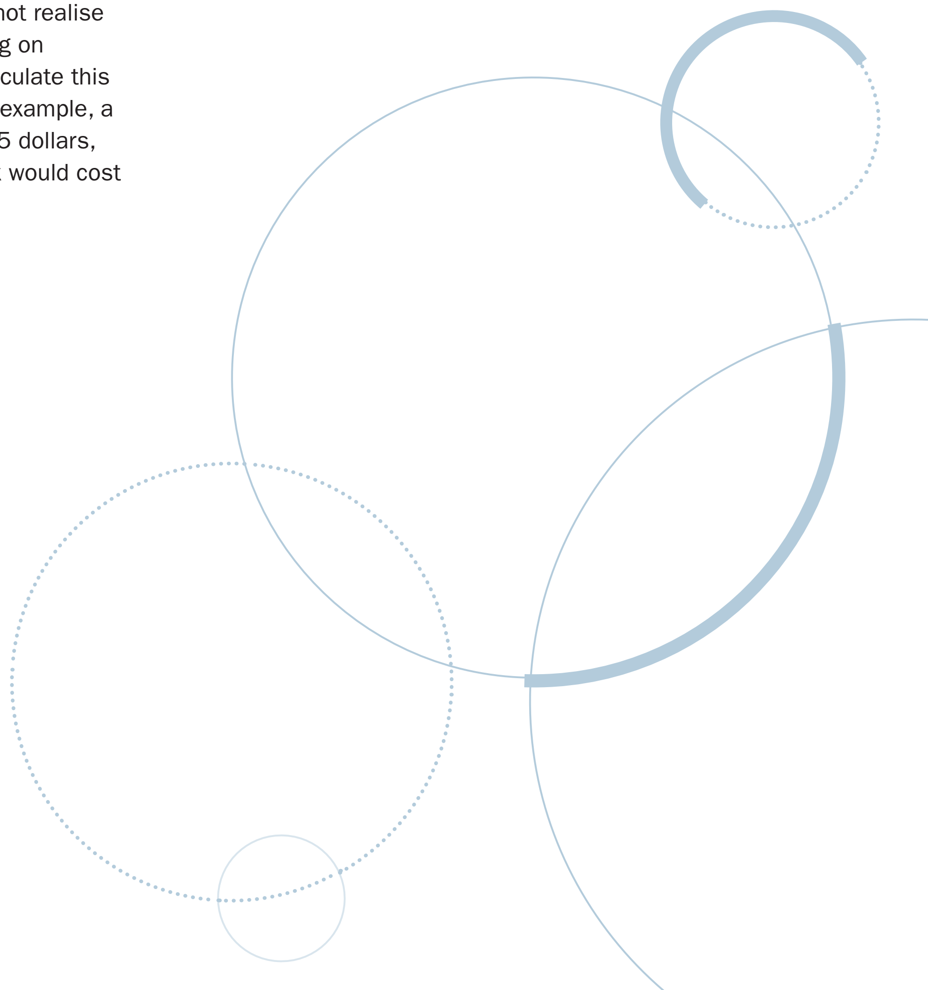
Substance use and social and occupational functioning

Psychoeducation about substance use should also pay attention to its relationship with social and occupational functioning. Most substance use serves a function: for some people it reduces social anxiety, for others it helps them relax to get to sleep. Without understanding the function of substance use, it will be difficult for the clinician to work with the young person on changing their use. For example, a young man may continue to use cannabis to help him to get to sleep, despite stating that he would like to stop.

Psychoeducation should also focus on the psychosocial implications of substance use, or psychosocial difficulties that the young person may be experiencing, but may not attribute to substance use, including:

- Financial – the young person may not realise how much money they are spending on substances. It can be useful to calculate this cost over the course of a year. For example, a packet of cigarettes might cost $25 dollars, multiplied by 3 packets every week would cost $3900 in a year.
- Relationships – the young person may not consider the full spectrum of effects substance use can have on relationships. Psychoeducation could include:
  - The effect of substance use on friendships and the effect of friendships on substance use.
  - The effect of substance use on family relationships.
  - How growing up in a substance-using family may have impacted their attitudes towards substance use.
- Work/school:
  - Is it affecting their concentration or attention?
  - Is it affecting their work performance or ability to find work?

Identify what is important to the young person that you can build into or add to their life (e.g. support with sleep, something to do, a way to cope with stress), or help maintain friendships.



KYLE

CASE SCENARIO (CONTINUED FROM PAGE 45)

CM: Can you tell me a bit more about why you have been using ice?

Kyle: Yeah, it's pretty simple really. When I use it I feel great. Like I can do anything. Nothing else matters. I love it.

CM: How long does that feeling last?

Kyle: Only on the weekends. I usually use a gram in total, every 6 hours or so to keep the buzz. But I guess I'm still feeling the after effects during the week.

CM: After effects?

Kyle: Yeah, I feel wiped out and everything, everyone pisses me off. I sleep for a day or so and I can't be bothered doing anything, well except eating. I sometimes don't even take my medications because I'm asleep.

CM: It sounds like when you are high that things are pretty great, but that the flip-side of that is that your sleep, eating and mood are knocked around for the rest of the week. I'm concerned that you're missing your medication.

Kyle: Well it doesn't do anything anyway.

CM: That surprises me because you told me that since taking the medications you stopped hearing the voices.

Kyle: Yeah, it did I suppose, at the start anyway. But over the last few months, the voices have started again.

CM: I'm really glad that you told me that. I wonder if you can think of anything that may have been a trigger for the voices coming back? I know that you said that you started using ice around that time?

Kyle: Yeah I did start around the same time … but I wasn't using ice the first time I heard the voices.

CM: Sure, I can understand why you wouldn't make that connection. But actually using ice can trigger psychotic symptoms, especially in people who might have a vulnerability because they have already had them before.

Kyle: I guess it did start around the same time. That really sucks.

CM: I can see you are disappointed but I'm glad that we have made that connection. You remember when we talked about the 'bucket'? The ice is an added stress that is leading to symptoms spilling over again. Then missing the medication means that you've taken away one of the things that was keeping the bucket from getting too full. Now you have more information to make a decision about what is best to do next …

Motivational interviewing (MI)

What is MI?

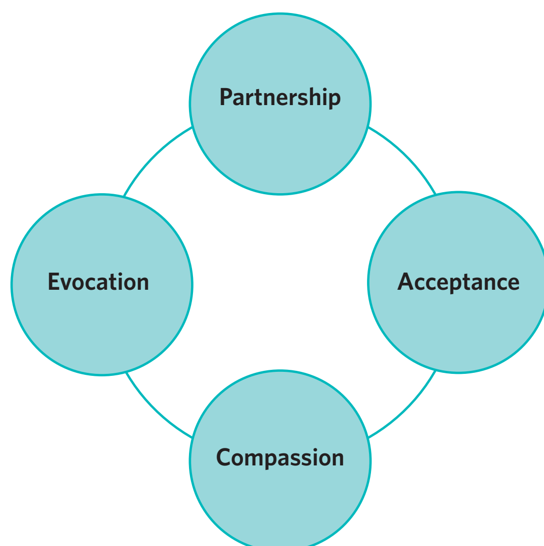
MI is defined as a 'collaborative conversational style for strengthening a person's own motivation and commitment to change'.[123] Clinicians using MI should guide the young person rather than take a directive or passive approach towards their substance use.

When using MI with young people with early psychosis, clinicians need to work collaboratively with the young person and their family to set realistic goals to reduce their substance use. Clinicians should explore reasons for change with the young person around their substance use, and be accepting and compassionate of the young person and their needs. It is also essential that clinicians strengthen the young person's personal motivation for wanting to change their use of substances.

The 'spirit' of MI

Miller and Rollnick (2012) express the view that the attitudes or perspectives of clinicians who work with young people around changing their substance use behaviour are far more important than the techniques or skills that they use.[123] They argue that without the underlying 'spirit' the same techniques can be used to manipulate individuals to do something that they don't wish to do. Figure 6 briefly outlines the four complementary elements of partnership, acceptance, compassion and evocation that form the foundation of MI.

FIGURE 6. **THE FOUR ELEMENTS UNDERPINNING THE 'SPIRIT' OF MI**



Partnership

- Active collaboration between the clinician and the young person
- The young person is the 'expert' on themselves
- Therapeutic environment that supports change but is not coercive

Acceptance

- Each young person has: absolute worth, value and potential as an individual
- Respect for the young person's right to autonomy, choice and self-direction
- Acknowledgement and affirmation of the young person's strengths and positive qualities
- Making the effort to understand the young person's perspective and experience through accurate empathy

Compassion

- Supporting and valuing the wellbeing of the young person
- Acting in the young person's best interests

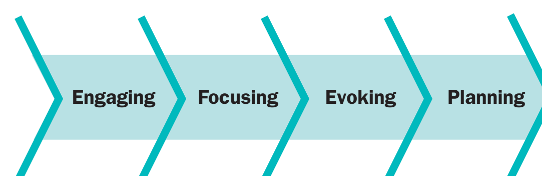
Evocation

- The assumption that the young person already has the knowledge, skills and resources needed for change
- The role of the clinician is to elicit, evoke and strengthen the young person's existing motivation and reasons for change

The process of MI

Miller and Rollnick have outlined four components that comprise the process of MI: engaging, focusing, evoking and planning displayed in Figure 7.[123] These processes are not intended to be strictly linear and clinicians may find that they move with a young person back and forth through the process.

FIGURE 7. **THE PROCESS OF MI**



Engaging

- Developing a working alliance with the young person
- Understanding how the young person perceives their substance use
- Emphasising reflective listening statements
- Paying attention to how engaged in the conversation the young person is

Focusing

- Awareness and clarification of the particular direction or goals that the young person has with respect to their substance use
- Being aware of the level of agreement between clinician perspective and the young person's goals

Evoking

- Eliciting the young person's own motivations for change
- Identifying and strengthening change talk
- Working with ambivalence
- Developing discrepancy

Planning

- Shifting the conversation to 'when' and 'how change will occur rather than 'if' or 'why'
- Seeking solutions from the young person
- Developing a change plan
- Strengthening commitment to change

Core interviewing skills (OARS)

The following four core skills, asking open questions, affirming, reflective listening and summarising should be used by clinicians throughout the process of MI. The way in which each skill is used may differ depending on the phase that the young person and clinician are currently working in.

Open questions

Using open questions allows space for the young person to reflect and elaborate on their own reasons for change rather than simply collecting information. Open questions helps facilitate meaningful engagement with the young person while allowing the clinician to understand their perspective.

In contrast, using closed questions may help to collect specific information but they may act as challenging statements depending on the situation. Using too many closed questions may cause the young person to disengage from the conversation, or feel that the clinician has made themselves the 'expert' instead of developing a collaborative relationship. Box 7 contains examples of open questions.

BOX 7: **EXAMPLES OF OPEN QUESTIONS**

- How has your drug use affected your day to day life?
- What would you say are the parts or your life that are most valuable to you?
- What do you think may happen if you continue using cannabis in the way you are now?
- I understand that there are there things that you hope will be different for you in the future. Can you tell me about them?

Affirm

This skill is consistent with principles of a strengths-based approach with an emphasis on recognising and reinforcing those positive characteristics inherent in the young person. The clinician views the young person as holding all of the resources they need to attain their goals and their role as one of encouragement and support. In practice, affirming involves a genuine understanding and respect of the young person and what is important to them. The message communicated is that the young person is valued, respected and possesses strengths. Affirmation supports engagement, positive self-concept, and reduces the potential impact of self-stigma that may be related to dual psychotic and substance use diagnoses (see Box 8).

BOX 8: **EXAMPLES OF AFFIRMING STATEMENTS**

- It is really impressive that you have been able to delay using any alcohol until much later in the day … I know that the last few weeks have been really stressful for you and to make a change during this time has taken a lot of strength.
- I really appreciate you making the time to come to our appointment today.

Reflective listening

Reflective statements are means of communicating that clinicians are paying attention and have heard and understood the meaning behind what the young person has said. Using reflective rather than directive language allows the young person to correct or clarify what is most important to them (see Box 9).

BOX 9: **EXAMPLE OF A REFLECTIVE STATEMENT**

Young person: It pisses me off that everyone keeps telling me to stop smoking weed. My drug use doesn't have anything to do with the psychosis. I've smoked weed for ages and never had any problems … feeling down all the time and not being able to get a job is what I really need help with.

CM: You're feeling angry that people have been focussed on your drug use rather than on the things that are most important to you, such as improving your mood and getting a job. It sounds as if you do not see a connection between using weed and your experience of psychosis because you were able to smoke for a long time without any problems.

Summarising

Summary statements may be used to bring together information at particular points within the treatment process. They allow a synthesis of where the young person is and should be used at appropriate points to introduce a point of change, clinical intervention or invite the young person to make a choice or decision. As with reflective statements they should be framed in such as way to invite correction or elaboration from the young person. Summary statements may be used to highlight discrepancies between the young person's current situation and future goals. As with reflective statements they should be framed in such a way as to invite correction or elaboration from the young person. An example of a summarising statement is presented in Box 10.

BOX 10: **EXAMPLE OF A SUMMARISING STATEMENT**

CM: If it is okay with you, I'd like to check that I have understood everything that we've been talking about so far. You've been worrying about how much ice you have been using in the past month because you recognise the relationship between that and your psychotic symptoms, like feeling paranoid. It has been very stressful for you lately because your dad let you know that he doesn't want you living at home while you are still using. Despite really wanting to cut back, you've tried a few times and have found it really difficult particularly when your mood becomes low as you come off the ice. Am I missing anything so far?

MI strategies

Eliciting change talk

The underpinning principles and spirit of MI are that the young person is not pushed or coerced into any particular course of action. However, one challenge can be that young people do not have a clear goal for change or plan for achieving this. As a result, clinicians and young people may find themselves trapped in a cycle of ambivalence. An MI strategy to resolve this is to elicit 'change talk' by asking targeted questions designed to alert the young person to discrepancies between their current situation and where they would like to be.[124] The clinician can then build on the young person's confidence in their ability to change by drawing their attention to strengths and previous experience of success. What is also important is that clinicians pay close attention and 'catch' the young person during their 'change talk' and use a Socratic style of enquiry to move the young person from a position of ambivalence to commitment to change. Table 7 on page 52 contains some examples of questions that will allow clinicians to elicit change talk as well as some examples of change talk from a young person's perspective.

TABLE 7. **ELICITING CHANGE TALK**

CHANGE TALK	QUESTIONS	EXAMPLE A YOUNG PERSON'S RESPONSE
Disadvantages of remaining in the current situation	What concerns you about your ice use? Can you tell me about the difficulties that have resulted from your substance use?	'At the moment I'm really worried that if I don't cut down my use that I'll end up on the street … that my dad will kick me out'.
Advantages of change	What are some of the benefits of reducing your ice use? Can you describe what would be different in your life if you reduced your ice use?	'If I was able to even get through a day without using then I would feel so much better about myself as a person'.
Optimism about change	Can you tell me about others times in your life when you have made important changes? What personal resources did you use that helped you to make that change?	'When my girlfriend told me how important it was to her that I change … I did really well for a few weeks.' 'I think what really helped was seeing that I was worth something to someone. I realised that my relationships are really important to me so that kept me going.'
Intention to change	What are the things that you want to be different in your life in the future? If you could put aside your worries about the potential obstacles, what would you change about your substance use?	'I want to be in a happy relationship where my girlfriend can really rely on me'.

Decisional balance

This strategy is a way of encouraging the young person to have a clear idea of the pros and cons of making a change to their substance use. At times there can be an assumption on the part of the clinician and the young person that once they identify reasons to change that will be enough to sustain motivation and change that direction. However, in reality, there are likely multiple reasons that changing may be negative or difficult for the young person. For example, a young person who uses cannabis to help them to fall asleep may identify a potential negative impact on their sleep, at least initially, if they cease to use. It is important that young people have considered the implications of change prior to committing to action as they are more likely to persist with change during challenging moments. It also provides an opportunity to tease apart the young person's ambivalence, validate the many reasons for substance use and support the young person to have strategies to manage the potential negative impact of change.

The decisional balance form can be found in Resource 7. Clinicians should work through the sheet with young people, encouraging them to write down all of the advantages and disadvantages of continuing with their current substance use versus making a change. It is best to work in a clockwise direction, beginning with the pros and cons of not changing, then the cons of change and finish with the pros for change so that the young person finishes this exercise thinking about the benefits for them. An example of how this worksheet is used can be seen in the case scenario of Sean, as he explores the pros and cons of using ice and ecstasy.

SEAN

CASE SCENARIO

	PROS	CONS
No change	• *Easier to keep doing what I'm doing* • *When I go out and use I have more fun than when I don't use* • *Drugs make it easy to be confident and be social*	• *Voices and feeling paranoid might get worse* • *Will never be able to save up money and go travelling or buy a house* • *Depression and anxiety might get worse* • *I will feel like a failure if I always need drugs to feel good*
Change	• *It is important to me not to be dependent on drugs* • *Improve my mental health generally and reduce voices and paranoia* • *Have more energy, get physically fit* • *Save money and be able to travel or buy a house* • *I'll feel proud of myself* • *Some of my friends might want to change things as well*	• *I won't have fun with my friends when I go out* • *Friends will think I'm boring and might stop inviting me* • *Don't know what else I'd do for fun* • *Depression and anxiety might get worse*

Sean has identified a number of pros and cons of changing his substance use. There is the clear potential for a perceived or actual negative impact on his relationships as well as a sense of being uncertain about whether he will be able to find other activities that he will find fun or enjoyable. In addition, he appears uncertain about whether reducing his substance use will help him to feel less anxious and depressed or whether it may make these experiences worse. The clinician working with Sean would want to spend time exploring how the potential disadvantages to change may be reduced prior to implementing any strategies targeted specifically at his substance use. For example, encouraging Sean to think about what else he is interested in (e.g. going to see bands, joining a soccer club), building up coping strategies (e.g. relaxation or cognitive strategies for managing anxiety), providing psychoeducation (e.g. relationship between depression and reducing cannabis use) and acknowledging where there may be disadvantages (e.g. some friends may not understand his choice to change).

Although it may seem counterintuitive, spending time discussing the negative aspects of change is a vital step. Young people are more likely to feel validated, that they have had time to discuss their concerns and to be able to focus with the clinician on the reasons that they do want to make a change. A young person may also decide that based on this information, they are not ready to make a change yet, which is extremely useful information as it will inform an approach that is targeted at a pre-contemplation stage of change.

