NSW Health

# Management of Withdrawal from Alcohol and Other Drugs

## Handbook

NSW GOVERNMENT

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The NSW Ministry for Health acknowledges the traditional custodians of the lands across NSW. We acknowledge that we live and work on Aboriginal lands. We pay our respects to Elders past and present and to all Aboriginal people.

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# Contents

# Background

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## 1.1 About this document

This Handbook is a companion to the 2022 Clinical Guidance for Management of Withdrawal from Alcohol and Other Drugs. It aims to assist clinicians managing alcohol and other drug (AOD) withdrawal across a range of settings including hospitals, AOD specialist inpatient units, residential facilities such as non-government AOD services, nursing homes and correctional centres, primary health and community settings including general practice, Aboriginal Community Controlled Health Organisations and community and welfare services.

In the 14 years since the last clinical practice guidelines were published, there have been a number of changes in substance use in NSW, including:

- Substance use trends have changed, with an increase in the use of the crystal form of methamphetamine compared with other forms, and an increase in the non-medical use of pharmaceutical opioids.
- Data shows that people who use alcohol and other drugs most commonly use multiple substances.
- Treatment services have enhanced their focus on trauma-informed care and working in partnership with patients and their carers. There is greater recognition of the impact of stigma and discrimination.
- Take home naloxone has become available.
- There is a greater focus on driver safety issues associated with AOD use.
- There has been increasing recognition of the importance of continuity of care, in which withdrawal is seen not as an endpoint in treatment but rather one stage of ongoing management.

This Handbook adds detail and educative material to the 2022 Clinical Guidance – Managing Withdrawal from Alcohol and Other Drugs. It is informed by the literature review commissioned by the Ministry (available **here**) which examined evidence regarding psychosocial, physical and pharmacological interventions in the management of withdrawal from each of the following substances: alcohol, benzodiazepines, amphetamines, methamphetamine and cocaine, methylenedioxy methamphetamine (MDMA), opioids, cannabis, pregabalin/gabapentin and gamma hydroxybutyrate (GHB) and its precursors. This information was supplemented with expert clinical experience where evidence was not available. The Expert Steering Committee decided against including **nicotine withdrawal** in this Handbook as NSW Health has separate Guidelines for managing tobacco cessation, which are available at **https://www.health.nsw.gov.au/tobacco/Pages/managing-nicotine-dependence.aspx**.

Chapters on individual substances and specific population groups were drafted by experts in the field and reviewed by an Expert Steering Committee. Further input occurred through a consultative group. The authors and the participants in the groups are listed in Appendix 2.

We consulted with a wide range of stakeholders to obtain written or face-to-face feedback. This included producing a consultation draft which was electronically distributed to local health district drug and alcohol clinicians and others upon request. In-person consultation occurred with the Aboriginal Drug and Alcohol Network, Aboriginal patients/consumers and the Ministry of Health Consumer Reference Committee as well as AOD nursing forums.

The **Victorian Guidelines for AOD Withdrawal**, produced by Turning Point, have been drawn upon with the kind permission of the Victorian Department of Health and Turning Point. The alcohol section of this Handbook was drafted based on the National **Guidelines for Treatment of Alcohol Problems**.

## 1.2 Key definitions

A glossary of terms and acronyms appears in section 15 below.

### AOD

Alcohol and other drugs. This term is used interchangeably with ‘drug and alcohol’ and ‘substances’.

## Patient, client, consumer

describe the person receiving withdrawal care. Client, consumer and person are also used at times. The terms are used interchangeably.

## Settings

In this Handbook, the terms inpatient, residential and community settings are used. The inpatient setting refers to treatment provided to a patient admitted to a hospital bed, whether a specialised withdrawal unit or a general hospital ward. Care in a residential setting refers to treatment provided at a drug and alcohol residential facility, usually operated by a non-government organisation. Residential settings may not have 24-hour medical coverage.

Care in a community setting is non-residential treatment provided without requiring overnight stays. It can be home-based (with clinicians visiting the patient's home) or ambulatory/outpatient (with the patient attending at a clinic or medical centre). Community, ambulatory and outpatient are sometimes used interchangeably in this document.

## Substance dependence and withdrawal

Withdrawal occurs in substance-dependent people who stop or reduce their substance use. The World Health Organisation's (WHO) International Classification of Diseases 11th Revision (ICD-11) defines substance dependence as 'a disorder of regulation of psychoactive substance use arising from repeated or continuous use'. The ICD-11 further notes that:

the characteristic feature is a strong internal drive to use the substance, which is manifested by impaired ability to control use, increasing priority given to use over other activities and persistence of use despite harm or negative consequences.

The relevant definitions of dependence and withdrawal in the two key classification systems, the ICD-11 and the Diagnostic and Statistical Manual 5th Edition (DSM 5), are compared in Table 1.1 below. This Handbook will use the ICD-11 definitions in subsequent chapters. ICD-11 was adopted by the WHO in 2019, with member countries transitioning from ICD-10 from 2022.