Exploring importance and confidence

It is important to understand the value a young person places on making a change to their substance use and how confident they feel in their ability to change. Importance and confidence are two central ingredients to change and measuring this in a deliberate way with a young person serves a dual purpose:

- it allows the clinician to understand better where the young person is coming from
- it provides opportunities for the young person to reflect on what they need to be able to change.

This strategy involves asking the young person to make ratings about importance and confidence on a ruler in response to the following questions. These may be individualised to reflect the specific goal (e.g. cessation versus reduction) and substance (e.g. alcohol versus cannabis). Resource 8 is a template for exploring importance and confidenece of change with young people.

Importance and confidence ratings

On a scale of 0 to 10, how important is it for you to make a change to your substance use?

Not important — *Extremely important*

0 1 2 3 4 5 6 7 8 9 10

On a scale of 0 to 10, how confident are you that you can make this change to your substance use?

Not confident — *Extremely confident*

0 1 2 3 4 5 6 7 8 9 10

Exploring these ratings in a Socratic manner aims to elicit important reasons for change as well as solutions to obstacles that the young person anticipates they may encounter. The following case scenario demonstrates a dialogue between Sean and his case manager exploring the importance of change and the confidence he has that he can reduce his use of party drugs.

SEAN

CASE SCENARIO (CONTINUED FROM PAGE 53)

CM: On a scale of 0 to 10, how important is it for you to stop using ecstasy and ice?

Sean: Probably about a 5, about halfway.

CM: Great, why do you think you picked a score of 5?

Sean: Well, I don't know … I just want to have more in my life! I guess I just know that it can't always be like this and I've got to stop at some point.

CM: Yes, you've said that for a while now you have had this sense of wanting more for yourself. What led you to pick a score of 5 rather than a 3?

Sean: The last few times I've used it has taken me a while to recover. It just seems to be taking its toll on me physically and mentally. So I suppose it has become more important than when I first started thinking about cutting back.

CM: What do you think would need to happen for you to move from a 5 on this scale to a 7?

Sean: I hate to say this … it sounds like I'm just waiting for things to be really bad! But probably if my mood kept getting worse. Or if the voices were happening more often, because those things kind of ruin the good bits about using.

CM: So making a change to your drug use would be more important if the impact on your mental health was worsening. That then the negatives would start to outweigh the positives of using for you?

Sean: Yeah, and I can see that is happening already. I think that I feel nervous about committing to making a change though.

CM: Sure. Which is really normal for many young people in your situation. I wonder if feeling nervous might be something that has impacted on your confidence about making a change. On the same scale of 0 to 10, how confident are you that you can stop using ecstasy and ice?

Sean: That one is way less. About a 2.

CM: Why do you think you picked a score of 2?

Sean: Probably the biggest thing is that I expect to fail. I just don't know if I have what it takes to do something different to my friends … I worry that they'll reject me and then I will have less than before.

CM: It sounds like continuing to have friendships and being included is very important to you. I wonder if you can tell me what you think led you to select a 2 rather than a 0?

Sean: There is a small part of me that knows that my friends are better than that. Like I'm being a bit unfair thinking that all we have is clubbing.

CM: Right so there is some confidence in the idea that perhaps you are exaggerating your friends' responses in your mind?

Sean: Yeah, probably some of them wouldn't make an effort. But for Mick and Andy, we've even talked about wanting the same thing sometimes.

CM: So what would it take for you to move from a 2 to a 5 in confidence?

Sean: Definitely if my friends were on board. If one or two of them wanted to cut down as well then I think I could even be a 7!

Developing a change plan

Once the young person has expressed an intention to change their substance use (whether this be a small reduction or ceasing completely) it is helpful to support them to develop a change plan. This involves developing a clear plan with the young person that takes into account what the young person wants to do and what they think they need to achieve this. Asking the young person 'It sounds to me that you don't want things to stay the way they are now. What do you want to do at this point?' allows them to take the lead with suggesting the next steps. If clinicians think that is may be helpful to offer suggestions then this should be done in a way that continues to highlight to the young person that they are the best 'authority on themselves'.

Cognitive–behavioural interventions

This section provides an overview of cognitive–behavioural interventions for working with young people with co-occurring substance use and psychosis.

Why use cognitive–behavioural interventions to address substance use?

Cognitive–behavioural interventions can help young people understand how their substance use interacts with their thoughts, emotions, physical sensations and odd or unusual experiences. These interventions use a learning-based approach to develop coping skills, and to target unhelpful behavioural patterns, cognitive and motivational barriers.[125] Cognitive–behavioural interventions can help young people develop strategies to reduce or cease their substance use and understand that their substance use is related to:

- persistent psychotic symptoms
- low or anxious mood
- impaired social and occupational functioning.

Additionally, these interventions may be used to:

- support stress management
- address co-occurring symptoms or conditions
- address other psychosocial factors associated with incomplete recovery from psychosis.[126]

Understanding substance use from a cognitive–behavioural perspective

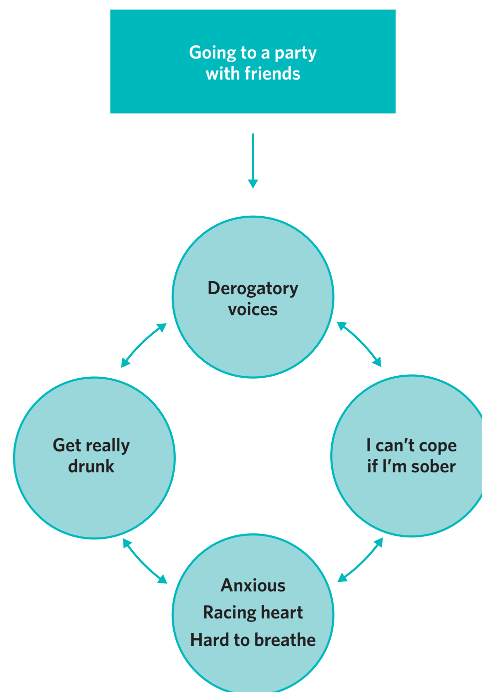
For a description of the cognitive–behaviour model and more detailed descriptions of specific cognitive–behavioural interventions presented in this section, please see the ENSP manual *Psychological interventions: why, how and when to use in early psychosis*.

The fundamental aspect of substance use from a cognitive–behavioural perspective is that substances reinforce certain behaviours through their impact of physiological, emotional, cognitive and social factors. Chronic or repeated substance use reinforces patterns of both positive and negative effects, such as increasing social bonds (positive) and reducing social anxiety (negative), that may be associated with situational and internal triggers.[125] Cognitive–behavioural interventions aim to modify or weaken the reinforcing effects of using substances by:

- increasing alternative reinforcing behaviour (e.g. returning to playing regular sport with friends)
- developing coping (e.g. slow breathing to manage anxiety)
- modifying unhelpful beliefs (e.g. 'I won't be able to cope in social situations without drinking')
- facilitating a focus on longer-term goals (e.g. returning to study).

Figure 8 outlines an example of a cognitive–behavioural formulation of the relationship between substance use, psychosis and anxiety symptoms.

FIGURE 8. **COGNITIVE–BEHAVIOURAL MODEL OF PSYCHOSIS AND SUBSTANCE USE**



Cognitive–behavioural formulation for substance use and psychosis

When clinicians consider using cognitive–behavioural interventions while working with a young person, it may be useful to complete a formulation that focuses on a particular presenting problem or a goal that you would like to work on together. This formulation may help clinicians and young people to develop a shared understanding of specific maintaining factors for current problems and provide a reason and rationale to the young person for using particular cognitive–behavioural interventions to attain goals.

There are a number of cognitive–behavioural formulation approaches that can be taken depending on what is appropriate for the young person, for example, a cross-sectional versus longitudinal approach. A cross-sectional approach, outlined in Figure 8, focuses on ‘in the moment’ pattern of responses to a particular trigger or event, whereas a longitudinal approach incorporates the young person’s early experiences, core beliefs, schema and long-term compensatory and safety behaviours relevant to the particular problem (Figure 9 on page 58). Please see the ENSP manual *Psychological interventions: why, how and when to use in early psychosis* for more details on cognitive–behavioural formulation. A case scenario including an example of a longitudinal cognitive–behavioural formulation for ‘Ray’ is presented below.

RAY

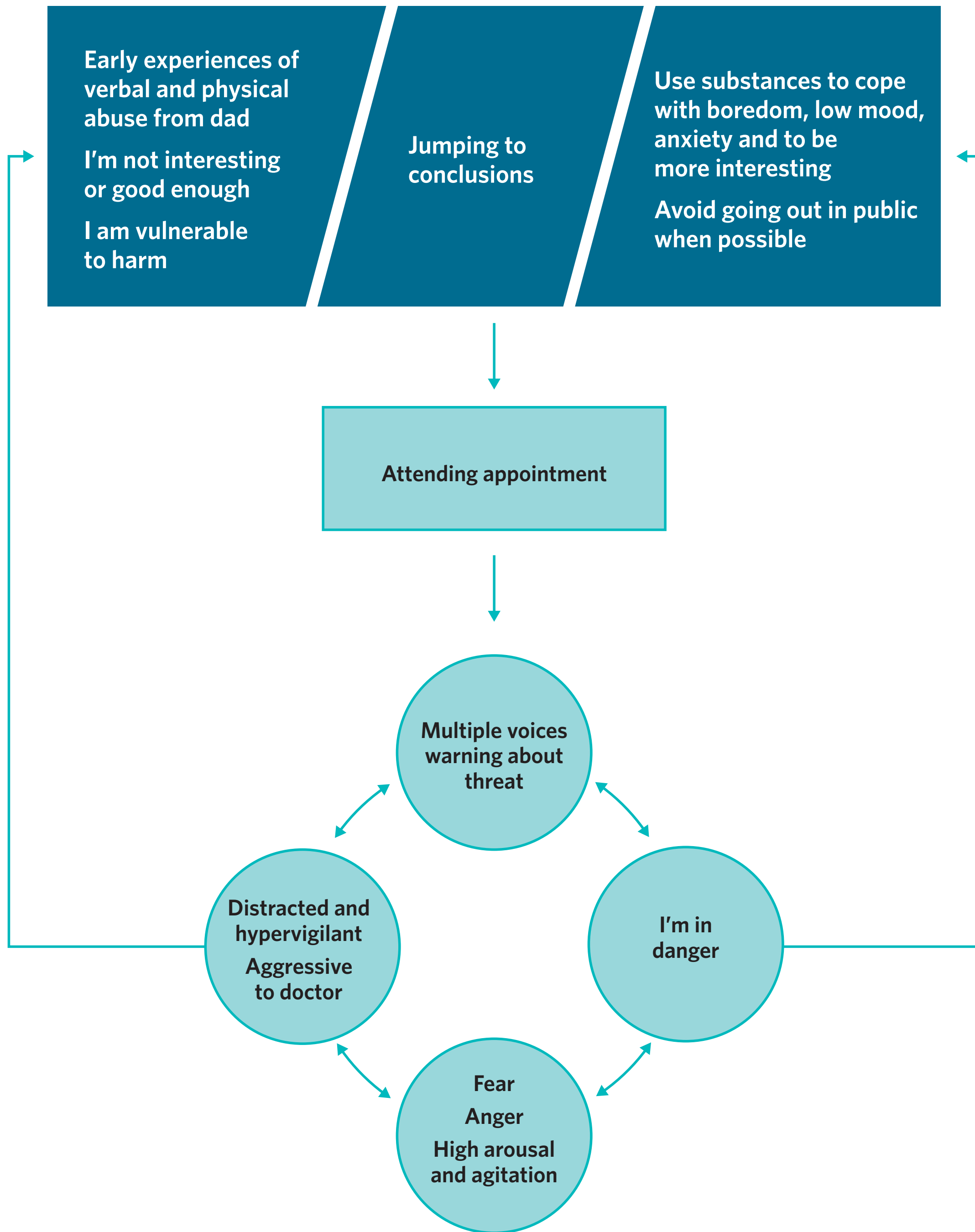
CASE SCENARIO

Ray is a 23-year-old man, living with his mum and younger brother in the eastern suburbs of Melbourne. He was referred to the early psychosis service by the local emergency department in the context of psychotic and manic symptoms.

At initial assessment Ray was seen with his mum, Tanya. Ray presented as guarded, irritable and agitated with grandiose and paranoid delusions. He endorsed the daily experience of distressing auditory hallucinations but minimised other psychotic experiences and expressed suspicion about the motives of the interviewer and his mum. His mum reported that despite starting medication Ray was only sleeping between 2–3 hours per night and that he had continued to use methamphetamine (with a pipe) on a daily basis. Tanya also expressed concerns about Ray’s verbally aggressive and agitated behaviour, particularly when directly towards her younger son.

Ray agreed to work with his case manager around the experience of distressing voices and how this affected him during his last appointment with the doctor. Together, they discussed some of the ‘in the moment’ triggers and responses for this problem. Ray was able to discuss some of his background and history, including early experiences of physical abuse that he agreed may be related to his current difficulties. Ray explained that he had been using ice for a number of years because it helped him cope with boredom, to feel more interesting, powerful and safe when he went out in public.

FIGURE 9. **LONGITUDINAL COGNITIVE–BEHAVIOURAL FORMULATION FOR RAY**



It is important for clinicians to emphasise that the principles of formulation and treatment planning for substance use are the same as working on any presenting problem or goal. Difficulties associated with substance use are unlikely to occur in isolation from other problems such as anxiety, depression, interpersonal difficulties or distress related to psychotic symptoms. Therefore, it is important for clinicians to concentrate on the whole person and what is important to them rather than focusing exclusively on treating a specific symptom or problem. Clinicians can do this by understanding the reasons behind why the young person uses substances, including both the positive and negative effects of their use, and the implications of changing their use. The ultimate goal of addressing substance use is to reduce harm, distress and dysfunction, and increase wellbeing.

Self-monitoring

Self-monitoring involves a young person monitoring the occurrence and presence of particular problems, for example, their substance use and depressive and anxiety symptoms. There are a number of ways that young people can record their daily substance use and associated emotions, cognitions, behaviours and psychotic symptoms, including the substance-use record (see 'Recording substance use' on page 25) or by using thought-records (see an example thought-record for Ray in Table 8). This helps a young person to make connections between situational (e.g. being around friends who are using) and personal (e.g. feeling lonely) triggers and to establish some form of mastery or control over their problems. Resource 9 contains a template thought record for clinical use.

TABLE 8. **RAY'S THOUGHT RECORD**

TRIGGER	THOUGHTS AND BELIEFS	EMOTIONAL AND PHYSICAL RESPONSE	ODD OR UNUSUAL EXPERIENCES	BEHAVIOUR
Getting ready to leave the house to see a friend	*I haven't seen him in ages* *He thinks I'm boring* *I won't know what to say*	*Anxious* *Irritable*	*Hear a voice telling me 'you're a loser'*	*Smoke a pipe to feel more confident*

Behavioural interventions for working with substance use and psychosis

There are a range of consequences following a psychotic episode that may lead to an increased use of substances, or make it more difficult for a young person to reduce their use. Common experiences include depression, anxiety and lowered self-confidence that subsequently impact multiple domains of a young person's life. Young people may reduce their involvement with occupational and social activities or may develop negative psychotic symptoms after a psychotic episode. Many young people cope with these experiences by avoiding activities they previously enjoyed such as social interaction and participation in work or school.

Behavioural interventions are useful for working with young people towards a range of behaviour change goals that may support a reduction in substance use. These include increasing a young person's social and occupational participation, reducing anxiety, improving low mood and improving self-confidence.

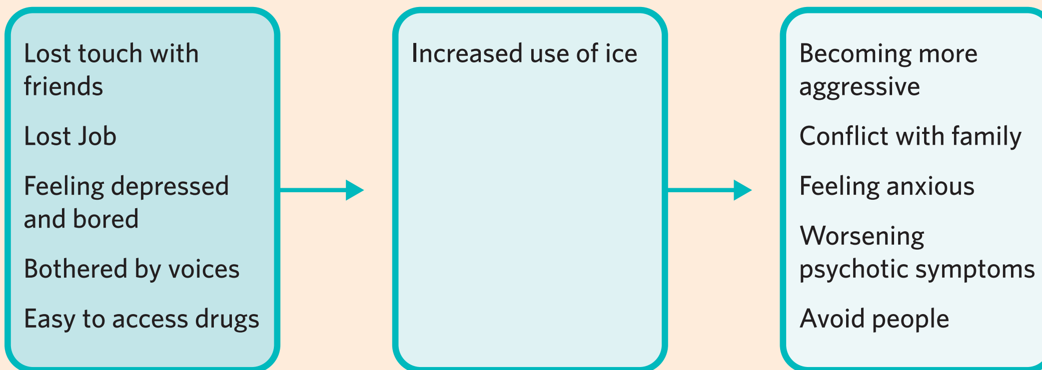
Behavioural activation

Behavioural activation is a common behavioural intervention that can be used (as part of overall treatment program) to treat depressive symptoms including low mood, anhedonia and low motivation.[127] It can also be used to address the impact of negative psychotic symptoms, although the evidence is limited.[128] For many young people with early psychosis, their use of substances may increase as a way of coping with boredom, negative emotions or loss of meaningful involvement in work or education.

Avoiding or withdrawing from social or occupational settings is common when young people continually use substances and they may become stuck in a vicious cycle where using substances or obtaining substance begin to dominate the young person's life (see scenario). The impact of increased substance use then reinforces further withdrawing from usual activities by affecting motivation, symptom severity and interpersonal or financial problems.

RAY

CASE SCENARIO (CONTINUED FROM PAGE 57)



Encouraging young people to identify activities they previously found enjoyable or rewarding and gradually re-engage with these activities is the premise of behavioural activation (case scenario). If a young person can gradually reintroduce activity goals there is a positive flow-on effect on cognition, emotion and physical domains. To help young people identify activities, it may to useful to:

- Ask about past activities – what was fun or gave them a sense of satisfaction?
- Work through a checklist of enjoyable activities (see Resource 10) – ask the young person to circle things they would like to do.
- Break down larger activities into smaller steps – if the young person does not feel like they can achieve everything at once, for example, cleaning out a drawer in their room versus cleaning the entire room.