## Table 1.1 Definition of dependence and substance use disorder

| ICD-11 Dependence syndrome | DSM 5 – Substance use disorder |
|---|---|
| Substance dependence is a disorder of regulation of psychoactive substance use arising from repeated or continuous use.<br>The characteristic feature is a strong internal drive to use the substance, which is manifested by impaired ability to control use, increasing priority given to use over other activities and persistence of use despite harm or negative consequences.<br>These experiences are often accompanied by a subjective sensation of urge or craving to use the substance.<br>Physiological features of dependence may also be present, including:<br>• tolerance to the effects of the substance<br>• withdrawal symptoms following cessation or reduction in use<br>• repeated use of the substance or pharmacologically similar substances to prevent or alleviate withdrawal symptoms.<br>The features of dependence are usually evident over a period of at least 12 months but the diagnosis may be made if substance use is continuous (daily or almost daily) for at least 1 month. | **Impaired control**<br>The individual may:<br>• Take the substance in larger amounts or over a longer period than was originally intended.<br>• Express a persistent desire to cut down or regulate substance use and may report multiple unsuccessful efforts to decrease or discontinue use.<br>• Spend a great deal of time obtaining the substance, using the substance, or recovering from its effects.<br>• Experience craving as manifested by an intense desire or urge for the drug.<br>**Social impairment**<br>The individual may:<br>• Fail to fulfil major role obligations at work, school or home.<br>• Continue substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.<br>• Cease or reduce important social, occupational or recreational activities because of substance use.<br>**Risky use**<br>Recurrent substance use in situations in which it is physically hazardous.<br>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.<br>Pharmacological criteria<br>Tolerance as signalled 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.<br>Withdrawal symptoms when blood or tissue concentrations of a substance decline in an individual who had maintained prolonged heavy use of the substance. Neither tolerance nor withdrawal is necessary for a diagnosis of a substance use disorder. |

## Table 1.2

| Withdrawal state (ICD-11) | Withdrawal syndrome (DSM 5) |
|---|---|
| Withdrawal is a clinically significant cluster of symptoms, behaviours and/or physiological features, varying in degree of severity and duration, that occurs upon cessation or reduction of use of a substance in individuals who have developed dependence or have used the substance for a prolonged period or in large amounts.<br>Presenting features vary according to the substance. | Withdrawal is a syndrome that occurs following cessation or reduction in use of a substance by an individual who had maintained prolonged heavy use of the substance.<br>The signs or symptoms cause clinically significant distress or impairment in social, occupational or other important areas of functioning and are not attributable to another medical condition and are not better explained by another mental disorder, including intoxication or withdrawal from another substance. |

### Table 1.3 Common withdrawal syndromes

| | |
|---|---|
| **Alcohol** | |
| Onset: | 6-24 hours after last drink (depending on rate that blood levels fall). |
| Duration: | 3-7 days (up to 14 days in severe withdrawal). |
| Features: | anxiety, agitation, sweating, tremor, nausea, vomiting, abdominal cramps, diarrhoea, anorexia, craving, insomnia, elevated blood pressure, pulse and temperature, headache, confusion, perceptual distortions, disorientation, hallucinations, seizures. |
| **Benzodiazepine Receptor Agonists** | |
| Onset: | 1-10 days (depending on half-life of drug). |
| Duration: | 3-6 weeks (may be longer). |
| Features: | anxiety, headache, insomnia, muscle aching and twitching, perceptual changes, feelings of unreality, depersonalisation, seizures. |
| **GHB** | |
| Onset: | 1-4 hours after last use. |
| Duration: | Up to 21 days. |
| Features: | **Mild-moderate withdrawal:** Cravings, tremor, insomnia, diaphoresis, anxiety, nausea, tachycardia, hypertension, agitation, hyperthermia<br>**Severe withdrawal:** Myoclonus, disorientation, perceptual disturbance, delirium, seizures, bradycardia, rhabdomyolysis, renal impairment. |
| **Gabapentinoids** | |
| Onset: | 1-2 days after last use. |
| Duration: | 3-5 days for severe symptoms, residual mild symptoms for several weeks. |
| Features: | headache, anxiety, craving, diarrhoea, chills, fatigue, palpitations, nausea and insomnia, agitation, diaphoresis, tachycardia, hypertension and tremor. |
| **Cannabis** | |
| Onset: | Within 24 hours. |
| Duration: | 1-2 weeks. |
| Features: | insomnia, shakiness; irritability, restlessness, anxiety; anger, aggression. |

| **Opioids** | |
|---|---|
| Onset: | 6-24 hours (may be later with longer-acting opioids). |
| Duration: | peaks 2-4 days, ceases 5-10 days (more prolonged for longer-acting opioids). |
| Features: | anxiety, craving, muscle tension, muscle and bone ache, muscle cramps and sustained contractions, sleep disturbance, sweating, hot and cold flushes, piloerection, yawning, lacrimation and rhinorrhoea, abdominal cramps, nausea, vomiting, diarrhoea, palpitations, elevated blood pressure and pulse, dilated pupils. |
| **Psychostimulant** | |
| Onset: | 6-12 hours (cocaine); 12-24 hours (amphetamines). |
| Duration: | Several weeks for withdrawal phase, then months for extinction. |
| Features: | 3 phases. **Crash:** fatigue, flat affect, increased sleep, reduced cravings.<br>**Withdrawal:** fluctuating mood and energy levels, cravings, disturbed sleep, poor concentration.<br>**Extinction:** persistence of withdrawal features, gradually subsiding. |

# General Principles of Withdrawal Care

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When a person is dependent on a substance, withdrawal of the drug carries risks of physical harm, psychological trauma and (rarely) death. The aim of withdrawal care is to minimise the risks associated with withdrawal and to reduce discomfort. This maximises the chance of completion of withdrawal, in turn enabling people to engage in treatment that will reduce harm in the longer term.

## 2.1 Rationale and underlying principles for withdrawal care

The purpose of withdrawal care is to provide appropriate support to enable withdrawal to be completed safely.

The primary aims of substance withdrawal are to:

1. Cease substance use, whether permanently or temporarily.
2. Treat symptoms, coexisting conditions and complications of chronic use.
3. Engage the patient in ongoing treatment and care.

Withdrawal is not a standalone treatment; it is only a part of the treatment journey. Post-withdrawal treatment planning should begin at the commencement of a supported withdrawal episode.