Developing a behavioural activation plan by using a calendar or diary to help the young person plan graded activities they enjoy or get satisfaction from. It is important that clinicians include enough activity so that the young person can have a sense of achievement but not too much that it makes the plan unattainable and feel disheartened. Clinicians should ensure that young people have a way of keeping track of activities when is planned and a way of noting when the activities are completed that is using a paper calendar that can be put up somewhere at home or tasks list in a phone. An example of a behavioural activation plan is presented in Table 9 on page 61.

RAY

CASE SCENARIO (CONTINUED)

CM: You've said that one of the reasons that you have found it hard to cut back on using ice is because you feel that there is nothing else to do with your day.

Ray: Yeah, I kind of lost touch with a lot of people after I went into hospital. Even Rach, I mean she doesn't want me to come over that much and a lot of my friends who don't use they are kind of connected to her. And … I'm not working so I'm not doing anything else.

CM: Can you tell me a bit more about the things you used to do before that made you feel good?

Ray: Riding my bike was something that I love to do … but I lost my license when I was manic because I crashed it. I used to drive up to the country and go fishing with my uncle, he's a pretty good guy and we'd just chill out.

CM: I can see how things are really tricky at the moment, and something that brings a lot of positives into your life doesn't seem possible at the moment. Can you tell me, is there another way that you are able to have that 'chill out time' without needing your bike?

Ray: Yeah, I guess. My uncle said that I could come up and stay with him any time I wanted to, and my cousin, he would probably take me up one evening after work because he commutes. I just didn't want to be around them because I feel a bit ashamed that I'm so useless at the moment.

CM: So you kind of got stuck in this cycle, where you don't want to ask for help but by doing that you miss out on things that might make you feel better.

Ray: And get back on track. Because when I see my uncle, he's kind of motivating as well. I know he'd probably try and give me a bit of work to do during the week too which would keep me away from the gear for a while.

CM: He sounds like a good person to be spending a bit of time with at the moment. I wonder if we could try and put together a bit of a plan, not just for spending time in the country but for other stuff that you know used to make you feel good but that you've stopped doing?

TABLE 9. **RAY'S ACTIVITY PLAN**

	MON	TUE	WED	THU	FRI	SAT	SUN
Morning	Get up and shower before 10am	Cook breakfast for Rach	Get up and shower before 10am	Go for a walk with mum		Help my uncle with jobs on the farm	Go for a ride on the dirt-bikes
Afternoon	Go to the supermarket to get food for the week with mum	Catch up with friend Dave		Job search online	Get a lift with James to the farm	Fishing with uncle and James	Lift back to Melbourne with James
Evening	Rach coming to stay at my house	Watch TV with mum	Go to the movies with Rach		Dinner with uncle's family	Dinner with uncle's family	

Behavioural experiments

Behavioural experiments are collaboratively designed activities based on a cognitive–behavioural concept of a problem, and are used to directly test specific beliefs about self, others and the world gained through experience and observation.

Setting up behavioural experiments

Behavioural experiments should be primarily informed by a comprehensive case formulation and based on a cognitive–behavioural formulation of presenting problems. Clinicians should develop a shared understanding with the young person about what beliefs and behaviours are maintaining a particular presenting problems such as substance use. Table 10 contains an example of a behavioural experiment that was developed by Ray and his case manager. Ray identified that he found it particularly difficult to reduce his use of ice when in social situations. He also disclosed that he uses ice when he leaves the house because it made him feel more social and normal if he needed to be around other people. He agreed with his case manager to test the belief 'I am more interesting and fun to be around when I am using ice'.

TABLE 10. **RAY'S BEHAVIOURAL EXPERIMENT**

Target thought
People like me more and find me more interesting and fun to be around when I am using ice
Alternative thought
People like me more when I am myself, not using ice
Experiment
Ray to complete a repertory grid with words describing himself when he is high versus when he is not
Ray's mum and girlfriend to complete the same activity
Comparison of the three grids to see how similar or different they are
Predictions (% belief)
Rachel will say that I'm more interesting, fun, energetic, friendly and confident when I'm using ice – 80%
Mum will say that I'm more interesting, fun, energetic, friendly and confident when I'm using ice – 50%
Rachel will say that I'm less interesting, fun, energetic, friendly and confident when I'm using ice – 20%
Mum will say I'm less interesting, fun, energetic, friendly and confident when I'm using ice – 50%
Outcome
Both Rachel and mum said that I was less interesting, fun, friendly and confident when using ice. Both of them said that I was more aggressive and rude when I was using.
My ratings of myself using ice were completely different to Rach and mum.
What I learned
How I feel when I am using ice is not the same as what others see.
I don't need to use anything to make me 'good enough' for the people that I care about.

Stress management and coping

Developing a range of coping strategies to manage life stressors is an essential and highly effective component of therapeutic work for young people with early psychosis and co-occurring substance use. The stress–vulnerability model emphasises the importance role stress has in: precipitating a first episode of psychosis, maintaining symptoms, influencing recovery and increasing the risk of relapse.[129] Given the high rates of reported trauma among young people with co-occurring substance use and early psychosis, working on physiological arousal may also be helpful. Furthermore, there is evidence to suggest that individuals who use substances have less effective coping strategies when trying to manage stress and anxiety;[130] these resources are likely to be further stretched by psychosis and its sequelae.

Using interventions that help with relaxation, manage stress and distress tolerance may be useful when working with young people who use substances to cope with their high levels of generalised or social anxiety, poor distress tolerance or difficulty sleeping or concentrating. The ongoing use of substances may worsen anxiety symptoms and result in an exaggerated anxiety response when they do eventually begin to reduce their substance use.

Interventions that could be this in this population group include:

- understanding stress and anxiety
- the impact of the ‘fight or flight response’ on the body and mind
- breathing exercises
- recognising and rating distressing emotions
- distraction techniques
- grounding and visualisation exercises.

Specific strategies for working with young people with anxiety are described below.

Understanding the relationship between substance use and anxiety symptoms

As discussed previously, young people may have different reasons for each substance that they use. Some young people may report that their use of substances can help to calm them or ease anxiety, particularly in the short-term. It is important to develop an individualised formulation of the relationship between substance use and anxiety.

Clinicians may use thought records or symptom checklists to develop a comprehensive description of the young person’s anxiety response (e.g. thoughts, emotions, physical sensations and behaviour)

Relaxation and coping interventions are likely to be useful when the young person demonstrates fear or worry about the experience of anxiety itself as shown in the thought record for Ray in Table 11.

TABLE 11. **THOUGHT RECORD FOR RAY**

TRIGGER	THOUGHTS AND BELIEFS	EMOTIONAL AND PHYSICAL	ODD OR UNUSUAL EXPERIENCES	BEHAVIOUR
Being at the pub with friends and not using ice	*I don’t know what to say* *I’m too anxious around people without ice* *I will freak out*	*Nervous* *Vulnerable* *Sinking feeling in stomach*	*Mumbling voices*	*Stick to the edge of the group* *Don’t talk much* *Have a lot to drink*

Normalising the physical and psychological impacts of anxiety

For young people who are distressed by their experiences of anxiety, it can be useful to normalise the experience of physiological symptoms related to anxiety and assist them to take notice of how their experiences can be understood as a positive and normal response to stress.

When providing psychoeducation about anxiety to young people clinicians should:

- Introduce the concept of the 'fight or flight' response.
- Ask the young person to consider a common example where the anxiety response would be adaptive (e.g. encountering a dangerous animal in the wild).
- Explain that experiences of panic or social anxiety are an identical response that have been triggered in situations where our minds trick us into thinking that we are in danger.
- Use a rating scale or metaphor that the young person finds useful to be able to monitor their level of anxiety or distress. Examples include: a distress thermometer, car speedometer or simply a 0 to 10 scale. Ask the young person to notice and label experiences of anxiety and distress in a quantifiable way.

Relaxation and distress tolerance strategies

Most relaxation and distress tolerance strategies rely on quite simple skills, such as slowed breathing, counting each breath, tensing and relaxing muscles, or purposeful noticing and awareness of the senses.

These strategies are most effective when the young person understands how and why they are effective and when they are practiced regularly while in a less anxious state (a rating of 6/10 or less on the distress scale).

You can find more information about stress management and distress tolerance strategies in the ENSP manual *Psychological interventions: Why, how and when to use in early psychosis*.

Cognitive interventions

At the core of many psychological interventions, particularly cognitive–behavioural interventions, is the idea that our emotions and behaviour are driven by: our appraisals, moment-to-moment thoughts and underlying beliefs. The previous two examples have focused on directly modifying the young person's behaviour or experience of emotional distress. Cognitive interventions aim to modify unhelpful thoughts and beliefs; this is done by examining evidence for particular thoughts and their use or usefulness.

For example, Ray described a number of beliefs that maintain his pattern of social withdrawal, ongoing substance use, aggression and exacerbation of psychotic symptoms (see below).

CASE SCENARIO
(CONTINUED FROM PAGE 61)

RAY

Beliefs maintaining substance use

- I'm more fun when I use
- Ice is the only thing that makes me feel happy
- There's no point in trying something different, I can't change

A full description of cognitive interventions is beyond the scope of this manual, however strategies include:

- gathering evidence for and against the belief
- exploring alternative explanations
- developing more realistic balanced beliefs
- working with core beliefs and schema.

Ray and his case manager agreed to explore the belief 'there's no point in trying something different' because he can't change.

RAY

CASE SCENARIO (CONTINUED)

CM: Can I ask you how you have drawn this conclusion that you won't be able to change or do things differently even if you want to?

Ray: When I've tried to cut down in the past I have always failed … it's not that I can't see how damaging it is, it just feels too hard.

CM: So you believe that all the evidence from your past attempts has shown you that it isn't possible to change?

Ray: Yeah, I mean I'm still using aren't I?

CM: I wonder whether there have been other things in your life that have felt 'too hard' at the time but where you have been able to cope or make changes?

Ray: I guess so, yes.

CM: Sometimes I've noticed that you are really good at pointing out to me where you think you have failed … but that the times when you do manage to make a change are seen as less important.

Ray: Yeah? Like what?

CM: Well, the other day you went to the pub with your friends and although you felt really anxious you didn't use any ice at all.

Ray: I got really pissed that night … that wasn't a great result.

CM: No, but then the next time you caught up with friends you were able to only have a few drinks.

Ray: I guess I hadn't really seen that as being a big deal, but it is a small step at least.

CM: It was definitely a step in the right direction. I wonder if you were to start paying close attention to those small steps and even writing them down. Then we could compare that evidence that you think shows you can't change and see how it measures up?

Over the following two weeks, Ray begins recording the evidence for and again his belief that he can't change his substance use.

Evidence for the belief – I can't change my substance use

- I used ice twice on the weekend
- When I don't use for a few days I get really aggressive and I don't like myself
- I feel really anxious when I have to leave the house without having a pipe

Evidence against the belief – I can't change my substance use

- I was able to catch up with friends three times without using ice even though some of them did
- I felt anxious but was able to use the new breathing skills to calm myself down

New cognitive–behavioural and specialised interventions

There are a number of new complementary theoretical models such as Acceptance and Commitment Therapy (ACT) and Mindfulness[131,132] that provide alternative perspectives on how to work with young people with early psychosis. The emerging evidence suggests that these are effective treatments for substance use disorders [133] and individuals with psychosis.[132] However, there is still no solid evidence for use of these interventions with young people with co-occurring substance use and early psychosis.

These models are already established and readily used for common co-occurring conditions such as anxiety or depression, or cross-diagnostic goals such as interpersonal relationships, distress tolerance, acceptance, coping or personal values. For further information, please see the following recommended resources:

- *Mindfulness and Acceptance for Addictive Behaviors: Applying Contextual CBT to Substance Abuse and Behavioral Addiction*[134]
- Acceptance and commitment therapy and mindfulness for psychosis[131,132]

Medical and case management interventions for substance intoxication and withdrawal

Managing acute intoxication

Managing drug intoxication in young people with early psychosis is important as intoxication frequently causes many short-term psychological and physical harms. Acute intoxication results from the immediate pharmacological effect of the drug on the CNS. Intoxication is dose-related and may complicate other health problems, can affect mood, cognition, behaviour and physiological functioning or can mask serious illness or injuries.[135,136] Using more than one substance is common and is therefore important to inquire if there is more than one drug in the intoxicated person.[135]

For example, alcohol and opioids are commonly used together and are both CNS depressants that can result in:

- respiratory system suppression and failure
- coughing reflex suppression
- gag reflex suppression
- aspiration of stomach contents
- cardiovascular system dysfunction and subsequent arrhythmias
- coma.

It is important to remember that any intoxicated person is at risk of asphyxiation due to vomiting or loss of consciousness or poisoning and overdose.

Clinicians should provide young people with a safe environment and allow time for the intoxication to resolve if young people are acutely intoxicated. Psychotropic medications require cautious administration in intoxicated young people as these medications are frequently sedating and will have additive sedative effects.

A list of common substances used, their intoxication symptoms and possible harms are listed in Table 12.

TABLE 12. **LIST OF SUBSTANCES USED, ACUTE INTOXICATION SYMPTOMS AND POSSIBLE HARMS**[135,136]

SUBSTANCE	SYMPTOMS OF ACUTE INTOXICATION	POSSIBLE HARMS OF INTOXICATION
Alcohol	Confusion Slurred speech Aggression Lack of coordination and balance Increased drowsiness Comatose	Alcohol-related injuries Drink-driving Organ damage Respiratory depression, especially if taken with other substances Aggressive behaviour
Cannabis	Sleepiness Disorientation Increased appetite Paranoia Inability to perform complex tasks Anxiety Mild euphoria Increased heart rate Conjunctivitis	Falls/injuries Respiratory problems Memory lapse Drug driving Exacerbation of mental illness Paranoia, panic attacks Withdrawn Poor oral health: higher decayed, missing and filled teeth scores, higher plaques scores and less healthy gingiva

SUBSTANCE	SYMPTOMS OF ACUTE INTOXICATION	POSSIBLE HARMS OF INTOXICATION
Opioids	Drowsiness Stupor Slowing respirations Constricted pupils Nausea and vomiting Unconsciousness leading to death	Overdose, especially when taken with other drugs Impact of unsafe injecting: • hepatitis B/C • HIV • Pericarditis, endocarditis, septicaemia • abscesses • vein collapse
Benzodiazepines	Sleepiness Disinhibition Confusion Slurred Speech Lack Of Coordination Stumbling	Amnesia Falls/injuries Impaired thinking
Amphetamines	Overactivity, reduced need for sleep Reduced appetite Aggression Rapid speech Pressured speech Confusion Dehydration Shakiness/tremor Agitation Irritability Paranoia	Fatigue, exhaustion (due to bingeing) Cardiovascular complications: increased heart rate and blood pressure Poor or irregular eating patterns due to appetite suppression Weight loss Hallucinations Drug-induced psychosis Depression and suicidal ideation Exacerbation of mental illness symptoms Increased risky behaviours such as unsafe sex[74] Impact of unsafe injecting: • hepatitis B/C • HIV • pericarditis • abscesses • vein and skin damage Poor oral health
LSD	Severe hallucinations Incoherency Lack of coordination Vomiting Seizures Dilate pupils Disassociation	Risk of self-harm Injuries/falls Unpredictable behaviour May predispose mental illness ‘flashbacks’

SUBSTANCE	SYMPTOMS OF ACUTE INTOXICATION	POSSIBLE HARMS OF INTOXICATION
Cocaine	Extreme agitation Paranoia Drug-induced psychosis Nausea and vomiting Increased body temperature Irregular breathing Tremors Heart pain Heart attack	Lethargy Fatigue Panic Paranoia Depression Irritability Weight loss Delusions Violent behaviour Ulceration and permanent damage to mucosa if snorted
Ecstasy	Feeling of wellbeing Vigorous activity Jaw clenching Nausea Sweating Teeth grinding Paranoia Increase in body temperature Loss of temperature control Severe dehydration Muscle tissue breakdown Brain damage	If combined with rigorous activity: • severe dehydration • muscle tissue breakdown (rhabdomyolysis) • brain damage • death. Other adverse effects and negative consequences as yet unknown
Ketamine	Temporary paralysis Hallucinations 'K hole' – subjective dissociation of the body	Cramps Fatigue Severe depression Irritability Vomiting Heart failure Violent reactions Flashbacks Long-term bladder fibrosis, urinary incontinence
Inhalants	Similar to alcohol intoxication Hallucinations Seizures Unconsciousness Slurred speech Drowsiness Aggression Accidents	Long-term damage to: • liver • brain • kidney Sudden sniffing death syndrome Asphyxiation Risks increase with co-current use of other substances especially depressants

Table adapted from the Victorian dual diagnosis initiative AOD withdrawal and intoxication lecture notes 2009.

Managing withdrawal symptoms from substances

Substance withdrawal is ‘the development of a substance-specific maladaptive behavioural change, with physiological and cognitive concomitants, that is due to the cessation of, reduction in, heavy and prolonged substance use’.[4] Simply put, withdrawal is the physical and mental effects of reducing or ceasing the use of a substance when an individual has developed tolerance to it.[135]

It is important to recognise an imminent withdrawal as this may result in a potential psychiatric and medical emergency that may require urgent intervention. Substance withdrawal can be associated with potentially serious medical conditions such dehydration, electrolyte imbalance, cardiovascular instability, seizures, delirium and exacerbation of underlying psychiatric conditions.[135,136] Generally, the management of unexpected or unplanned withdrawal is most likely to be required for young people who are being seen within acute or inpatient settings rather than within an outpatient setting. However, case managers should be aware of how to recognise and respond to young people experiencing withdrawal if needed.

If a young person indicates that they wish to come off the substances they are currently using, then a clear withdrawal plan should be developed collaboratively with the young person and other necessary services if they are required. Another substance use assessment should be conducted to determine their current level of substance use as another substance may have been added since their previous assessment. A withdrawal plan should be developed based on the assessment; the plan should clearly identify the roles of people involved in the plan, that is, whether medical staff members would need to be involved during the process to monitor vitals etc. When developing a plan to withdraw from substances with young people, the following things need to be considered:

- substance use:
  - how much is currently being used
  - how often the substance is being used i.e. number of joints or bongs or injections per day
  - route of administration i.e. smoked or snorted or injected
  - whether the young person uses other substances
- how will withdraw take place:
  - use slowly being cut down
  - sudden cessation or ‘cold turkey’
- how long it will take to physiologically withdraw from the substance
- physiological withdrawal from a substance is 3–5 days but psychological and sleep symptoms can last longer
- home environment and social support
- medical and psychiatric history
- post-withdrawal support plan.

Clinicians need to consider the level of support a young person would need if they want to withdraw from a certain substance. When considering withdrawal, it is important to ask families and supports about:[135]

- the young person’s accommodation stability
- the young person’s social network
- the young person’s family and friends
- the young person’s links with local health professionals.

Clinicians need to ask the question: ‘Should alcohol and drug services be involved?’ If so, in what capacity? Withdrawal can be done in the home environment with intensive home-based care provided by the early psychosis service; however, this does depend on the substance being use and the severity of use. Home-based withdrawal is often suitable for young people experiencing mild-to-moderate withdrawal symptoms who are withdrawing from one substance, have no significant medical complications and have adequate support at home. It is recommended that a nurse is included in the home-based care team to conduct physical examinations while the young person is withdrawing at home. Clinicians also need to consider involving specialised services in the withdrawal if they are not confident that they are able to manage the withdrawal symptoms of that particular substance.

It is important for clinicians to discuss the following with the young person:

- what to expect during withdrawal, including information about cravings
- the expectations of withdrawal, their previous experiences of withdrawal and their ability to cope with withdrawal.[135]

A list of substances, their withdrawal symptoms and timeframes are listed in Table 13 on page 70.

TABLE 13. **LIST OF SUBSTANCES, WITHDRAWAL SYMPTOMS AND WITHDRAWAL TIMEFRAMES**[135,136]

SUBSTANCE	WITHDRAWAL SYMPTOMS	WITHDRAWAL TIMEFRAME
Alcohol	Sweating Tachycardia Hypertension Insomnia Tremor Fever Anorexia Nausea Vomiting Dyspepsia Vivid dreams Hallucinations Delirium	Withdrawal starts within 6–24 hours of the last drink, peaks over 36–72 hours
Cannabis	Insomnia Hypersensitivity Cravings Nightmares Anxiety	Withdrawal starts 24–48 hours of last use and symptoms subside within 4–7 days Sleep disturbance and cravings persist for weeks
Opioids	Flu-like symptoms Sweating Muscular and abdominal cramps	Withdrawal starts within 6–24 hours of last dose and lasts for 5–7 days with a peak at 48–72 hours Physical symptoms subside but sleep and mood disturbances persist for weeks
Benzodiazepines*	Anxiety Depression Insomnia Tremor Convulsions/seizures Perceptual disorders Cramps	**Short-acting** e.g. alprazolam, temazepam, oxazepam Withdrawal starts within 1–2 days of last use with a peak at 7–14 days and gradually subsides **Long-acting** e.g. diazepam, clonazepam, flunitrazepam Withdrawal starts at 2–7 days with peak around 20 days and subsides after a few weeks.
Nicotine	Depressed mood Insomnia Anxiety Irritability, frustration or anger Restlessness Decreased heart rate Increased appetite Weight gain	Withdrawal within hours of last cigarette with a peak at 24–72 hours Symptoms resolve within 2–4 weeks

Table adapted from the Victorian dual diagnosis initiative AOD withdrawal and intoxication lecture notes 2009.

*it may be difficult to differentiate between symptoms of withdrawal from benzodiazepines such as anxiety, insomnia and mood changes and those symptoms of an underlying mood and/or anxiety disorder. If a mood or anxiety disorder is probable then it must be treated concurrently.

General strategies for managing withdrawal

The information presented in this section is based on the *Cannabis and psychosis: an early psychosis treatment manual*.[137]

Support the young person to feel confident that they can manage the process of withdrawal:[137]

- Provide message of 'one day at a time'.
- Remind young people of previous achievements, reinforce ability to use coping strategies and strengths.
- Emphasise the temporary nature of withdrawal symptoms.
- Discuss and remind young people of the reasons they want to withdraw.

Reduce discomfort related to withdrawal:[137]

- Focus on positive benefits of withdrawal (e.g. saving money).
- Use medication such as sleep aids (see following sections for specific information on the medical management of withdrawal symptoms by substance).
- Create structure and routine.
- Plan pleasurable activities, including exercise.
- Use sleep hygiene strategies.
- Use relaxation strategies.

Support the young person to cope with cravings:[137]

- Delay – Encourage the young person to postpone any decision to use substances by one hour as cravings will usually subside during this time.
- Distract – Develop with the young person some strategies that they find useful for redirecting their attention away from cravings. This may include behavioural strategies (e.g. exercise, listening to music, doing housework), cognitive strategies (e.g. focusing on external environment using the five senses), or calming strategies such as active relaxation techniques.
- Detest – Prompt the young person to write down the reasons that they have wanted to modify their use or do not want to use substances. Encourage them to keep this handy so that they can remind themselves when experiencing difficult cravings.
- Discuss – Ask the young person to select a reliable support person who they can call when they need support to manage cravings.

Medical strategies for managing substance withdrawal

Opioid withdrawal

Clinicians should provide young people with psychoeducation on the withdrawal symptoms of opioids and offer extra support when young people are undergoing opioid withdrawal. As opioid dependence is associated with a significant risk of mortality, clinicians should consult with local alcohol and other drug agencies for advice and possible referral of the young person to those services.

Buprenorphine is the most effective pharmacological treatment in the management of opioid withdrawal and dosing is usually initiated following the first signs of opioid withdrawal, that is, at least 6 hours after the last dose of heroin or 24–48 hours after methadone dose.[135,136] It should be prescribed according to local regulation. If buprenorphine is administered too early it will precipitate withdrawal symptoms.[135,136] If the young person is thought to be using multiple substances such as opioids, alcohol and benzodiazepines in combination with buprenorphine, it is important to explain that this combination can cause respiratory depression, coma and death. For more information regarding dosing schedule please see the *Alcohol and other drug withdrawal practice guidelines* by NorthWestern Mental Health in Victoria; services are encouraged to read the relevant withdrawal guidelines in their local area.

Where there is a risk of relapse to use opioids after withdrawal, maintenance opioid replacement therapy with either buprenorphine or methadone should be considered and undertaken in collaboration with a local opioid replacement therapy prescriber and dispensing pharmacy.

Alcohol withdrawal

The complete cessation of alcohol use is often very challenging for many people and is considerably challenging for young people as alcohol is easily available and considered to be a 'mainstay' of many social interactions. The serious withdrawal complications associated with alcohol include seizure, hallucination, delirium and the exacerbation or precipitation of psychiatric disorders.[135,136] Oral benzodiazepines can be used to effectively reduce withdrawal symptoms such as seizures and delirium.[135,136] For more information regarding dosing schedule please see the *Alcohol and other drug withdrawal practice guidelines* by NorthWestern Mental Health in Victoria; services

are encouraged to read the relevant withdrawal guidelines in their local area. Clinicians should provide psychoeducation on alcohol withdrawal symptoms and offer extra support when young people are undergoing withdrawal.

Amphetamine withdrawal

Medication can be used during the first few days to alleviate withdrawal symptoms; however there is no consistent evidence for the efficacy of any drug in the management of amphetamine withdrawal.[135,136] Often the first 2–3 days of withdrawal are associated with exhaustion, the increased need for sleep and dysphoria. Some strategies to manage these withdrawal symptoms include:

- short-term use of benzodiazepines to alleviate anxiety and improve sleep
- exercise and sleep hygiene can be used as adjuncts to medication
- antidepressants can be considered if significant and prolonged depression occurs.[135,136]

Cannabis withdrawal

Cannabis withdrawal does not often require medication and most medication has a limited role in this regard. Medications that may be useful include:

- low dose short-acting benzodiazepines can be used to treat sleep disturbance, anxiety, agitation and irritability
- hyoscine can be used to abdominal cramps
- metoclopramide can be used to treat nausea and vomiting
- paracetamol or a non-steroid anti-inflammatory such as ibuprofen can be used to treat headaches.[135,136]

Benzodiazepine withdrawal

Managing benzodiazepine withdrawal can be challenging and often involves switching to a long-acting benzodiazepine and gradually titrating the dose down.[135,136] The rate of the dose reduction is approximately 10% every 1–4 weeks. Adjunctive therapies can be used to treat underlying anxiety, depressive or mood disorders.

Nicotine withdrawal

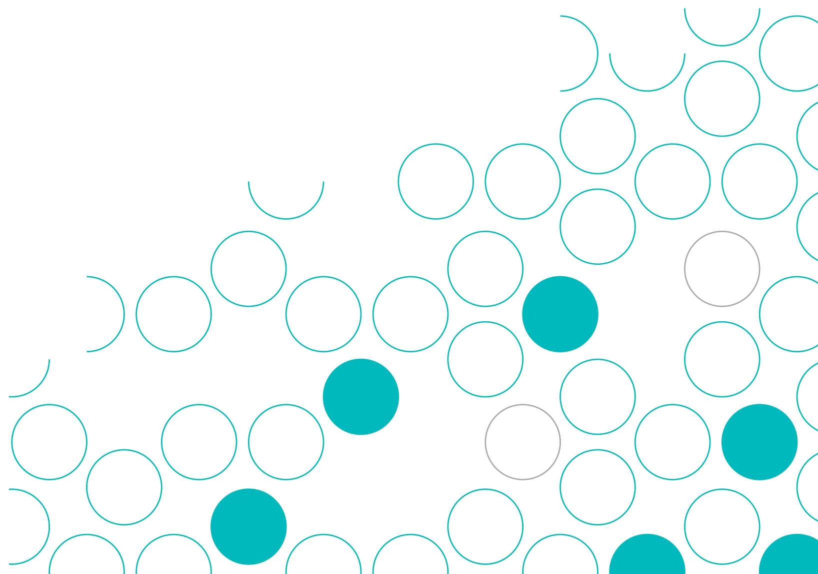
Symptoms of nicotine withdrawal present within hours of the last cigarette.[135] First-line pharmacological management of nicotine withdrawal is nicotine-replacement therapy.[136] There are four main types of nicotine-replacement therapy: patches, gum, inhalers and lozenges. For more information please see information on smoking cessation. It is advised that clinicians carefully explain to young people the changes in metabolism of their antipsychotic medications that can occur upon cessation of smoking.

Medical management of substance use in early psychosis

Prescribing principles in early psychosis and substance use

Prescribing by clinicians working with young people with co-occurring substance use and early psychosis should follow the nine principles described in the second edition of the *Australian Clinical Guidelines for Early Psychosis* and the ENSP manual *Medical interventions in early psychosis: a practical guide for early psychosis clinicians.*

Generally, second-generation antipsychotics (SGAs) are preferred over first-generation, or typical, antipsychotics (FGAs). This is of particular relevance to young people with co-occurring substance use and early psychosis because there is growing evidence that some FGAs are more effective in patients with schizophrenia and co-occurring substance use disorder.[138] Clozapine may be an effective pharmacotherapy for use with this population of young people as studies have reported positive results in adults with schizophrenia or schizoaffective disorder and substance use disorder.[139-141]



PRACTICE TIP

Case managers working with young people who are also using prescription medication should:

- Be familiar with general prescribing principles for young people with psychosis.
- Be familiar with general options for maintenance therapies that may be offered to young people to help reduce or cease substance use and support young people to discuss these with their treating doctor.
- Be familiar with common interactions between prescription medications and the substances used by the young person.
- Ensure that consultation with the treating doctor occurs promptly when the young person changes their pattern of substance use regardless of whether they increase or decrease their use.
- Ensure, together with the treating doctor, that young people have relevant information about the medication they are taking, the potential interactions with their substance use and options for managing these interactions.

Maintenance pharmacotherapies

Maintenance pharmacotherapies can be used to help manage individuals reduce or stop using substances. Naltrexone, disulfiram and acamprosate are medications used to manage alcohol dependence, and can be used as adjunctive therapies to reduce alcohol consumption.[142,143] Naltrexone does not appear to have an effect on concurrent antipsychotic medications in individuals with psychosis.[143] The potential hepatotoxicity of naltrexone and disulfiram need to be considered in this population.

Acamprosate does not appear to interact with antipsychotics and there have been no reported safety issues for its use.[144] It is yet to be studied in individuals with psychosis and alcohol dependence.

Buprenorphine, methadone or buprenorphine and naloxone combination are opioid substitution therapies or opioid replacement therapies that can be used to help young people stop problematic use of opioids.[144]

PRACTICE TIP

Clinicians should carefully explain how maintenance therapies work and what will be required for this approach to be successful. These approaches require close care planning with prescribing clinicians and dispensing pharmacies according to local and state regulations. Generally, mental health services often lack the necessary expertise and infrastructure to provide and supervise maintenance opioid replacement therapy; therefore, close collaboration with local prescribers and local alcohol and other drug agencies is recommended.

Currently, there are no approved pharmacotherapies used to manage stimulant dependence. There are no consistent effective pharmacotherapies for cannabis misuse.[144]

Interactions of substances with prescription medications

This section provides a brief summary of the common interactions between substances and prescription medications. For more detailed information clinicians can refer to the National Drug Strategy's *Comorbidity of mental disorders and substance use: a brief guide for the primary care clinician*.[144]

Tobacco

Tobacco affects the metabolism of clozapine and olanzapine by inducing the cytochrome enzyme CYP1A2 metabolism of these drugs and reducing their plasma concentrations and efficacy. Young people who are regular smokers may require higher doses of these medications. Smoking also affects the metabolism of methadone.[145] Individuals reported less sedation when they smoke around the time of their methadone dose in one study.[146] Reducing doses of methadone when an individual is trying to quit smoking could be detrimental as methadone attenuates nicotine withdrawal.[147]

Smoking cessation decreases the activity of cytochrome enzyme CYP1A2; therefore it is suggested that daily dose reductions of clozapine should be considered whenever individuals cease smoking when on clozapine therapy.[145]

Alcohol

Alcohol interacts with medications used to treat symptoms of early psychosis as it can:

- enhance the sedative effects of antipsychotic medication[148]
- enhance the sedative effects of tricyclic antidepressants and benzodiazepines.[148]

Cannabis

It is unclear whether chronic cannabis use affects the metabolism of antipsychotic medication and reduces its plasma concentration as tobacco does. It is possible that cannabis can enhance the sedative effects of antipsychotic and mood stabilisers such as lithium, carbamazepine and sodium valproate.[144] Cannabis can enhance the effects of tricyclic antidepressants and benzodiazepines.[148]

Opioids

It is possible that opioids may enhance the sedative effects of antipsychotic medication.[144] Opioids can exacerbate the sedative effects of tricyclic antidepressants and benzodiazepines.[148]

Methadone inhibits the CYP3A4 metabolism of benzodiazepines[149,150] that results in an increase in the plasma concentrations of benzodiazepine and subsequently increases their sedative effects.[151,152]

Benzodiazepines

Benzodiazepines are commonly misused in the community. Clinicians should carefully explain the interaction between benzodiazepines and alcohol to young people. Benzodiazepine enhance the effect of GABA at its receptor and produce a relaxing and calming effect. Alcohol also increases the effect of GABA and is a CNS depressant. When alcohol and benzodiazepines are combined, the effects of both are amplified and can result in depression of the respiratory and cardiovascular systems. For more information see the ENSP manual *Medical interventions in early psychosis: a practical guide for early psychosis clinicians*.

It is possible, due to its pharmacological profile, that benzodiazepines can increase the sedative effects of antipsychotic medication.[144]

Amphetamines and methamphetamines

The psychoactive effects of amphetamines and methamphetamines, including ecstasy, are partly mediated by its effects on the serotonergic neurotransmitter system.[153] If young people are prescribed any antidepressants such as selective serotonin reuptake inhibitors or monoamine oxidase inhibitors then it is important to be aware of the potential interactions when combined with ecstasy, amphetamines or cocaine. In particular, the combination of these classes of substance could result in excess serotonin within the CNS, referred to as serotonin syndrome. The clinical features of serotonin syndrome can be categorised as:[153]

- cognitive symptoms:
  - confusion
  - agitation
  - hypomania
  - hyperactivity
  - restlessness.
- autonomic symptoms:
  - hyperthermia
- sweating
  - tachycardia
  - hypertension
  - flushing
  - shivering.
- neuromuscular symptoms:
  - clonus
  - hyperflexia
  - hypertonia
  - ataxia
  - tremor.

Inhalants

The use of inhalants may exacerbate the sedative effects of antipsychotics.[144] Inhalant use can also enhance the sedative effects of tricyclic antidepressants and benzodiazepines.[148]

Relapse planning and prevention

The extent to which clinicians use relapse planning and prevention specific to substance using behaviour will vary for each young person. For some young people who continue to use substances it may make more sense to integrate substance use into their early warning signs and relapse plan. However, some young people may be working on a specific goal of reducing or ceasing use of a particular substance and for these young people it may make sense to have a separate plan focused solely on this behaviour.

Discussing substance use relapse

Talking about substance use relapse should begin early in the course of interventions targeting this behaviour as is the case for discussing early warning signs for psychotic relapse. Young people should have a clear understanding of the differences between a ‘relapse’ versus a ‘slip’ and that the experience of both is common for anyone who is trying to cease use of a substance. Ideally, the young person should also have a good understanding about the relationship between their substance use and psychosis, including the implications of returning to previous patterns of use.

What is a relapse?

This occurs when someone who has previously abstained from substance use for a significant amount of time begins using substances again. Sometimes a person may use substances on one occasion before abstaining from use again, which may be referred to as a ‘slip’. For many young people with early psychosis, their goal may have not been to cease use of substances completely. In this case, rather than talking about ‘relapse planning’ it may be useful to talk with them about a ‘substance use management plan’ by which they can respond to any changes in use for those substances that they are currently using at a reduced level. Regardless of the label for this process, the overall aim is to the support the young person to maintain the gains they have made, while having an understanding of the potential triggers for a return to use or increased use and a plan for responding to these.

What is the relationship between a relapse and psychosis?

For young people with early psychosis, a relapse to regular substance use may also operate as a trigger for a relapse of psychotic symptoms and other mental and physical health consequences. This can have a cascading effect, where young people re-experiencing psychotic symptoms may have a more challenging time reducing substance use, due to loss of insight, motivation, and an increased desire to use substances to manage sleep, emotional state or psychotic symptoms.

Develop a relapse plan or substance use management plan

Return to previous work that has been done together, such as decisional balance forms and triggers for use. Elicit from the young person their perspective on the importance of planning for the future with respect to their substance use and introduce the idea of a relapse or substance use management plan. This plan should be individualised and cover: reasons for not using or using less, triggers for use, coping strategies to cope with triggers, and an action plan for responding to urges or relapse including support people who will support the young person in a crisis.