Underlying principles:

- The objective is safe withdrawal, not long-term abstinence. Withdrawal support is not to be withheld because of doubts about a patient's commitment to long term abstinence. Reduction in substance use is a valid goal for some patients. Specific goals will depend on patient circumstances and are to be developed in consultation with the patient.
- Withdrawal should be undertaken only if the anticipated benefits outweigh the harms.
- Choice of treatment setting is dependent on safety and likelihood of successful completion of withdrawal.
- Clinical monitoring and care are to be tailored to individual need. Care may range from psychosocial support only, to a combination of psychosocial support plus medication, to high level nursing and medical care in more severe and complex withdrawal syndromes.
- Key elements of withdrawal care include building therapeutic relationships, reducing patient discomfort, collaboration with patients and provision of supportive care.
- Withdrawal medications are prescribed for a limited duration only, usually in a reducing regimen.
- Be aware of, and avoid exacerbating, the shame, stigma and discrimination experienced by patients who use alcohol and other drugs. It can be challenging to seek advice and treatment for AOD issues, particularly withdrawal.
- Involvement of families and carers, with patient consent, can be beneficial.
- Linking to evidence-informed AOD treatment post-withdrawal is an integral part of withdrawal care. All patients require a post-withdrawal management plan and be connected to the next care provider on transfer of care.
- Withdrawal presents an opportunity to promote harm reduction via the provision of information and education about safer substance use practices. This may include a reduction in AOD consumption, safer means of drug administration, and lifestyle improvements.
- People seeking support will often have a range of other health issues. Withdrawal treatment presents an opportunity to provide holistic and integrated care to address these.

## 2.2 Trauma-informed care

A history of trauma and trauma-related disorders is commonly associated with substance use disorders. While it is not essential to explore the details of the trauma in the acute situation, an openness to the possibility that each patient presenting for withdrawal management has experienced significant trauma encourages clinicians to work in a way that promotes safe and collaborative experiences of treatment, that ensure re-traumatisation does not occur in treatment.

Clinician awareness of trauma and its physical, psychological and social impacts can contribute to them assisting patients in identifying their own strengths and survival strategies and encourage the mobilisation of these strengths in coping with withdrawal and working towards recovery.

The core principles of working in a trauma responsive paradigm are safety, choice, trustworthiness, collaboration and empowerment.

**Research** shows that positive experiences in a person's relationships enhance trauma recovery and negative experiences impede it. Actively working to promote positive experiences of relationships in withdrawal management can benefit patients, staff and services, and limit further negative impacts of trauma.

## 2.3 Addressing stigma and discrimination

**All** clinicians who treat patients who use alcohol and other drugs have a responsibility to provide care that is free from stigma and discrimination.

Patients who use alcohol and other drugs are often stigmatised as having made unhealthy or immoral choices, stereotyped as being dangerous or untrustworthy, and considered to have less right to access health services.

Stigma is a significant cause of health inequality: it can be a barrier to help-seeking and can lead to poor quality care and premature termination of treatment. It does not lead to reduced substance use.

Stigma and discrimination toward people who use substances may have a negative impact on patients':

- Willingness to access medical assistance for future or ongoing treatment of health conditions.
- Ability to receive quality therapeutic care and treatment from a broad range of health practitioners.
- Motivation to disclose their status of alcohol and/or drug use, a history of injecting, or associated medical conditions.

Clinicians are to ensure their interactions with all patients, including those who are substance dependent, are respectful, empathetic and non-judgmental.

## 2.4 Confidentiality and its limits

Advise the patient that the information they provide is confidential and necessary to predict and prevent serious complications. The limitations of confidentiality, in accordance with legal and professional obligations, are also to be discussed with the patient in a sensitive manner. Advise patients that the information they provide will be kept confidential unless there is risk to themselves or others. Disclosure is permitted to occur to:

- Department of Communities and Justice where care and protection of children or young people is involved.
- Mental health professionals where risk to self or others is considered part of a mental health condition.
- **Transport for NSW** where driver safety is a concern.
- Australian Health Practitioner Regulation Agency (AHPRA) if there is concern about impaired practitioners.
- Workplaces – if safe operation of heavy machinery or vehicles is a concern.

## 2.5 Providing COVID-safe care

The COVID-19 pandemic has highlighted the need for services and clinicians to be flexible in their provision of care depending on levels of community transmission. Use of telehealth and virtual care facilities have enabled many services to continue during the pandemic. Clinicians are advised to have virtual care facilities available and ready to be activated as the need arises. A risk assessment is to be undertaken for individual patients to determine suitability for virtual care.

Advice on effective use of virtual care is available from a range of sources – designed for clinicians and patients. This includes the **NSW Agency for Clinical Innovation** and **Turning Point**.

## 2.6 Accessing specialist addiction medicine advice through DASAS

The Drug and Alcohol Specialist Advisory Service (DASAS) is a free 24/7 telephone service that provides general advice to health professionals who require assistance with the clinical diagnosis and management of patients with alcohol and other drug related concerns. DASAS provides support to all health professionals, especially those working in regional, rural and remote areas of NSW or where timely local specialist drug and alcohol support is not available.

Callers to the DASAS line may include GPs, hospital doctors, nurses, mental health staff, pharmacists and other allied health professionals. DASAS can advise on managing withdrawal from specific substances and provide general advice on what AOD conditions can or cannot be safely and effectively managed in a community or general practice setting. All doctors on the DASAS line are qualified Addiction Specialists.

To contact DASAS phone 1800 023 687 from regional, rural & remote NSW or (02) 8382-1006 if within Sydney metropolitan area.

# Accessing Withdrawal Services

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## 3.1 Screening

In the hospital setting, screening for substance use assists in early detection of any substance-related withdrawal risks and will inform a decision about whether a comprehensive assessment is required. Screening is typically undertaken by nursing staff and should occur early in the admission or presentation.

Ask the patient the questions about the quantity and frequency of substance use as follows:

In the last month have you:

- Smoked tobacco or vaped?
- Consumed alcohol on 4 days or more in a week or had 6 or more standard drinks on one occasion?
- Used any recreational drugs?
- Taken medication for pain, anxiety/stress or sleeping problems?
- Used any other substances?

If 'yes' to any of the above, then clarify:

- How frequently have you used the substances you have identified?
- When did you last use this drug, smoke tobacco/vape or drink alcohol?
- How do you take the drug or alcohol? (e.g. drink, inject, snort, smoke, vape)
- Have you ever overdosed or experienced withdrawal symptoms?
- Have you ever attended a drug or alcohol service for treatment for your alcohol or drug use?