Identify the most important reasons not to use substances.

Ask the young person to list the most important reasons for them not to continue to follow a plan of reduced or no use of substances. Examples may include: being effective at work or school, enjoyment of daily life, maintaining an important relationship, staying mentally healthy, or saving money.

Identify the most common triggers for substance use.

Review earlier worksheets or diaries where the young person has identified triggers for them using substances. These triggers may be emotional (feeling anxious), environmental (being at a pub or bar), social (friends who continue to use), cravings, physical (fatigue or difficulty falling asleep), or related to psychotic symptoms (hearing voices). If the young person is unable to identify any triggers it may be useful to show them a list of common triggers and ask them to select the ones that best fit them.

Identify strategies for coping with triggers for substance use.

Review the strategies that have been most useful for the young person as they have been reducing substances. These may be matched to the trigger (e.g. using relaxation strategies to respond to a trigger of feeling anxious), or more general (e.g. reminding themselves of reasons not to use when they are exposed to triggers).

Complete an action plan to respond in situations where the young person is about to use or has already used substances.

Identify with the young person the later warning signs that may indicate that they are about to use substances. For example, a young person may identify that they are at risk of using once they experience cravings that are strong (e.g. 7/10 on a rating scale). For another young person they may experience physical symptoms such as sweating, feeling excited or euphoric in anticipation of use.

Complete steps for the young person to follow that they can use to avoid use or to manage a situation where they have already used. For example, a young person may temporarily remove themselves from a situation, call a friend or other support.

This part of the plan may involve a list of support people (family, friends or professionals) who can help the young person to follow their plan. Ideally, the plan should include contact phone numbers for each person and a copy of the plan may be provided to each individual identified.

The relapse or substance use management plan may be revised by the young person as needed. If a relapse occurs this is a good opportunity to review the plan with respect to what didn't work and what may be helpful in the future. The case scenario of 'Tim' highlights an example of a substance use management plan. There is a substance use management plan template in Resource 11 for clinical use.

TIM

CASE SCENARIO

Tim is a 21-year-old man, living with his parents and older sister in Perth. He experienced his first episode of psychosis 6 months ago and has been attending an early psychosis service close to his home. Tim experienced a full remission of psychotic symptoms but has ongoing difficulties with his mood that he has continued to work on with his case manager. Approximately 1 month ago, Tim experienced some early warning signs, hearing mumbling sounds and having odd thoughts, when he returned to using cannabis at a music festival with friends. Tim was scared by this experience as it made him realise that he can't use drugs in the same way as his friends because of the risk of having another psychotic episode. Tim and his case manager reviewed his reasons for not using cannabis, his triggers for use, his coping strategies and personal and professional supports and completed a substance use management plan presented in Figure 10.

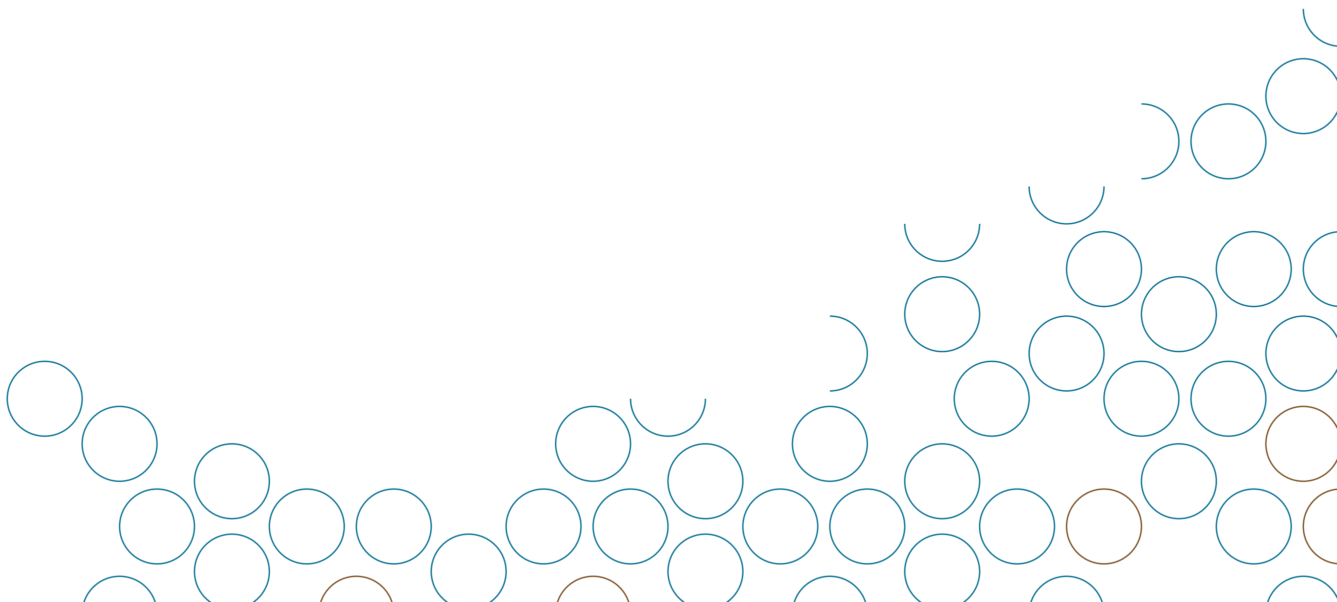


FIGURE 10: **TIM'S SUBSTANCE USE MANAGEMENT PLAN**

What are my reasons for not using? What are the important goals or values that I am working towards?

- Weed may trigger another psychotic episode.
- If I have another episode I might lose friends or my job.
- I want to save money so that I can go travelling and buy a house.
- Feeling proud of myself if I can reduce my use.
- Feeling shit about myself when I'm stoned and afterwards.

What are my triggers for using?

- Attending music festivals or going out clubbing with friends where others are using drugs.
- Getting paid at the end of the month.
- When my mood is low.
- When I feel isolated from others.

What strategies help me to cope with these triggers?

- Confide in my close friends that I do not want to use drugs when we go out together.
- Plan different activities that don't involve weed, such as regular exercise and gym with friends.
- Set up a direct debit into a long-term deposit account to come out on pay day.
- Work with my case manager on new strategies to cope with low mood or feeling lonely.

What are warning signs that I am about to use?

- Buying weed.
- Going to see friends with all my cash in my wallet.
- Calling friends who use when I have cravings.
- Staying in social situations where others are using when I have urges to use weed.

How I can respond if I am about to use:

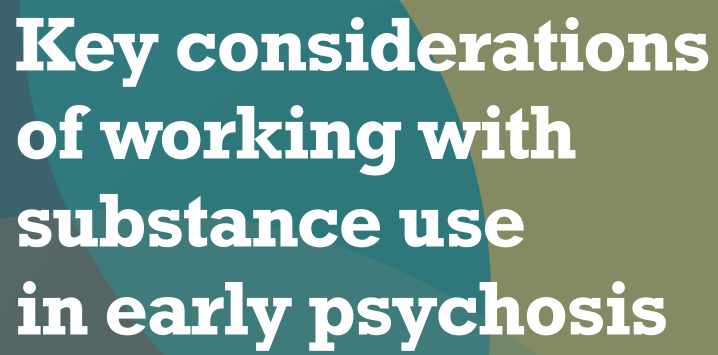
- Leave my wallet at home
- Call a friend who doesn't use and arrange something to do with them
- Leave social situations when I start to have urges to use or tell friends that I don't want to use
- Remind myself the reasons that I don't want to use and look at bad 'next day' photos

How I would like others to respond if I am about to use:

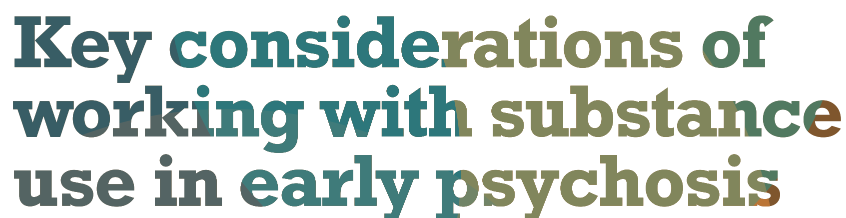
- Not offer me any drugs.
- Do something else with me like go for a walk, have a chat, watch TV.
- Encourage me to call another support, like mum or case manager.
- Be supportive and help me to feel included even if I don't use.

People I can call to support me with my plan

Family	Friends	Professional
Mum or my sister Kelly.	My friend Ollie.	My case manager.



Key considerations of working with substance use in early psychosis



Key considerations of working with substance use in early psychosis

Introduction

This section outlines some key considerations for clinicians working with young people with co-occurring substance use and early psychosis. The most prominent challenges of working with young people with co-occurring substance use and early psychosis are also discussed in this section, along with advice on how clinicians can best address problematic substance use in early psychosis populations.

When working with young people with early psychosis and co-occurring substance use, it is important that treatment and care considers the needs and preferences of young people and their families. Clinicians within early psychosis services should give young people and their families opportunities to make informed decisions about their treatment. This can be helped by clear communication between clinicians, young people and families.

Interventions used to reduce substance use in early psychosis such as harm reduction, MI or CBT are largely adapted from their use with different populations (e.g. adults with chronic substance use). The evidence for using these interventions within an early psychosis population is less clear[154] and as a result it is vital that clinicians consider the context in which they are working when addressing substance use with young people. Clinicians may also find that there are a number of factors particular to young people with co-occurring substance use and early psychosis that make using such interventions challenging. Clinicians should be mindful of these challenges and flexible in their practice to effectively support young people with early psychosis and co-occurring substance use.

Engagement and the role of the clinician

'Engagement' is frequently used as a broad term that includes engagement with treatment (medical, psychosocial or other interventions), with the early psychosis service and with members of the treating teams. Moreover, engagement applies to young people and their families or other supports (for more information please see the ENSP manual *Get on board: engaging young people and their families in early psychosis*).

Engagement has long been considered a crucial element in establishing and maintaining successful therapeutic relationships with young people with early psychosis. It is a central process to working with young people with co-occurring substance use; however, it can be compromised by a young person's suspicions or paranoid thoughts, especially if they are using an illegal substance.

Engaging young people in working around substance use

A young person's engagement with clinicians, the service and their treatment is an essential foundation for any intervention targeted at reducing harm related to substance use. Engagement can be particularly challenging for this population of young people for a number of reasons including:

- higher rates of trauma[155]
- greater complexity and co-morbidity[43]
- greater functional impairment and social needs.[156,157]

Young people in this population are also less likely to be engaged in prosocial activities or roles (e.g. attending school, paid employment).[157] In addition, clinicians' perception of, and response to, these challenges are extremely important and may act to exacerbate difficulties or increase engagement with the young person.

Greater effort on the part of the clinician may be required to engage young people with co-occurring substance use and psychosis. This may involve more frequent use of outreach support, flexibility around location, use of shorter 'check-in' appointments and a broad range of case management support (e.g. negotiating with housing, financial or forensic services). Given that these young people are likely to have more chaotic lifestyles, it is helpful for clinicians to ensure that they provide predictability and structure, for example, sending the young person a reminder text-message the day before and on the day of a home-visit or ensuring that appointments occur at the same day and time each week regardless of duration.

> 'It can be tricky to engage young people with psychosis and when substance use is added to the mix, particularly chronic use, then it can take a lot longer. Clinicians just need to be really consistent and flexible. You need to make it clear to the young person that your role isn't to tell them off about their substance use … that you want to work with them no matter what.'
>
> Senior clinician
> EPPIC, Orygen Youth Health Clinical Program

Clinician skill

Clinicians working with young people with co-occurring substance use and early psychosis are expected to be able to provide a broad range of interventions for these issues. However, with respect to substance use interventions, there may be instances where specialist expertise and support is required (e.g. supporting a young person to manage withdrawal from alcohol).

Clinicians therefore need to know their skill limits and ensure that they seek supervision from senior staff members, consult with the treating team and/or involve specialists with expertise in providing drug and alcohol treatment. Although clinicians should prioritise professional development, early psychosis services should also provide appropriate training and supervision for staff to attain competency in assessing and treating substance use.

Clinician attitudes towards substance use

Clinicians bring their own life experiences, personal beliefs and attitudes into the therapeutic relationship with a young person that may affect how they engage with a young person about particular issues. In particular, clinicians may hold particular beliefs about substance use that unconsciously affect how they engage with young people around their substance use. There may be internalised stigma (e.g. about the use of injectable drugs) or conversely an overly normalised attitude (e.g. based on own regular use of licit and illicit substances) that may subtly influence setting treatment goals and the expectations of the young person.

Clinicians should ensure that they are aware of their personal beliefs and how they are likely to affect engagement and treatment. Clinicians should respect the choice of young people to continue to use substances and work with them using a harm reduction approach towards shared goals.

SUMMARY **ENGAGEMENT AND THE ROLE OF THE CLINICIAN**

- Engaging young people around their substance use may require more effort by clinicians. Clinicians would need to consider:
  - using outreach more often
  - being flexible about the location of the appointment
  - using shorter appointments to 'check-in'
  - using a broad range of case management support.
- Clinicians should ensure that their personal beliefs do not affect engagement and treatment.
- Clinicians should respect young people's choice to continue to use substances and work with them using a harm reduction approach towards shared goals.

Impact of psychosis and other co-occurring issues

Psychotic symptoms

The severity and nature of the young person's symptoms, and how they are affected by them, may impact the young person's ability to engage in focused work around their substance use. Psychotic symptoms may impact on cognitive capacity and emotional responses in a number of ways. Negative symptoms may cause difficulties in attending to, processing and responding to therapeutic processes during and between sessions. Positive psychotic symptoms such as auditory hallucinations or intrusive thoughts with delusional content may be experienced as distracting and/or distressing, resulting in the young person expending significant effort in affective control, hypervigilance, high anxiety or arousal.

Young people experiencing psychotic symptoms such as persecutory delusions or thought disorder may also be more likely to misinterpret verbal and non-verbal communication from clinicians and the immediate environment. For example, a young person who is experiencing paranoid ideation may have difficulty trusting their case manager. They may also have a significantly different explanatory model to that held by their case manager or significant others (e.g. 'others are targeting me', 'I am in danger'). This scenario does not mean that ongoing work around substance use should not continue, but it may affect factors such as the language used by the clinician to communicate with the young person, shared explanation of goals and plans to address them, and ongoing clarification about the young person's experience 'in the room'.

Trauma

Young people with early psychosis report high rates of co-occurring post-traumatic stress disorder[158] and research with individuals with substance use disorders has also demonstrated a significant relationship between problematic substance and trauma.[159] It is likely that a young person's use of substances in this context is intertwined with long-term strategies that they have developed for coping with trauma symptoms. As a result, efforts to remove or modify the young person's use of substances by well-meaning clinicians may be experienced by young people as highly distressing and destabilising. It is helpful for clinicians to communicate to young people in these circumstances that problematic substance use is understandable within the context of young person's history and that it makes sense if reducing their use of substances is not their primary goal.

Clinicians also need to consider how any co-occurring conditions may affect the young person's engagement with treatment and the therapeutic relationship. For example, a young person who has had traumatic experiences of treatment during the acute phase of the psychosis may understandably take longer to engage with and trust a new clinician.

SUMMARY **IMPACT OF PSYCHOSIS AND OTHER CO-OCCURRING ISSUES**

- Clinicians should remember that trauma rates in this population of young people are high.
- Clinicians should remember to pace interventions aimed at co-occurring substance use and early psychosis by gradually introducing new ideas or information.
- Clinicians should check-in with young people during their session about whether they are feeling comfortable and safe, or whether the information covered in the session is understandable and acceptable.
- Clinicians should try to normalise any feelings or reservations the young person may have about treatment.

Individualised treatment

Explanatory models and expectations of the young person

Sometimes young people with co-occurring substance use and early psychosis will be in different stages of change with respect to their perspectives on their experience of psychosis and substance use. Each young person will have their own explanatory model for their experiences of psychosis and how their substance use interacts with this. At times, this will mean that the young person is highly motivated to engage in work around their substance use (e.g. 'When I smoke weed it makes the voices worse and I get really anxious'). Other times, the young person's explanatory model may mean that it is more challenging to work with them around their substance use or around their experience of psychosis (e.g. 'I became paranoid because I had a 'bad' batch of drugs … not because I have an illness'). Young people may have variable levels of insight, including the recognition and acceptance that they are experiencing psychosis. Both of these factors will affect a young person's capacity to engage with clinicians generally, and with their motivation to engage with work that is specifically focused on their substance use.

It may be possible to work with young people on particular goals around their substance use regardless of the level of insight or explanatory model that they hold about their experience of psychosis. For example, a young person who is continuing to experience positive psychotic symptoms may still be able to recognise the negative impact of their cannabis use and work towards reducing the impact this has on their daily functioning.

The use of case formulation to guide engagement and selection of the type and level of intervention supports this idea. Clinicians should be guided by an understanding of the young person's explanatory model and goals. As a result, interventions are likely to be experienced as being more collaborative leading to the young person taking greater ownership and agency in the process.

Substance-induced psychosis

Occasionally, young people with co-occurring substance use and psychosis may be given a diagnosis of a substance-induced psychotic disorder (SIP). It can be challenging for young people to understand such a diagnosis and reconcile this with their referral and treatment within an early psychosis service. There is a risk that young people with this diagnosis may not be referred to, or be excluded from early psychosis services. Both clinicians and young people may erroneously attribute the experience of psychosis solely to their substance use and it is important to be mindful that irrespective of the initial 'trigger' of a psychotic episode, that these young people are at an increased risk for experiencing further psychotic episodes.[40] In fact, Bramness et al reported that there are no qualitative differences in presentation of individuals with SIP versus those given a diagnosis primary psychosis.[29]

For this reason, best practice recommendations are that clinicians should offer longitudinal comprehensive assessment to young people with a SIP diagnosis and consider factors such as the substance used, dose-response, the severity of psychotic symptoms and rate of recovery. The use of internal and external secondary consultation may also be appropriate. As a general guideline, young people who have met this diagnosis should be offered an episode of assessment and treatment within the early psychosis service that is reviewed based on the individualised needs of the young person.