The clinician should:

- Document the results of the screen, including the quantities of substances a person is using, or has used.
- Ask the patient if they are using more than one drug at a time, as polysubstance use can significantly increase the risk involved.
- Use the results of the screening to take action as required.
- Avoid duplicating the screening undertaken by other clinicians during the admission.

Clinicians are to refer to their local guidelines and protocols regarding whether particular screening tools are to be used and what the timeframe for screening should be.

Some screening tools commonly used are provided at Appendix 5.

## 3.2 Information and Intake

### 3.2.1 Sources of information about services

Alcohol Drug Information Service (ADIS) is a free 24-hour, 7-day phone service for people seeking information or assistance with substance related issues. It also provides assessment, referral and brief counselling. Phone: (02) 9361 8000 or 1800 422 599 (outside Sydney)

NSW Health's website contains information on available withdrawal services and how to contact them **(https://www.health.nsw.gov.au/aod/Pages/wmrs-contact.aspx)**.

Clinicians seeking more clinical information and advice about matching patients to particular withdrawal settings can call Drug and Alcohol Specialist Advisory Service (DASAS) on: (02) 9361 8006 or 1800 023 687 for regional and rural NSW.

### 3.2.2 Centralised intake lines

Local health districts (LHDs) in NSW have an intake telephone number (or online access) which is the first point of contact for people seeking help for substance use. Callers are assessed by telephone and referred to relevant services within the LHD. Intake lines screen for risk and identify the most suitable setting for withdrawal.

Local intake lines mostly operate Monday to Friday during business hours. Individual LHD's centralised intake lines are listed on the NSW Health **website**. These are also listed at Appendix 10 or can be accessed by calling the Alcohol and Drug Information Service (ADIS) on 1800 422 599.

## 3.3 Presentation for withdrawal management

A patient's presentation for withdrawal management may be planned (elective) or unplanned. Patients present for withdrawal management in a range of emotional states. They may be wary as a result of previous experiences in the healthcare system. The initial assessment provides an important opportunity to begin building an effective therapeutic relationship with the patient. It is important to be non-judgmental, empathic and respectful. You should:

- Listen to the patient and support them to clarify their needs.
- Encourage the patient to participate actively in treatment decisions from the outset.

Communicate clearly and allow time for the patient to gain an understanding of what they may expect during withdrawal, what assistance is being offered and the reasoning behind it.

### 3.3.1 Planned presentations

Planned or elective substance withdrawal can occur either in an outpatient (community) or inpatient (hospital) setting. If the patient is not able to access withdrawal care immediately, be aware of safety considerations. Patients with urgent health or social needs need to be linked with other treatments while waiting for withdrawal care.

Advise patients that sudden cessation of substance use **can be risky** and should be avoided by making small reductions in intake. One approach is to work with the patient to develop a gradual reduction regime and provide harm reduction information if they continue substance use as they wait for treatment to start.

Encourage the patient to start considering post-withdrawal treatment options. Provide them with information to reduce ongoing risk of harm as well as referrals and ongoing treatment options.

### 3.3.2 Unplanned presentations

Unplanned withdrawal episodes can occur when a patient has to cease or reduce their substance use for any reason, including being hospitalised for unrelated treatment. A patient may also present already experiencing signs and symptoms of withdrawal, such as when they attempt unsupported withdrawal or are unable to obtain their usual substances.

### 3.3.3 Intoxication, overdose and Poisons Hotline

It is common for substance-dependent people to present in a state of intoxication (which can complicate assessment and management of withdrawal) or overdose (which can be life-threatening). Both intoxication and overdose may require acute medical care.

For more information on managing intoxication and overdose, call the Poisons Information Hotline on 13 11 26. A clinician on the hotline will make an assessment from a toxicity perspective and evaluate the risk based on the history and symptoms. A decision would then be made to either refer the patient to a hospital or to have a responsible observer continue to observe the patient.

If a patient is intoxicated on presentation for a planned admission, they should be assessed and monitored. Depending on the clinical impression, the patient may need to be transferred to a hospital or observed by qualified staff on site. If there are health concerns, this patient **should not be sent away** until medically stable.

Consider the potential for a delayed medical deterioration secondary to substance consumption. A patient who has taken a substance prior to presentation may only display the full effects after a few hours. If appropriate, these patients should be observed for a period of four hours or referred to hospital via ambulance if required.

# Assessment for Withdrawal Care

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## 4.1 Primary aims of assessment

Assessment is the first step in managing AOD withdrawal. The primary aims are to:

- Predict and manage the risks that may confront the patient because of withdrawal.
- Identify and respond to co-occurring conditions.
- Identify the specific needs of the patient to enhance the likelihood of completing withdrawal (ie to match treatment to patient needs).
- Commence planning for post-withdrawal care.
- Begin building a therapeutic relationship with the patient.

There will be cases where withdrawal may not be the right choice for the patient. Treatment that offers no apparent benefit to patients or increases risk should not be commenced. Alternative approaches should be sought in consultation with the patient.

## 4.2 Timing of assessment

For elective presentations, the assessment can partially be conducted over the phone, with the physical examination and thorough mental state assessment done at presentation for admission.

For unplanned presentations, a thorough assessment and withdrawal care plan should be undertaken at the time of presentation.

## 4.3 Key elements in assessment

Explain the purpose of each element of the assessment process to the patient, being mindful of whether the patient's capacity to process information is affected by intoxication, withdrawal symptoms or cognitive impairment.

Provide the patient with information about the signs and symptoms of withdrawal, the course of withdrawal and options for withdrawal management. Emphasise that withdrawal is not a stand-alone treatment and is unlikely to be successful without post-withdrawal treatment.