SUMMARY **INDIVIDUALISED TREATMENT**

- Clinicians' language should always be respectful of the young person's explanatory model, and their cultural and social background.
- Clinicians should use a case formulation-based approach towards interventions and be guided by the young person's explanatory models and goals.
- Clinicians should offer young people with SIP ongoing assessment and treatment within an early psychosis service. Young people should not be excluded from services on the basis of a SIP diagnosis.

Working with families

As part of the EPPIC Model, it is expected that case managers will work collaboratively with families. For a discussion of general principles and strategies for providing family work with this population please see ENSP manual *All in this together: family work in early psychosis*.

Engaging with families when young people are experiencing difficulties related to their substance use can be particularly challenging and this may be a key issue for which family members want support. There may be high expectations from family members around what interventions can be provided to address challenging behaviours that are linked with the young person's substance use rather than behaviour that is driven by acute psychotic symptoms. One common challenge is when young people are engaging in substance use that is severely impacting on their relationships, self-care, safety and occupational functioning in the absence of acute psychotic symptoms. Families can feel frustrated when they perceive that coercive treatments are only used for acute mental health deterioration and can't be used when the young person is engaging in chronic harmful substance use.

Other challenges that may be experienced by family members include: increased risk of aggression and violence when the young person is intoxicated, exposure of siblings or vulnerable family members to drug paraphernalia, and financial concerns and debt impacting on the broader family unit. At times family members may not be able to accommodate the young person within the family home due to their behaviour. This can be difficult given that often families are a central part of the support and management plan with respect to the young person's psychosis.

Alternatively, there may be a culture of substance use within the family and parents or siblings may be providing and sharing substances with the young person. In these circumstances it may be particularly important to involve family members as much as possible to provide psychoeducation about the impact of substance use on the young person and their experience of psychosis. At other times family members may require support to address their own substance use issues and clinicians may be able to facilitate connections with specialist services. In extreme circumstances it may be necessary to support the young person to seek accommodation outside of the family environment to make changes to their substance use.

Confidentiality and substance use

Early psychosis services should have clear guidelines regarding what information about a young person clinicians may discuss with third parties, including family members and other services, and under what circumstances. Generally the information a young person discloses is confidential except in circumstances where the young person or others are at high risk of harm (of self or to others). Clinicians should talk to young people and their families about what information might or might not be shared with the family or other services, giving a rationale for what information is necessary to share (for more information please see 'Information sharing and confidentiality' in the ENSP manual *In this together: family work in early psychosis).* Clinicians may be reluctant to breach confidentiality as it may have an impact on engagement. Nonetheless, breaching confidentiality is acceptable if it will reduce the harm to the young person and their family.

> 'If the patient says, keep this between us, you keep it between them. Something like that, that's what we want you to do anyway.'
>
> Young person
> EPPIC, Orygen Youth Health Clinical Program

Clinicians should ask the young person whether it is okay to talk to their family members and supports about their substance use to explore the reasons behind it and to enlist their help in supporting the young person around this issue. Young people may give permission for specific information to be discussed (e.g. that they use cannabis) but may wish to keep other details of their use private (e.g. that they have previously used amphetamines). The details of this agreement should be communicated to all members of the treating team. If the young person agrees, clinicians should aim to help family members understand why the young person is continuing to use substances and provide a clear rationale for chosen intervention strategies, such as using a harm reduction (rather than abstinence) approach.

> 'I was in a room with my case manager, the doctor and my mum, and the doctor brought up drug use in front of my mum. And yeah, it was awful and actually upset me quite a lot.'
>
> Young person
> EPPIC, Orygen Youth Health Clinical Program

SUMMARY **WORKING WITH FAMILIES**

- Clinicians should always ask young people whether it is okay to talk to their family and supports about their substance use.
- Clinicians may need to break confidentiality if there is a significant increase of risk of harm to self or to others.
- Clinicians should inform young people when they need to break confidentiality and provide a clear rationale of why they have to do so.

Input from specialised services

Shared care with alcohol and other drug services

Clinicians working in case management roles within early psychosis services should consider providing substance use interventions as a standard part of a comprehensive treatment package. All clinicians should have basic level skills and knowledge about indicated assessment and treatment to engage with young people around their substance use. However, there may be circumstances where specialist input is required to address more complex issues. There are a number of options for clinicians who may wish to seek supervision, expert secondary consultation or commence a period of shared care with a specialised service.

There are a range of specialised services that clinicians should consider involving in a shared treatment plan, which may include the use of detox facilities, referral to drug and alcohol counselling, family counselling or outreach services.

Integrated specialised support

Early psychosis services may also have access to a number of different models of integrated specialist support. One option includes the employment of a clinician with specialist skills in the area of substance use who is available within the team for consultation, supervision, shared clinical care or treatment of young people with complex presentations. Alternatively, clinicians from specialised alcohol and other drug services may be co-located with the early psychosis service and/or support an exchange of specialist consultation (e.g. on one day per week a clinician from the drug and alcohol service provides consultation for the early psychosis program and vice versa).

> 'I wished that my case manager would have helped me quit smoking. I really regret that I did not stop smoking earlier because of how bad it is for you. We had long discussions about changes to my using alcohol so that was definitely a goal. It was not just something I worked on with my case manager, I was referred to a specialist youth drugs person who had even more expertise.'
>
> Young person,
> EPPIC, Orygen Youth Health Clinical Program

SUMMARY **INPUT FROM SPECIALISED SERVICES**

- Clinicians should involve specialised services in a shared treatment plan for young people which could involve using detox facilities or referring young people to alcohol and other drug counselling, family counselling or outreach services.

Service-level considerations

Within the Australian health care system, there may at times be a rigid demarcation between services who provide treatment for tertiary mental health problems and those who provide treatment for substance use problems.[160] This creates obvious problems for the health consumers who may require support and expertise to address co-occurring mental health and substance use problems. In fact, as discussed earlier, this is more likely to be the case than not for young people receiving treatment at early psychosis services.

Significant efforts have been made to ensure that both mental health and substance use clinicians are skilled in 'dual diagnosis' treatment.[160] However, it is vital that in addition to sufficient clinical skills, that attitudes of clinicians in early psychosis services support the view that treating substance use problems is part of the core business. From a service-level perspective, there must be a culture of integrated treatment, provision for regular professional development opportunities and supervision, as well as service level agreements with relevant local organisations.

This may include the need for agreements or policy initiatives with local hospitals and emergency departments, who will often see young people with co-occurring psychosis and substance use problems when they present in a crisis. It can be extremely challenging for clinicians working within an emergency department context to provide comprehensive mental health assessment for young people presenting with behavior that may appear to be driven solely by substance intoxication or withdrawal. For young people with early psychosis who regularly present to emergency departments in the context of their substance use there may be significant challenges in determining whether their presentation is one of a substance induced 'crisis' versus a relapsing psychotic episode. Service-level agreements that encourage staff at both services to consult, share treatment plans and streamline the process of referral may assist with reducing some of these challenges.

> 'Sometimes we can get carried away with trying to figure out what causes what … what problem to address first … and then struggle with getting services to provide interventions to each of those things. But actually … if we just view the young person as a whole and see everything as part of our role then things can become simpler.'
>
> Senior clinician
> EPPIC, Orygen Youth Health Clinical Program

SUMMARY **SERVICE-LEVEL CONSIDERATIONS**

- Early psychosis services should:
  - implement a culture of integrated treatment where treating substance use is considered core business
  - provide regular opportunities for training and supervision
  - develop policies and agreements with relevant local organisations
  - encourage and support staff members to consult with specialists and share treatment plans.

Resources

Physical effects of substance use

Physical effects can be acute (experienced at the time of intoxication) short-term effects or chronic (experienced following longer-term, more persistent use). Physical effects are also present in withdrawal and 'come down' phases of use as well as the potentially fatal effects experienced in overdose. The physical effects associated with depressants, stimulants, hallucinogens and inhalants are described below. This resource is based on drug information websites.[95-112]

Depressants

Substances that suppress, inhibit or decrease the CNS, effectively slowing down the messages sent between the brain and the body, can be described as depressants. Depressants include alcohol, benzodiazepines, cannabis, heroin and other opioids. Acute effects can include:

- relaxation and feeling of wellbeing and euphoria
- slurred speech
- constricted pupils
- drowsiness
- dizziness and blurred vision
- dry mouth and reduced appetite
- constipation.

Higher doses can lead to more severe effects such as extremely depressed and shallow breathing, dangerously low heart rate, cold and clammy skin, convulsions and coma. Chronic effects can include:

- memory loss
- anxiety
- sleep disturbance
- appetite loss
- drowsiness, lethargy, decreased motivation
- tolerance and dependence
- sexual dysfunction and fertility problems
- heart, chest and bronchial complications.

Stimulants

Stimulants are substances that activate, enhance or increase neural activity. In other words, they speed up messages passed between the brain and the rest of the body. Stimulants include substances such as amphetamines, ecstasy, cocaine, caffeine and nicotine. Acute effects of stimulants can include:

- headaches
- stomach cramps and nausea
- elevated blood pressure and increased heart rate
- enlarged pupils
- wakefulness and increased energy
- agitation, panic and anxiety.

Higher doses may result in effects such as jaw clenching and teeth grinding, temperature dysregulation, dehydration, respiratory distress, heart pain and heart attack. Chronic effects can include:

- malnutrition and weight loss
- reduced resistance to infection
- seizures
- menstrual problems
- memory loss
- cardiovascular problems.

Hallucinogens

Hallucinogens distort perceptions of reality and thinking and intensify or alter sensory experiences. Examples include LSD, magic mushrooms and mescaline. Ecstasy and cannabis also have hallucinogenic qualities. Acute effects can include:

- intense, disturbing hallucinations
- anxiety and panic
- dilated pupils
- headaches dizziness, blurred vision, nausea and vomiting
- seizures
- increase in heart rate, blood pressure, breathing and body temperature
- impaired coordination and tremor
- temporary paralysis.

Chronic effects can include:

- flashbacks (especially disturbing if reliving a bad trip)
- tolerance and dependence
- impaired memory
- heart failure.

Inhalants

Inhalants are any volatile substance that when inhaled – or sniffed – produce intoxication. Inhalants include volatile solvents such as petrol, aerosols and nitrates such as nitrous oxide ('laughing gas'). Acute effects can include:

- nose-bleeds
- irritation of the throat and eyes
- auditory and visual hallucinations
- seizures
- headaches

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

- 'sudden sniffing death' (due to heart failure)
- asphyxiation (if using a bag).

Higher doses result in effects very similar to those seen in high doses of alcohol and can result in unconsciousness and death. Chronic effects can include:

- weight loss
- pallour
- loss of smell and hearing
- excessive thirst
- pimples around mouth
- paranoia
- memory loss
- organ damage (e.g. liver, kidney, brain damage)
- tolerance and dependence.

Cannabis

Cannabis can be classed as both a CNS depressant and hallucinogen. Acute effects can include:

- anxiety and panic
- impaired attention
- memory and psychomotor performance
- increased risk of accident (e.g. if driving).

Chronic effects include:

- impaired respiratory function and cardiovascular disease
- dependence syndrome
- subtle impairments in attention and memory
- risk of cancers of the oral cavity, pharynx, and oesophagus
- risk of leukaemia among offspring exposed in utero
- increased risk of use of other illicit drugs.[50,51]

Alcohol

Alcohol is a CNS depressant. Acute effects can include:

- feelings of relaxation and euphoria (or sadness depending on circumstances)
- slowed reflexes
- poor coordination
- slurred speech
- blurred vision and sexual dysfunction.

Higher doses intensify aforementioned symptoms and can lead to nausea, vomiting, increased drowsiness, 'passing out' and even coma and death.

Chronic effects include:

- increase the risk of oral, throat and breast cancers
- chronic sexual dysfunction and fertility problems
- cirrhosis of the liver
- tolerance and dependence
- cardiovascular problems
- brain damage.

Tobacco

Tobacco is a CNS stimulant, though can also produce relaxing effects. Acute effects can include:

- feeling alert, happy and relaxed
- increased heart rate and blood pressure
- coughing, dizziness and headaches
- reduced appetite
- peripheral numbness and tingling.

Higher doses can result in increased breathing, feelings of confusion and faintness and seizures. Chronic effects include:

- various cardiovascular and respiratory issues
- stroke
- cancer (in many areas)
- accelerated skin aging and poor wound healing
- oral health issues
- loss of taste and smell
- sexual dysfunction and fertility problems
- stomach ulcers
- eye problems and hearing loss
- dependence.

Polysubstance use

Polysubstance use can increase the chances of physical harm. Polysubstance use also increases the risk of overdose, which can lead to death. Acute effects can include:

- drowsiness, clumsiness and dizziness
- increased blood pressure
- heart abnormalities (including an increase or decrease in heart rate)
- breathing/respiratory difficulties
- increased body temperature
- severe dehydration.

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

Substance use record

DAY AND DATE	TIME	WHERE WAS I AND WHO WAS I WITH?	HOW WAS I FEELING?	WHAT DID I USE?	HOW MUCH DID I USE?	HOW DID I FEEL AFTERWARDS?
e.g. Tues 16/4	*e.g. 10 p.m.*	*e.g. at a club with friends*	*e.g. anxious, self-conscious about talking to people*	*e.g. ecstasy*	*e.g. 2 pills*	*e.g. I got really wasted which was initially really good. Then my heart started racing and I got anxious and paranoid.*

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

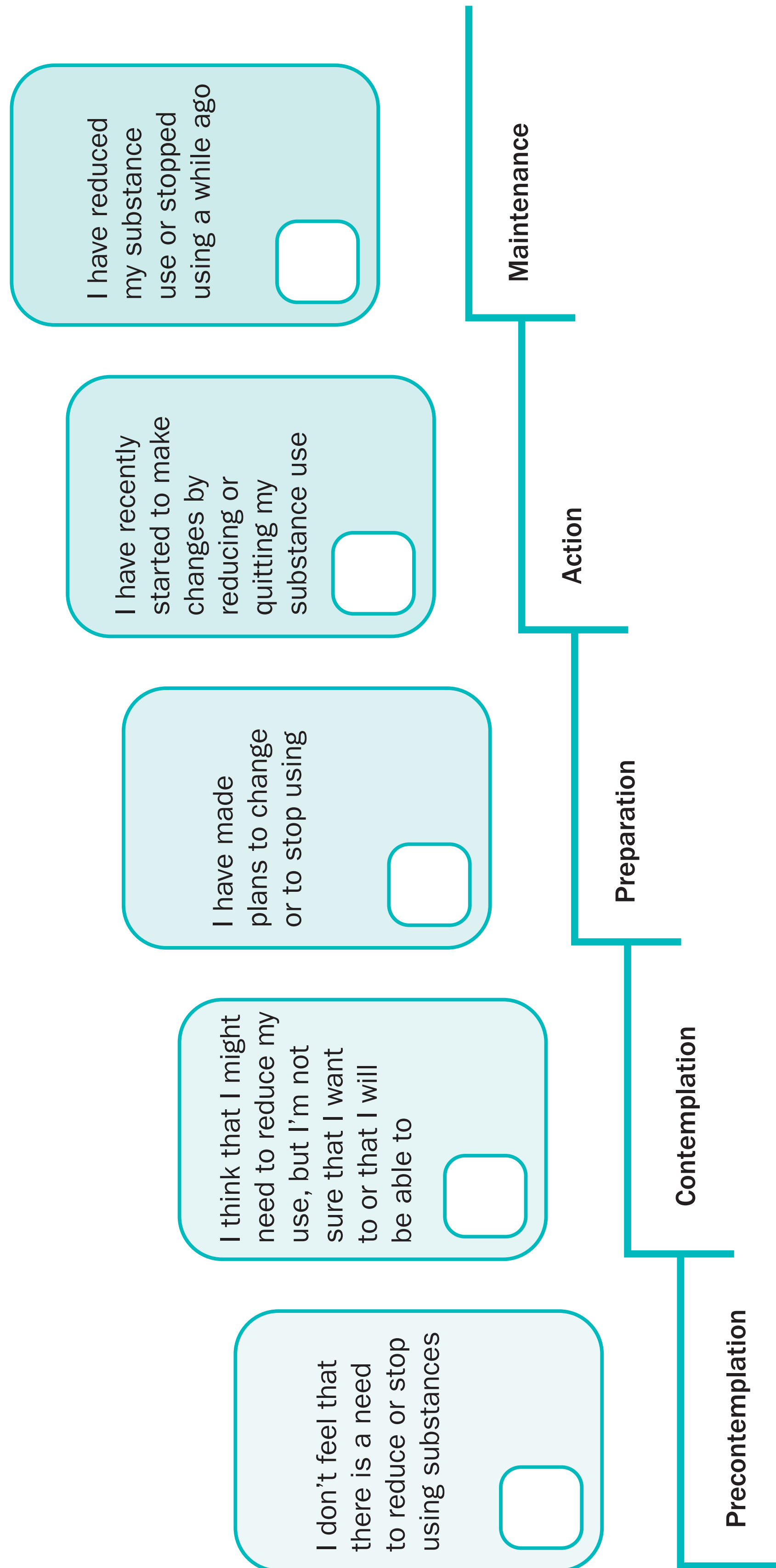
Timeline

Take some time to think about how you see yourself over time and write your responses in the timeline below. Consider the way you would describe yourself before you experienced psychosis, during the episode of psychosis, and how you see yourself now and in the future.

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

The readiness to change steps

The steps on this scale can be used to identify where you are now with regard to your substance use. Please circle the statement that best fits the way that you would describes your current situation:



© Orygen, The National Centre of Excellence in Youth Mental Health 2015

Harm reduction worksheet

There are a number of ways in which using substances may be harmful to your physical safety and health, mental well-being, personal relationships and day to day functioning. Please use this worksheet to identify the ways in which your substance use can be harmful when you are: getting or buying, using, intoxicated or withdrawing from alcohol or substances.