Components of a comprehensive assessment are:

- Substance use history covering each substance used, risks associated with multiple substance use and the patient's history of withdrawal and any associated complications.
- Medical and mental health history.
- Psychosocial assessment to identify expectations, supports, barriers and preferences that may influence withdrawal management.
- Physical examination that includes an assessment of intoxication and withdrawal signs.
- Appropriate laboratory investigations.
- Mental state examination.
- Risk assessments.

More information on each of these elements appears below.

Clinicians must ensure that personal values and stereotypes do not interfere with effective assessment of the patient.

### 4.3.1 Substance use history

Undertake a full history of alcohol and other drugs used. Ask the patient about all substances, class by class, to identify any substances used, whether prescribed or not. Document the:

- Quantity, frequency, duration of use, pattern of use.
- Time and amount of last use.
- Route of administration.
- Recent pattern leading up to this presentation.
- Average daily consumption.

Many people - with or without substance use problems – are likely to underestimate or estimate inaccurately how much they use if asked the question: "On average how much do you use a day or a week?"

One way to increase accuracy is to obtain a retrospective consumption history. This involves asking about consumption over a typical week (or month) starting from today and working backwards. This may easily be recorded on a "consumption calendar". (See Appendix 8 for information on obtaining a consumption history).

## When a substance use history is hard to obtain

There are situations in which a patient is unable or unwilling to provide an accurate substance use history. This includes when the patient is confused, extremely ill, has a serious mental health condition, is cognitively impaired, or will not provide accurate details of their use for other understandable reasons (including concern about stigma and discrimination, legal or employment consequences, childcare and protection, or relationship consequences).

In these circumstances, obtain the substance use history that is available from the patient, family, friends, health records or other sources, especially details of the last episode of use. Be aware that information obtained from family and friends may be skewed by many factors including the time they spend with the patient, what the patient allows them to know, and their own perspectives. Information gained from family/loved ones or friends about substance use does not require the express consent of the patient. A risk/benefit analysis should be undertaken in each case, balancing the potential damage to the therapeutic relationship against possible negative ramifications for the patient. It would be best however for the patient to consent.

Consider the possibility of multiple substance use and record this possibility if concerned. Identify any signs of alcohol or other drug consumption and effects during physical examination. Consider urine or blood testing as an additional source of information. Take a further consumption history when the patient is stable or when others are able to provide information. Provide ongoing nursing and/or medical care in the meantime.

## Estimating consumption

### *Cannabis*

Identify as accurately as possible:

- The way in which the drug is consumed – i.e. ingested or inhaled via combustion or vaporisation.
- Frequency of use.
- Amount spent per day on cannabis.

Users will usually be able to report how many grams they smoke per day. There are approximately 10-15 cones to a gram, more if “mulled” or “spun” with tobacco. Heavy users may smoke more than 1 ounce/28 grams a week.

### *Heroin*

Heroin dosage estimates are difficult because of wide variations in the concentration and purity of (illicit) heroin. Consumption may be recorded as number of injections per day; number of points/grams ingested or dollars spent.

Heavy users use 1-2 grams or more per day and may inject more than twice a day.

### *Pharmaceutical opioids*

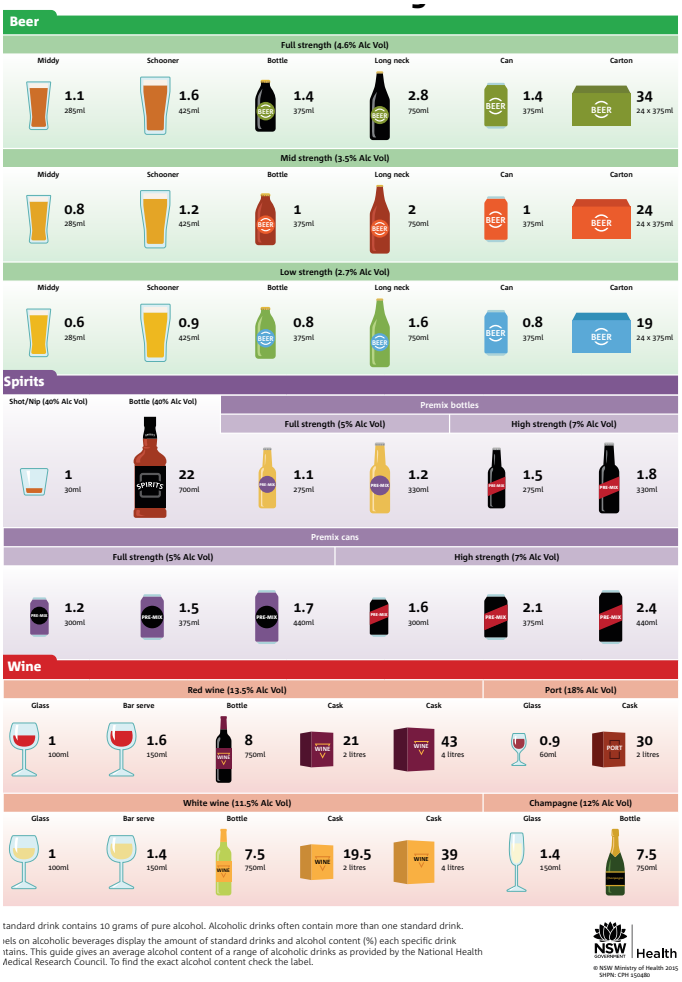
There are a range of opioid drugs that may be used via intravenous, oral, transdermal or inhalational routes. In estimating consumption, be consistent about the units of measurement (for example points vs grams, milligrams vs millilitres).

Seeking specialist advice is recommended for methadone and buprenorphine equivalency, as well as the distinction between opioids when used to treat pain as opposed to their use in the context of dependency. It is important for clinicians to confirm last dose and dosing history with confirmed dosing point – this will give a clearer picture of the tolerance capacity of an individual.

### *Alcohol*

Record average daily consumption in grams of alcohol. One standard drink is 10 grams. Table 4.1 sets out the number of standard drinks for common alcoholic beverage containers.

## Table 4.1 Amount of alcohol in common drink measures and containers




*Source: National Health and Medical Research Council Australian guidelines to reduce health risks from drinking alcohol (Haber PS, Riordan BC (2021). Guidelines for the Treatment of Alcohol Problems (4th edition). Sydney: Specialty of Addiction Medicine, Faculty of Medicine and Health, The University of Sydney.* ***https://alcoholtreatmentguidelines.com.au/***

### *Benzodiazepines*

Note the dose (in milligrams) and the type of each benzodiazepine product used. Table 4.2 below can be used to estimate equivalency but the figures are not exact due to inter-patient variability, differing half-lives and differing sedative properties. Therefore, the information should be interpreted using clinical and pharmaceutical knowledge and applied cautiously, with doses titrated against patient response.

## Table 4.2 Comparative oral doses of benzodiazepines

| Drug | Approximate equivalent dose (mg)[1] to diazepam 5mg |
|---|---|
| Alprazolam | 0.5 |
| Bromazepam | 3 |
| Clobazam | 10 |
| Clonazepam | 0.25[2] |
| Diazepam | 5 |
| Flunitrazepam | 0.5 |
| Lorazepam | 1[3] |
| Nitrazepam | 5 |
| Oxazepam | 15 |
| Temazepam | 10 |

*Source: Therapeutic Guidelines Ltd (eTG March 2021 edition)*
***https://tgldcdp.tg.org.au/etgcomplete***

[1] The widely varying half-lives and receptor-binding characteristics of these drugs make exact dose equivalents difficult to establish.

[2] Particular care is needed if changing from clonazepam to a different benzodiazepine because there is a wide variety of reported equivalences.

[3] Lorazepam may be more potent at higher doses.

**Table 4.3 Psychostimulants on the illicit market in Australia.**

| | Ice | Speed | Base | Cocaine | Ecstasy |
|---|---|---|---|---|---|
| **Drug** | Methamphetamine | Methamphetamine | Methamphetamine | Cocaine hydrochloride | MDMA, often with other drugs added to mimic the effects of MDMA |
| **Appearance** | Crystal or coarse crystalline powder | Fine or coarse powder | Sticky, gluggy, waxy or oily form of damp powder, paste or crystal | Crystalline powder | Tablets, capsule, powder |
| **Colour** | Translucent or white; may have green, blue or pink tinge | White, pink, yellow, orange, brown | Often has a yellow or brown tinge | White | Various |
| **Method of administration** | Swallowed, smoked, snorted, injected | Usually snorted or injected, sometimes swallowed | Swallowed, smoked, snorted, injected | Swallowed, snorted, Can be injected | Swallowed, snorted, can be injected |
| **Purchase quantity** | Point, gram | Point (0.1 gram), half gram, gram | Point (0.1 gram); also gram, half gram | Gram | Pill, capsule, powder (varying sizes) |
| **Availability** | Most widely available form of methamphetamine | Less widely available form of methamphetamine | Less widely available (varies between states and territories) of methamphetamine | Increasing availability especially in metro areas | Wide availability |

### 4.3.2 Identifying risks associated with multiple substance use

The majority of patients use multiple substances – the most frequent co-occurring condition for those with substance dependence is another substance use disorder.

Managing withdrawal in a person with multiple dependencies requires extra clinical vigilance and consideration of the manner in which the withdrawals should be managed. Although many patients seeking treatment may wish to withdraw immediately from all substances, in some instances a stepped or selective

approach is preferable, undertaking withdrawal from one drug at a time. The driving principle in determining the order of withdrawal is to begin with the substance with the potential for the most problematic withdrawal. In most instances this will be alcohol.

Selective withdrawal while on an opioid agonist treatment (OAT) program

Patients in an OAT program who are dependent on other substances, in particular benzodiazepines, alcohol or psychostimulants, may require assistance to withdraw from those drugs while continuing methadone or buprenorphine treatment.

Unless the patient requires admission to a hospital for withdrawal, the patient's OAT prescriber would usually take responsibility for coordinating selective withdrawal. The prescriber should:

- Review the patient frequently.
- Monitor closely for evidence of intoxication with sedative drugs in combination with methadone or buprenorphine.
- Provide only small quantities of withdrawal medication at a time (preferably daily pick-up of withdrawal medication).

Often the prescriber will manage the withdrawal in collaboration with other clinicians. This may include GPs working in consultation with practice nurses. If it is not safe or practical to manage withdrawal alone (e.g. from heavy alcohol use) the prescriber will need to work with withdrawal management services in their area. **DASAS** may also be approached for advice.

*Identifying past history of withdrawal*

The likely course of withdrawal may be anticipated from past experiences. Obtain a history of:

- Significant withdrawal symptoms.
- Complications (including seizures or delirium).
- Treatments used.
- Where and when previous withdrawals occurred.

Features of common withdrawal syndromes are briefly described above at section 1.3, with more detailed descriptions in subsequent chapters on each substance.

### 4.3.3 Medical and mental health history

Undertake a medical history that includes a comprehensive assessment of past and current medical and surgical conditions. A review of systems e.g. cardiovascular, respiratory, gastrointestinal, neurological and musculoskeletal should be undertaken. Administer a pregnancy test for female patients.

The medical history must include any major accidents resulting in injury such as motor vehicle accidents or work-related accidents. In addition, any traumatic brain injury must be documented. The clinician is to ask the patient about blood-borne virus (BBV) risks and past infections such as HIV, Hepatitis B and C, particularly if the patient is an intravenous drug user. The nutritional status of the patient should be assessed to evaluate for potential malnutrition.

The mental health history should contain previous and current psychiatric diagnoses. The clinician providing psychiatric care is to be identified e.g. GP, psychologist and/or psychiatrist, community mental health coordinator. Mental health medications and treatment is included in this section, including any episodes of psychiatric inpatient and outpatient or community-based care. Suicide attempts and deliberate self-harm must be listed.