SUBSTANCE	ACQUIRING	USING	INTOXICATION		WITHDRAWAL
	Risks when I am getting or buying.	Risks when I am using.	Risks to my physical and mental health when I'm high or intoxicated.	Risks related to my behaviour when I'm high or intoxicated.	Risks related to coming down, crashing or withdrawing.
e.g. speed	*e.g. buying drugs from dangerous people*	*e.g. not always sure of the quality and risk of overdose*	*e.g. cracking my teeth from grinding them* *e.g. feeling paranoid*	*e.g. getting aggressive and picking fights with people including my friends*	*e.g. feeling depressed, low energy, not going to work*

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

Harm reduction plan

SUBSTANCE	POTENTIAL HARM	HARM REDUCTION STRATEGIES
General		
Before (obtaining or purchasing)		
Intoxication		
Withdrawal		

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

Decisional balance worksheet

It can be difficult to make changes and often decisions can be made without considering all of the consequences. At times you may begin making a change because you or others think that you 'should'. This may lead to feeling discouraged when change is not quick or easy. Having a clear idea of the pros and cons of making a change to your substance use means that you are more likely to persist with change during challenging moments. In the boxes below, write down all of the advantages and disadvantages of continuing with your current substance use versus making a change. For some people 'change' may mean not using substances at all, while for others it may mean something different.

	PROS	CONS
No change		
Change		

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

The ingredients of change

My goal for change

What is the change that I want to make to my substance use?

Importance

On a scale of 0 to 10, how important is it to you to make a change to your substance use?

Not important **Extremely important**

0 1 2 3 4 5 6 7 8 9 10

What makes you say a … ?

What led you to say … and not zero?

What would it take to move it to a … or a … ?

What could I do to help you to make it a … or a … ?

Confidence

On a scale of 0 to 10, how confident are you that you can make this change to your substance use?

Not confident **Extremely confident**

0 1 2 3 4 5 6 7 8 9 10

What makes you say a … ?

What led you to rate your confidence a … and not zero?

What would it take to move it to a … or a … ?

What would help you to increase your confidence to a … or a … ?

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

Thought record

TRIGGER	THOUGHTS AND BELIEFS	EMOTIONAL AND PHYSICAL	ODD OR UNUSUAL EXPERIENCES	BEHAVIOUR
What happened?	What were you thinking? What thoughts or images ran through your mind?	What were you feeling? What physical sensations did you experience?	Were there any other experiences (e.g. hearing a voice or feeling that you were floating away)?	What did you do? How did you react?

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

List of enjoyable activities

Solo activities

- Plan a holiday
- Go for a walk or a jog
- Listen to music
- Lie in the sun
- Read a magazines or a good book
- Write a poem or short story
- Go to the gym
- Cook from a new recipe
- Practice karate, judo or yoga
- Do some gardening
- Go swimming
- Draw or paint something
- Make a list of tasks and tick them off
- Play a musical instrument
- Make a gift for someone
- Practice meditation
- Do a jigsaw puzzle
- Start collecting something
- Sew something
- Buy some clothes
- Prepare your resume
- Read the newspaper
- Daydream
- Watch a movie
- Go bike riding
- Chat on the internet
- Take some photographs
- Write a letter
- Spring clean
- Join the local library
- Look at some old photos
- Do a crossword puzzles
- Dress up in something smart
- Learn a new language
- Get a massage
- Taking a sauna or steam bath
- Reorganise my cupboards
- Light some candles
- Listen to the radio
- Play a computer game
- Rearrange the furniture in my room

Activities with others

- Go to a movie
- Spend an evening with good friends
- Play a card or board games
- Join a book club
- Go to a party
- Talk to friends
- Sing in a choir
- Go to the beach
- Go ice skating or roller-blading
- Go for a drive
- Go hiking or bush walking
- Go out to dinner
- Play tennis
- Go to a play or concert
- Go to a footy game
- Go fishing
- Join a sporting team
- Go on a picnic
- Have lunch with a friend
- Play pool or billiards
- Go to a museum or art gallery
- Go surfing
- Go bowling
- Go horse-riding
- Go rock climbing
- Go window shopping

Adapted from resources from the Centre for Clinical Interventions (http://www.cci.health.wa.gov.au) and the National Cannabis Prevention and Intervention Centre (https://ncpic.org.au).

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

Substance use management plan – template

What are my reasons for not using? What are the important goals or values that I am working towards?

What are my triggers for using?

What strategies help me to cope with these triggers?

What are warning signs that I am about to use?

How I can respond if I am about to use:

How I would like others to respond if I am about to use:

People I can call to support me with my plan

Family	Friends	Professional

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

References

1. World Health Organization. *ICD-10 classification of mental and behavioural disorders*. 2015; viewed 29 June.
2. American Psychiatric Association. *Highlights of changes from DSM-IV-TR to DSM-5*. American Psychiatric Association 2013.
3. Hasin DS, O'Brien CP, Auriacombe M et al. DSM-5 Criteria for Substance Use Disorders: Recommendations and Rationale. *American Journal of Psychiatry* 2013; 170: 834-851.
4. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. Arlington, VA: American Psychiatric Association, 2013.
5. National Alliance on Mental Illness. NAMI comments on the APA's draft revisison of the DSM-V: substance use disorders.
6. White V and Smith G. *Australian secondary school students' use of tobacco, alcohol, and over-the-counter and illicit substances in 2008*. Canberra: 2009.
7. Baker AL, Hiles SA, Thornton LK et al. A systematic review of psychological interventions for excessive alcohol consumption among people with psychotic disorders. *Acta Psychiatrica Scandinavica* 2012; 126: 243-255.
8. Hunt GE, Siegfried N, Morley K et al. Psychosocial interventions for people with both severe mental illness and substance misuse. *Cochrane Database of Systematic Reviews* 2013; Issue 10:
9. Rygaard Hjorthoj C, Baker A, Fohlmann A et al. Intervention Efficacy in Trials Targeting Cannabis Use Disorders in Patients with Comorbid Psychosis Systematic Review and Meta-analysis. *Current Pharmaceutical Design* 2014; 20: 2205-2211.
10. Sara GE, Burgess PM, Malhi GS et al. Stimulant and other substance use disorders in schizophrenia: Prevalence, correlates and impacts in a population sample. *Australian and New Zealand Journal of Psychiatry* 2014; 48: 1036-1047.
11. Addington J, Case N, Saleem MM et al. Substance use in clinical high risk for psychosis: a review of the literature. *Early Intervention in Psychiatry* 2014; 8: 104-112.
12. Wade D, Harrigan S, Edwards J et al. Course of substance misuse and daily tobacco use in first-episode psychosis. *Schizophr Res* 2006; 81: 145-50.
13. Barnett JH, Werners U, Secher SM et al. *Substance use in a population-based clinic sample of people with first-episode psychosis*. 2007.
14. Myles N, Newall H, Nielssen O et al. The association between cannabis use and earlier age at onset of schizophrenia and other psychoses: meta-analysis of possible confounding factors. *Current Pharmaceutical Design* 2012; 18: 5055-5069.
15. Hinton M, Edwards J, Elkins K et al. Reductions in cannabis and other illicit substance use between treatment entry and early recovery in patients with first-episode psychosis. *Early Intervention in Psychiatry* 2007; 1: 259-266.
16. Australian Institute of Health and Welfare. National drug strategy household survey detailed report 2013. 2014.
17. Hall N, Francey S, and Edwards J. *Methampetamine and early psychosis*. 19th International Conference on Early Psychosis. Tokyo, Japan.
18. Auther AM, McLaughlin D, Carrión RE et al. Prospective study of cannabis use in adolescents at clinical high risk for psychosis: impact on conversion to psychosis and functional outcome. *Psychological Medicine* 2012; 42: 2485-2497.
19. McAtamney A and Willis K. *Polydrug use among cannabis users.* NCPIC. Accessed 2 July 2015.
20. Sevy S, Robinson DG, Holloway S et al. Correlates of substance misuse in patients with first-episode schizophrenia and schizoaffective disorder. *Acta Psychiatrica Scandinavica* 2001; 104: 367-374.
21. Boys A, Marsden J and Strang J. Understanding reasons for drug use amongst young people: a functional perspective. *Health Education Research* 2001; 16: 457-469.
22. Parrott AC, Milani RM, Gouzoulis-Mayfrank E et al. Cannabis and Ecstasy/MDMA (3,4-methylenedioxymethamphetamine): an analysis of their neuropsychobiological interactions in recreational users. *Journal of Neural Transmission* 2007; 114: 959-968.
23. Kelly AB, Evans-Whipp TJ, Smith R et al. A longitudinal study of the association of adolescent polydrug use, alcohol use and high school non-completion. *Addiction* 2015; 110: 627-635.

© Orygen, The National Centre of Excellence in Youth Mental Health 2015

24. Verdoux H, Liraud F, Gonzales B et al. Suicidality and substance misuse in first-admitted subjects with psychotic disorder. *Acta Psychiatrica Scandinavica* 1999; 100: 389-395.

25. Barrowclough C, Haddock G, Beardmore R et al. Evaluating integrated MI and CBT for people with psychosis and substance misuse: recruitment, retention and sample characteristics of the MIDAS trial. *Addictive Behaviors* 2009; 34: 859-866.

26. Teeson M. The relationships between substance use and mental health problems: Evidence from longitudinal studies. In Stockwell T GP, Toumbourou J, Loxley W (ed). *Preventing Harmful Substance Use: Evidence Base for Policy and Practice*. 2005.

27. Bagot KS, Milin R and Kaminer Y. Adolescent Initiation of Cannabis Use and Early-Onset Psychosis. *Substance Abuse* 2015; 00-00.

28. Barkus E and Murray RM. Substance Use in Adolescence and Psychosis: Clarifying the Relationship. *Annual Review of Clinical Psychology* 2010; 6: 365-389.

29. Bramness J, Gundersen O, Guterstam J et al. Amphetamine-induced psychosis - a separate diagnostic entity or primary psychosis triggered in the vulnerable? *BMC Psychiatry* 2012; 12: 221.

30. Large M, Sharma S, Compton MT et al. Cannabis use and earlier onset of psychosis: a systematic meta-analysis. *Archives of General Psychiatry* 2011; 68: 555-561.

31. Large M, Sharma S, Compton MT et al. Cannabis use and earlier onset of psychosis: a systematic meta-analysis. *Arch Gen Psychiatry* 2011; 68: 555-61.

32. Di Forti M, Sallis H, Allegri F et al. Daily use, especially of high-potency cannabis, drives the earlier onset of psychosis in cannabis users. *Schizophrenia Bulletin* 2014; 40: 1509-1517.

33. Donoghue K, Doody GA, Murray RM et al. Cannabis use, gender and age of onset of schizophrenia: data from the AESOP study. *Psychiatry Research* 2014; 215: 528-532.

34. Large M, Mullin K, Gupta P et al. Systematic meta-analysis of outcomes associated with psychosis and co-morbid substance use. *Australian and New Zealand Journal of Psychiatry* 2014; 48: 418-432.

35. Wade D, Harrigan S, McGorry PD et al. Impact of severity of substance use disorder on symptomatic and functional outcome in young individuals with first-episode psychosis. *The Journal of Clinical Psychiatry* 2007; 68: 767-774.

36. Baeza I, Graell M, Moreno D et al. Cannabis use in children and adolescents with first episode psychosis: influence on psychopathology and short-term outcome (CAFEPS study). *Schizophrenia Research* 2009; 113: 129-137.

37. Machielsen M, van der Sluis S and de Haan L. Cannabis use in patients with a first psychotic episode and subjects at ultra high risk of psychosis: impact on psychotic-and pre-psychotic symptoms. *Australian and New Zealand Journal of Psychiatry* 2010; 44: 721-728.

38. Bagot KS, Milin, R., & Kaminer, Y. (2015). Adolescent Initiation of Cannabis Use and Early-Onset Psychosis. Substance Abuse. *Substance Abuse* 2015; Early online DOI: 10.1080/08897077.2014.995332.

39. van der Meer FJ and Velthorst E. Course of cannabis use and clinical outcome in patients with non-affective psychosis: a 3-year follow-up study. *Psychological Medicine* 2015; doi:10.1017/S0033291714003092: 1-12.

40. Alvarez-Jimenez M, Priede A, Hetrick SE et al. Risk factors for relapse following treatment for first episode psychosis: a systematic review and meta-analysis of longitudinal studies. *Schizophr Res* 2012; 139: 116-28.

41. Foti DJ, Kotov R, Guey LT et al. Cannabis use and the course of schizophrenia: 10-year follow-up after first hospitalization. *The American Journal of Psychiatry* 2010; 167: 987-993.

42. González-Pinto A, Alberich S, Barbeito S et al. Cannabis and first-episode psychosis: different long-term outcomes depending on continued or discontinued use. *Schizophrenia Bulletin* 2009; doi:10.1093/schbul/sbp126.

43. Lambert M, Conus P, Lubman DI et al. The impact of substance use disorders on clinical outcome in 643 patients with first-episode psychosis. *Acta Psychiatr Scand* 2005; 112: 141-8.

44. Mazzoncini R, Donoghue K, Hart J et al. Illicit substance use and its correlates in first episode psychosis. *Acta Psychiatrica Scandinavica* 2010; 121: 351-358.

45. Fergusson DM, Horwood LJ and Swain-Campbell N. Cannabis use and psychosocial adjustment in adolescence and young adulthood. *Addiction* 2002; 97: 1123-1135.

46. Barrowclough C, Gregg L, Lobban F et al. The Impact of Cannabis Use on Clinical Outcomes in Recent Onset Psychosis. *Schizophrenia Bulletin* 2014; 41: 382-390.

47. Compton MT, Broussard B, Ramsay CE et al. Pre-illness cannabis use and the early course of nonaffective psychotic disorders: associations with premorbid functioning, the prodrome, and mode of onset of psychosis. *Schizophrenia Research* 2011; 126: 71-76.

48. Curtis J, Watkins A, Rosenbaum S et al. Evaluating an individualized lifestyle and life skills intervention to prevent antipsychotic-induced weight gain in first-episode psychosis. *Early Intervention in Psychiatry* 2015.

49. Lawrence D, Hancock KJ and Kisely S. *The gap in life expectancy from preventable physical illness in psychiatric patients in Western Australia: retrospective analysis of population based registers*. 2013.

50. Hall W and Solowij N. Adverse effects of cannabis. *The Lancet* 1998; 352: 1611-1616.

51. Hall W. The adverse health effects of cannabis use: What are they, and what are their implications for policy? *International Journal of Drug Policy* 2009; 20: 458-466.

52. Green BOB, Kavanagh DJ and Young RM. Reasons for cannabis use in men with and without psychosis. *Drug and Alcohol Review* 2004; 23: 445-453.

53. Schaub M, Fanghaenel K and Stohler R. Reasons for Cannabis Use: Patients with Schizophrenia Versus Matched Healthy Controls. *Australian and New Zealand Journal of Psychiatry* 2008; 42: 1060-1065.

54. Seddon JL, Copello A and Birchwood M. Cannabis use and abstention in first-episode psychosis: the participants'view. *Mental Health and Substance Use* 2013; 6: 47-58.

55. Archie S, Boydell KM, Stasiulis E et al. Reflections of young people who have had a first episode of psychosis: what attracted them to use alcohol and illicit drugs? *Early Intervention in Psychiatry* 2013; 7: 193-199.

56. Gregg L, Barrowclough C and Haddock G. Reasons for increased substance use in psychosis. *Clin Psychol Rev* 2007; 27: 494-510.

57. Addington J and Duchak V. Reasons for substance use in schizophrenia. *Acta Psychiatrica Scandinavica* 1997; 96: 329-333.

58. Goswami S, Mattoo SK, Basu D et al. Substance-Abusing Schizophrenics: Do They Self-Medicate? *The American Journal on Addictions* 2004; 13: 139-150.

59. Kolliakou A, Joseph C, Ismail K et al. Why do patients with psychosis use cannabis and are they ready to change their use? *International Journal of Developmental Neuroscience* 2011; 29: 335-346.

60. Henquet C, van Os J, Kuepper R et al. *Psychosis reactivity to cannabis use in daily life: an experience sampling study*. 2010.

61. Spencer C, Castle D and Michie PT. Motivations That Maintain Substance Use Among Individuals With Psychotic Disorders. *Schizophrenia Bulletin* 2002; 28: 233-247.

62. Prochaska JO, DiClemente CC and Norcross JC. In search of how people change: applications to addictive behaviors. *American Psychologist* 1992; 47: 1102–1114.

63. Commonwealth of Australia. National hepatitis C resource manual. Department of Health, 2008.

64. Ritter A and Cameron J. *Monograph No. 06: A systematic review of harm reduction*. Fitzroy: 2005.

65. Skinner HA. The drug abuse screening test. *Addictive Behaviors* 1982; 7: 363-371.

66. First MB, Spitzer RL, Gibbon M et al. *User's Guide for the Structured Clinical Interview for DSM-IV Axis I Disorders SCID-I: Clinician Version*. American Psychiatric Press, 1997.

67. Rosenberg SD, Drake RE, Wolford GL et al. Dartmouth Assessment of Lifestyle Instrument (DALI): a substance use disorder screen for people with severe mental illness. *Am J Psychiatry* 1998; 155: 232-8.

68. Raistrick D, Bradshaw J, Tober G et al. Development of the Leeds Dependence Questionnaire (LDQ): a questionnaire to measure alcohol and opiate dependence in the context of a treatment evaluation package. *Addiction* 1994; 89: 563-72.

69. Sobell LC, Brown J, Leo GI et al. The reliability of the Alcohol Timeline Followback when administered by telephone and by computer. *Drug Alcohol Depend* 1996; 42: 49-54.

70. Babor TF and Grant M. From clinical research to secondary prevention: International collaboration in the development of the Alcohol Disorders Identification Test (AUDIT). *Alcohol Health and Research World* 1989; 13: 371-374.

71. McLellan AT, Kushner H, Metzger D et al. The fifth edition of the addiction severity index. *Journal of Substance Abuse Treatment* 1992; 9: 199-213.

72. Raistrick D, Dunbar G and Davidson R. Development of a questionnaire to measure alcohol dependence. *Br J Addict* 1983; 78: 89-95.

73. Martin G, Copeland J, Gates P et al. The Severity of Dependence Scale (SDS) in an adolescent population of cannabis users: Reliability, validity and diagnostic cut-off. *Drug and Alcohol Dependence* 2006; 83: 90-93.

74. Lee N, Johns L, Jenkinson R et al. *Clinican treatment guidelines for alcohol and drug clinicians No.14: methamphetamine dependence and treatment*. Fitzroy, Victoria: 2007.

75. Rollnick S, Heather N, Gold R et al. Development of a short readiness to change questionnaire for use in brief, opportunistic interventions among excessive drinkers. *British Journal of Addiction* 1992; 87: 743-754.

76. Miller WR and Tonigan JS. Assessing drinkers' motivation for change: The stages of change readiness and treatment eagerness scale (SOCRATES). *Psychology of Addictive Behaviors* 1996; 10: 81-89.