Medical and psychiatric history should be listed in chronological order.

### 4.3.4 Psychosocial assessment

Psychosocial assessment may be deferred if the patient is acutely unwell, but it will serve to assist in planning future care and in determining treatment options. The patient's social situation, support systems, preference for treatment, cognitive capacity, capacity to undertake withdrawal and the likely success of treatment are important components of an AOD assessment. This information helps in developing an agreed treatment plan with the patient. Discussing these issues and partnering with patients in developing treatment plans will improve their engagement with treatment and increase the chances of successful withdrawal.

A patient's recent or past experiences of violence, abuse and neglect may also impact on their experience during withdrawal. NSW Health delivers a wide range of specialist violence, abuse and neglect (VAN) services which help minimise the impact of trauma, support patient recovery from trauma, and promote long term health and wellbeing (see **www.health.nsw.gov.au/parvan**)

*Psychosocial factors affecting withdrawal*

Ask the patient about their expectations of withdrawal, their reasons for seeking withdrawal at this time and any past experiences of withdrawal. Draw out their current knowledge and fears of withdrawal and their perceived ability to cope with withdrawal and its treatment.

Ask about their supports for withdrawal treatment, including stability of accommodation the extent and suitability of their social network, whether they have supportive family and friends, have or need mental health support and what links they have with local health professionals.

Ask about potential barriers to successful withdrawal such as distance to nearest clinician, access to transport, relationship issues, cognitive impairment, care of children (including children of partners or others that stay in the house), substance use of cohabitants, current legal issues, financial problems and work commitments.

### 4.3.5 Physical examination

Assessment by a medical practitioner is to include a full physical examination. A nursing examination in a medical setting should include assessment of vital signs, identification of signs of intoxication or withdrawal and evaluation of the general health and mental state of the patient. Record observations on the appropriate chart or validated withdrawal scale to allow monitoring over time.

Examination by a non-medical professional should include observation of physical appearance and mental state — sweating, tremor, agitation, coordination, gait. Rate these appearances and reassess them at regular intervals to monitor the progress of symptoms. If symptoms are increasing in severity, notify a senior staff member, or if available, a doctor.

### 4.3.6 Investigations and screening

There are a range of investigations that may inform an assessment of a patient presenting for withdrawal, for example FBC, EUC, LFTs. All women of child-bearing age should be tested for pregnancy. Other investigations may be indicated depending on substances used, route of administration and comorbid conditions.

Blood alcohol concentration is an investigation which may provide valuable information about when to start withdrawal treatment, levels of tolerance and to correlate with the severity of withdrawal.

Urine drug screens are performed if clinically indicated and with patient consent, for example where it is unclear what substances have been used by the patient.

*STI, HIV, hepatitis B and hepatitis C screening*

Drug and alcohol services must take responsibility for discussing blood-borne viruses, their risk of acquisition, and available testing and treatment with their patients. Injecting drug use, in particular, is associated with blood-borne viral infections and testing should be routine.

Engagement in AoD withdrawal treatment offers an opportunity to test for blood-borne viruses. Effective treatments for blood-borne viruses are available. They lead to improvements in quality of life, which support treatment for AoD dependence. Testing should be opt-out and built into the assessment interview. Testing can also be offered again after treatment has commenced, but not during the acute withdrawal phase.

To assist patients to make an informed decision and consent to testing, provide advice on how testing is undertaken, reasons for testing and not testing and assurance about confidentiality.

For all patients who have ever injected drugs; have been incarcerated; are Aboriginal and Torres Strait Islander; are sex workers; or are men who have sex with men, offer the following tests:

- Hepatitis B (HBV) surface antigen, core antibody and surface antibody
- Hepatitis C (HCV) antibody
- HIV antigen-antibody

For these groups and those aged 15-29 years, and pregnant women also offer STI screening :

- Urine PCR for gonorrhoea and chlamydia (and other anatomical sites according to recommendation)
- Syphilis serology.

All tests must be followed up as set out in Appendix 9.

It is critical that all patients with hepatitis C antibody positive test results have an HCV RNA test ordered to check for current infection and, if RNA positive, actively linked into treatment to ensure continuity of care.

Patients susceptible to hepatitis B must be offered a vaccination course (3 doses in total, given at 0, 1 and 6 months).

### 4.3.7 Mental state exam

The clinician should conduct and document a mental status examination (MSE) to obtain a snapshot of the patient's behavioural and cognitive functioning at the time of the interview. The MSE is the systematic observation of a person's appearance, behaviour, cognition, motor and speech activity, mood and effect. This is used to make an assessment of the patient's current state of mind and can provide evidence for or against a mental disorder.

A mental state assessment can also help determine:

- the presence of intoxication.
- the presence of acute psychiatric symptoms which may complicate the process of withdrawal – the main concerns are psychosis or suicide risk.
- the patient's capacity for informed consent and active participation in treatment planning, including post-withdrawal treatment.

The particular areas of thought which are important to assess are the presence of psychotic symptoms and any thoughts about suicide or self-harm.

### 4.3.8 Suicide risk

Assess the patient's suicide risk by engaging with the patient and looking for risk factors. Conduct a preliminary suicide risk assessment and manage any identified risks immediately as described below.

*Detection of risk factors*

Intoxication complicates the immediate suicide risk assessment. If suicide risk is identified in an intoxicated person, he or she should be monitored in an appropriate and safe setting until a full assessment is conducted. Enduring risk cannot be appropriately assessed until the person is sober.

*Preliminary suicide risk assessment*

This assessment examines the risk of danger to self and others and whether a more detailed risk assessment is indicated.

There is no current rating scale that has a proven predictive value in clinical assessment of suicide. Referral to specialist mental health services may be required.

A mental state examination should be performed, including observations of general appearance and behaviour, affect, and thinking (especially with regard to risk of harm to self and others), perception (including hallucinations and illusions), cognition (level of consciousness and orientation) and insight.