77. Biener L and Abrams DB. The Contemplation Ladder: validation of a measure of readiness to consider smoking cessation. *Health Psychol* 1991; 10: 360-5.

78. Hunt GE, Siegfried N, Morley K et al. Psychosocial interventions for people with both severe mental illness and substance misuse. *Schizophrenia Bulletin* 2014; 40: 18-20.

79. Ley A, Jeffery DP, McLaren S et al. Treatment programmes for people with both severe mental illness and substance misuse. *Cochrane Database Syst Rev* 2000; CD001088.

80. Smedslund G, Berg RC, Hammerstrøm KT et al. Motivational interviewing for substance abuse. *Cochrane Database of Systematic Reviews* 2011; Issue 5.

81. Jensen CD, Cushing CC, Aylward BS et al. Effectiveness of motivational interviewing interventions for adolescent substance use behavior change: a meta-analytic review. *Journal of Consulting and Clinical Psychology* 2011; 79: 433-440.

82. Barnett E, Sussman S, Smith C et al. Motivational Interviewing for adolescent substance use: a review of the literature. *Addictive Behaviors* 2012; 37: 1325-1334.

83. Macgowan MJ and Engle B. Evidence for optimism: Behavior therapies and motivational interviewing in adolescent substance abuse treatment. *Child and Adolescent Psychiatric Clinics of North America* 2010; 19: 527-545.

84. Hofmann SG, Asnaani A, Vonk IJ et al. The efficacy of cognitive behavioral therapy: a review of meta-analyses. *Cognitive Therapy and Research* 2012; 36: 427-440.

85. Tripodi SJ, Bender K, Litschge C et al. Interventions for reducing adolescent alcohol abuse: a meta-analytic review. *Archives of Pediatrics & Adolescent Aedicine* 2010; 164: 85-91.

86. Carney T and Myers B. Effectiveness of early interventions for substance-using adolescents: findings from a systematic review and meta-analysis. *Substance Abuse Treatment, Prevention, and Policy* 2012; 7: 25-40.

87. Tait RJ and Christensen H. Internet-based interventions for young people with problematic substance use: a systematic review. *Medical Journal of Australia* 2010; 192: s15.

88. Barrowclough C, Haddock G, Wykes T et al. Integrated motivational interviewing and cognitive behavioural therapy for people with psychosis and comorbid substance misuse: randomised controlled trial. *British Medical Journal* 2010; 341: c6325.

89. Hjorthøj CR, Fohlmann A, Larsen AM et al. Specialized psychosocial treatment plus treatment as usual (TAU) versus TAU for patients with cannabis use disorder and psychosis: the CapOpus randomized trial. *Psychological medicine* 2013; 43: 1499-1510.

90. Bonsack CM, G. S, Favrod J et al. Motivational intervention to reduce cannabis use in young people with psychosis: A randomized controlled trial. *Psychotherapy & Psychosomatics* 2011; 80: 287-297.

91. Edwards J, Elkins K, Hinton M et al. Randomized controlled trial of a cannabis-focused intervention for young people with first-episode psychosis. *Acta Psychiatrica Scandinavica* 2006; 114: 109-117.

92. Madigan KB, D., Lawlor E, Turner N et al. A multi-center, randomized controlled trial of a group psychological intervention for psychosis with comorbid cannabis dependence over the early course of illness. *Schizophrenia Research* 2013; 143: 138-142.

93. Kemp R, Harris A, Vurel E et al. Stop using stuff: trial of a drug and alcohol intervention for young people with comorbid mental illness and drug and alcohol problems. *Australasian Psychiatry* 2007; 15: 490-493.

94. Kavanagh DJ, Young R, White A et al. A brief motivational intervention for substance misuse in recent-onset psychosis. *Drug and Alcohol Review* 2004; 23: 151-155.

95. *The facts about cannabis.* 2014; viewed 20th June. http://www.regen.org.au/resources/drug-factsheets.

96. *Cannabis*. 2015; viewed 19th June. http://www.druginfo.adf.org.au/drug-facts/cannabis.

97. Substance use and mental illness treatment team. *Reducing harm from cannabis*. SUMITT, 2015.

98. *The facts about alcohol.* 2014; viewed 20th June. http://www.regen.org.au/resources/drug-factsheets.

99. *Alcohol*. 2015; viewed 19th June. http://www.druginfo.adf.org.au/attachments/article/30/FS_Alcohol_Jul2015.pdf.

100. Substance use and mental illness treatment team. *Reducing harm from alcohol*. SUMITT, 2015.

101. *The facts about amphetamines*. 2014; viewed 20th June.

102. *Amphetamines*. 2015; viewed 19th June. http://www.druginfo.adf.org.au/drug-facts/amphetamines.

103. Substance use and mental illness treatment team. *Reducing harm from methamphetamines*. SUMITT, 2015.

104. *Heroin and opiates*. 2015; viewed 1 July 2015. http://www.drugfoundation.org.nz/heroin-opiates.

105. *The facts about heroin*. 2014; viewed 20th June. http://www.regen.org.au/resources/drug-factsheets.

106. Substance use and mental illness treatment team. *Reducing harm from heroin*. SUMITT, 2015.

107. *Benzodiazepines*. 2015; viewed http://www.druginfo.adf.org.au/drug-facts/benzodiazepines.

108. *The facts about benzos*. 2014; viewed 20th June. http://www.regen.org.au/resources/drug-factsheets.

109. Substance use and mental illness treatment team. *Reducing harm from benzodiazepines*. SUMITT, 2015.

110. *Ecstasy*. 2015; viewed 19th June. http://www.druginfo.adf.org.au/drug-facts/ecstasy.

111. *The facts about ecstasy*. 2014; viewed 20th June. http://www.regen.org.au/resources/drug-factsheets.

112. *Tobacoo*. 2015; viewed 19th June. http://www.druginfo.adf.org.au/attachments/article/380/DF_Tobacco_Dec2014.pdf.

113. Lubman DI, Hides L, Yucel M et al. Intervening early to reduce developmentally harmful substance use among youth populations. *Med J Aust* 2007; 187: S22-5.

114. Cairney S, Maruff P, Burns C et al. Saccade dysfunction associated with chronic petrol sniffing and lead encephalopathy. *Journal of Neurology, Neurosurgery, and Psychiatry* 2004; 75: 472-476.

115. Substance use and mental illness treatment team. *Reducing harms from inhalants*. SUMITT, 2015.

116. *Inhalants.* 2015; viewed 19th June. http://www.druginfo.adf.org.au/drug-facts/inhalants.

117. *Hallucinogens.* 2015; viewed 19th June. http://www.druginfo.adf.org.au/drug-facts/hallucinogens.

118. *Synthetic cannabis.* 2015; viewed 19th June. http://www.druginfo.adf.org.au/drug-facts/synthetic-cannabis.

119. Severe illness associated with reported use of synthetic marijuana – Morbidity and mortality weekly report. 2015; viewed 1 July. http://www.cdc.gov/.

120. Dixon L. Dual diagnosis of substance abuse in schizophrenia: prevalence and impact on outcomes. *Schizophr Res* 1999; 35 Suppl: S93-100.

121. Hall W. Is there a specific 'cannabis psychosis'? In Castle D and Murray RM (ed). *Marijuana and madness*. Cambridge, 2004.

122. Castle D. Substance use and psychosis. *Australian family physician* 2006; 35: 110.

123. Miller WR and Rollnick S. *Motivational interviewing: helping people change*. New York: The Guilford Press, 2012.

124. Hall K, Gibbie T and Lubman D. Motivational interviewing techniques: facilitating behaviour change in the general practice setting. *Australian Family Physician* 2012; 41: 660-667.

125. McHugh RK, Hearon BA and Otto MW. Cognitive-Behavioral Therapy for Substance Use Disorders. *The Psychiatric clinics of North America* 2010; 33: 511-525.

126. Hughes A, Macneil C, Francey S et al. *Psychological interventions: why, how and when to use in early psychosis*. Orygen The National Centre of Excellence in Youth Mental Health, 2015.

127. Cuijpers P, van Straten A and Warmerdam L. Behavioral activation treatments of depression: a meta-analysis. *Clin Psychol Rev* 2007; 27: 318-26.

128. Mairs H, Lovell K, Campbell M et al. Development and pilot investigation of behavioral activation for negative symptoms. *Behav Modif* 2011; 35: 486-506.

129. Zubin J and Spring B. Vulnerability: A new view of schizophrenia. *Journal of Abnormal Psychology* 1977; 86: 103-126.

130. Staiger PK, Melville F, Hides L et al. Can emotion-focused coping help explain the link between posttraumatic stress disorder severity and triggers for substance use in young adults? *Journal of Substance Abuse Treatment* 2009; 36: 220-226.

131. Chadwick P. Mindfulness for psychosis. *British Journal of Psychiatry* 2014; 204: 333-334.

132. Morris EMJ, Johns LC and Oliver JE. *Acceptance and Commitment Therapy and Mindfulness for Psychosis*. Chichester, England: Wiley-Blackwell, 2013.

133. Lanza PV, Garcia PF, Lamelas FR et al. Acceptance and commitment therapy versus cognitive behavioral therapy in the treatment of substance use disorder with incarcerated women. *J Clin Psychol* 2014; 70: 644-57.

134. Hayes SC and Levin M. *Mindfulness and acceptance for addictive behaviors: applying contextial CBT to substance abuse and behavioral addictions*. New Harbinger Publications, 2012.

135. Cementon E. *Alcohol and other drugs withdrawal practice guidelines: acute inpatient and residental services*. 2011.

136. Victorian Dual Diagnosis Initiative. *Victorian Dual Diagnosis Initiative AOD Withdrawal and Intoxication Lecture Notes*. 2009.

137. EPPIC. *Cannabis and psychosis: an early psychosis treatment manusl*. Parkville: EPPIC 2002.

138. Green AI, Noordsy DL, Brunette MF et al. Substance abuse and schizophrenia: Pharmacotherapeutic intervention. *Journal of Substance Abuse Treatment* 2008; 34: 61-71.

139. Brunette MF, Drake RE, Xie H et al. Clozapine Use and Relapses of Substance Use Disorder Among Patients With Co-occurring Schizophrenia and Substance Use Disorders. *Schizophrenia Bulletin* 2006; 32: 637-643.

140. Drake RE, Xie H, McHugo GJ et al. The Effects of Clozapine on Alcohol and Drug Use Disorders Among Patients With Schizophrenia. *Schizophrenia Bulletin* 2000; 26: 441-449.

141. Zimmet SV, Strous RD, Burgess ES et al. Effects of Clozapine on Substance Use in Patients With Schizophrenia and Schizoaffective Disorder: A Retrospective Survey. *Journal of Clinical Psychopharmacology* 2000; 20: 94-98.

142. Petrakis IL, Nich C and Ralevski E. Psychotic spectrum disorders and alcohol abuse: a review of pharmacotherapeutic strategies and a report on the effectiveness of naltrexone and disulfiram. *Schizophr Bull* 2006; 32: 644-54.

143. Petrakis IL, O'Malley S, Rounsaville B et al. Naltrexone augmentation of neuroleptic treatment in alcohol abusing patients with schizophrenia. *Psychopharmacology (Berl)* 2004; 172: 291-7.

144. Gordon A. *Comorbidity of mental disorders and substance use: a brief guide for the primary care clinician.* Department of Health and Ageing, 2008.

145. Lucas C and Martin J. Smoking and drug interactions. *Aust Prescr* 2013; 36:102-40

146. McCool RM and Paschall Richter K. Why do so many drug users smoke? *Journal of Substance Abuse Treatment* 2003; 25: 43-49.

147. Elkader AK, Brands B, Selby P et al. Methadone-nicotine interactions in methadone maintenance treatment patients. *J Clin Psychopharmacol* 2009; 29: 231-8.

148. Kavanagh D, McGrath J, Saunders J et al. Substance Misuse in Patients with Schizophrenia. *Drugs* 2002; 62: 743-755.

149. Boulton DW, Arnaud P and DeVane CL. A single dose of methadone inhibits cytochrome P-4503A activity in healthy volunteers as assessed by the urinary cortisol ratio. *Br J Clin Pharmacol* 2001; 51: 350-4.

150. Totah RA, Allen KE, Sheffels P et al. Enantiomeric metabolic interactions and stereoselective human methadone metabolism. *J Pharmacol Exp Ther* 2007; 321: 389-99.

151. Thummel KE and Wilkinson GR. In vitro and in vivo drug interactions involving human CYP3A. *Annu Rev Pharmacol Toxicol* 1998; 38: 389-430.

152. Zhang W, Ramamoorthy Y, Tyndale RF et al. Interaction of buprenorphine and its metabolite norbuprenorphine with cytochromes p450 in vitro. *Drug Metab Dispos* 2003; 31: 768-72.

153. Hall M and Buckley N. Serotonin syndrome. *Aust Prescr* 2003; 26: 62–3.

154. Madigan K, Brennan D, Lawlor E et al. A multi-center, randomized controlled trial of a group psychological intervention for psychosis with comorbid cannabis dependence over the early course of illness. *Schizophr Res* 2013; 143: 138-42.

155. Conus P, Cotton S, Schimmelmann BG et al. Pretreatment and outcome correlates of sexual and physical trauma in an epidemiological cohort of first-episode psychosis patients. *Schizophr Bull* 2010; 36: 1105-14.

156. González-Blanch C, Gleeson JF, Koval P et al. Social Functioning Trajectories of Young First-Episode Psychosis Patients with and without Cannabis Misuse: A 30-Month Follow-Up Study. *PLoS ONE* 2015; 10: e0122404.

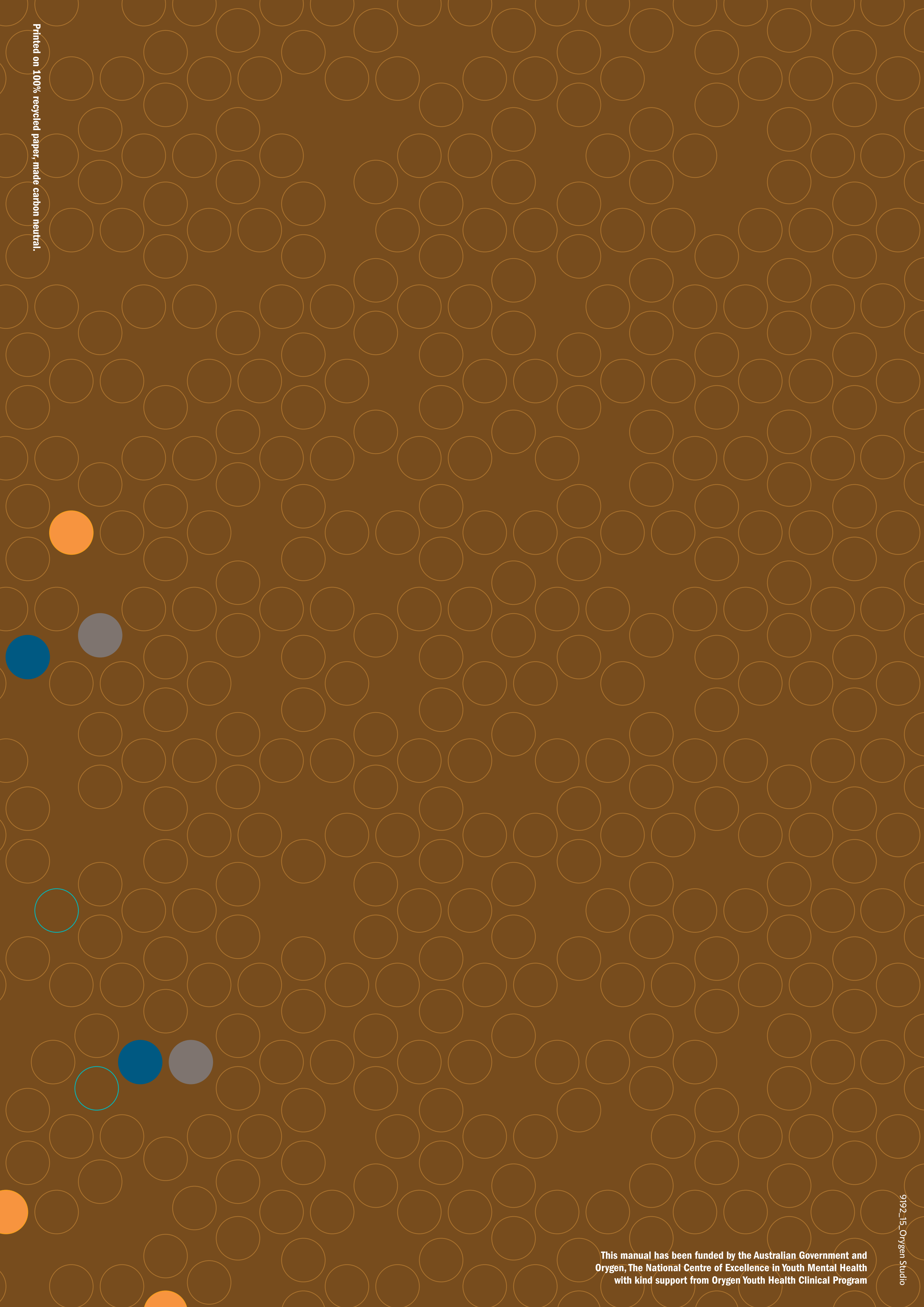
157. Mazzoncini R, Donoghue K, Hart J et al. Illicit substance use and its correlates in first episode psychosis. *Acta Psychiatr Scand* 2010; 121: 351-8.

158. Berry K, Ford S, Jellicoe-Jones L et al. PTSD symptoms associated with the experiences of psychosis and hospitalisation: A review of the literature. *Clinical Psychology Review* 2013; 33: 526-538.

159. Katherine L. Mills BHS, Maree Teesson PD, Joanne Ross PD et al. Trauma, PTSD, and Substance Use Disorders: Findings From the Australian National Survey of Mental Health and Well-Being. *American Journal of Psychiatry* 2006; 163: 652-658.

160. Department of Human Services. *Dual diagnosis: key directions and priorities for service development*. 2007.

NOTES



Printed on 100% recycled paper, made carbon neutral.

This manual has been funded by the Australian Government and
Orygen, The National Centre of Excellence in Youth Mental Health
with kind support from Orygen Youth Health Clinical Program

9192_15_Orygen Studio