Screening questions for suicide risk:

- Have things been so bad lately that you have thought you would rather not be alive?
- Have you had any thoughts of harming yourself?
- Are you thinking of suicide?
- Have you ever tried to harm yourself?
- Have you made any current plans?
- Do you have access to a firearm? Access to other lethal means?

Further information and a tool to assist in assessment of risk can be found in the **Mental Health Triage Policy** and/or the **NSW Policy Directive Clinical Care of People Who May Be Suicidal**.

*Management of immediate risk*

Concern about the safety of the patient should lead to appropriate referrals with the Local Health District: the withdrawal management will take less of a priority. The NSW Mental Health Intake Line is 1800 011 511 and additional information can be found here: **www.health.nsw.gov.au/mentalhealth/Pages/default.aspx**

### 4.3.9 Domestic and family violence

Questions about domestic violence must always be included in an assessment. In NSW-funded services, the Domestic Violence Routine Screening (DVRS) program is used to support the early identification and response to domestic violence.

DV screening for women provides a critical opportunity for the disclosure of domestic violence and to offer women information, referral and support. The *NSW Health Policy and Procedures for Identifying and Responding to Domestic Violence* mandates screening to be undertaken in key clinical areas, including AOD services, as part of routine assessment for women over 16.

Beyond the DVRS however, where a clinician suspects any client (regardless of gender) is experiencing domestic violence they must ask direct questions about domestic violence and offer information, support and a referral to an appropriate counsellor / social worker or domestic and family violence service for further support, risk assessment and safety planning.

Further information on identifying and responding to domestic violence, including NSW Health workers roles in responding to clients who disclose or are suspected of perpetrating domestic violence, is set out within **NSW Health Policy and Procedures for Identifying and Responding to Domestic Violence**.

If the client is in **immediate danger** contact Police or emergency services on **000**.

Where there is concern for the safety of children or young people contact the Child Protection Helpline 13 21 11.

For men experiencing domestic and family violence contact Mensline Australia on 1300 789 978.

For men who are perpetrators of domestic and family violence, they can contact Men's Referral Service 1300 766 491.

### 4.3.10 Child Protection

On initial assessment - and throughout treatment - it is critical to ask about the safety, welfare and well-being of any children and young people in the patient's care. This may include a patient's own children, those living at the same residence, or children and young people to whom the patient has access.

Health care workers are uniquely placed to identify and respond to risk factors for child abuse and neglect to improve health and wellbeing outcomes for children and young people. Where a child or young person is at risk of significant harm, health workers must respond. This includes making a report to the NSW Child Protection Helpline under the *Children and Young Persons (Care and Protection) Act 1998*.

The duty to report possible harm through abuse or neglect overrides the duty to maintain patient confidentiality. Health care practitioners have a responsibility to identify signs of possible child abuse, neglect, family violence and prenatal harm, and adult health issues that may affect parenting. Use the online **Mandatory Reporter Guide (MRG)** to inform initial decision making. NSW Health staff may contact the NSW Health Child Wellbeing Unit for further advice on 1300 480 420.

Respond to violence and neglect by continuing to provide health services and working with the family where concerns exist, contacting other professionals working with the child, young person or family in line with information sharing legislation. Report suspected risk of significant harm to the Child Protection Helpline 132111 or by eReport on the online MRG linked above.

It is important to note that a parent or carer of children wanting to withdraw from alcohol or other drugs **is not itself a reason to make a child protection report** to the Department of Communities and Justice.

In relation to newborn infants of mothers on opioid agonist treatment, a multidisciplinary case conference should be convened in accordance with **https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2013_008.pdf**. A discharge plan for mother and baby should be formulated with clear, documented responsibilities and timeframes. Representation at this meeting should include the parents, a health worker with expertise in child protection, and any services or supports involved with the family.

### 4.3.11 Screening for gambling disorder

Gambling should be explored in all patients during an assessment. Problematic gambling is common in patients with mental illness and substance use disorders. Substance use may lead to disinhibition and excessive gambling. Gambling Disorder is defined by the DSM 5 as “persistent and recurrent problematic gambling behaviour leading to clinically significant impairment or distress”.

The Lie-Bet Questionnaire is a commonly used screening tool and includes the following two questions:

“Have you ever had to lie to people important to you about how much you gambled?”

“Have you ever felt a need to bet more money?”

If a patient answers yes to one or both questions a further assessment should be undertaken.

# Withdrawal Management

05

This section outlines the key elements of treating substance withdrawal in general. Details of managing withdrawal from specific substances are given in later chapters.

## 5.1 Patient participation in treatment planning

Promoting patient participation in treatment choice enables their goals to be integrated into the treatment plan and increases awareness of both the patient's and the clinician's responsibilities. If possible, formalise the treatment plan with the patient. The agreement may be verbal or written. The acknowledgment of a verbal agreement should be recorded in the notes.

Make the patient aware of their responsibilities and those of the service provider. Be specific about expectations for feedback and how complaints will be managed. Address any variation from the agreement by re-evaluating the treatment plan in consultation with the patient.

Do not set up an agreement so that it can be used against the patient in a punitive manner. Failing to follow an agreement is not in itself sufficient grounds for discharge from care, and each circumstance should be considered in accordance with risk to patient and others.

## 5.2 Formulating the treatment plan

Summarise the patient's overall assessment to inform the treatment plan. Recording the main issues identified in the assessment helps continuity and quality of care when more than one clinician is involved. Identify and document potential risks to the patient during withdrawal and any problems or barriers that may prevent the patient completing withdrawal. Include any medical, mental health or social interventions that have been indicated by the assessment.

Document the patient's treatment goals, for example reduced substance use or abstinence, and document in the treatment plan. Also discuss and document what AOD treatment is proposed following completion of withdrawal.

## 5.3 Elements of a treatment plan

A treatment plan (or care plan) is to include:

- Identification of appropriate setting.
- Frequency of clinical observations including the withdrawal scale to be used.
- Management of withdrawal symptoms including medication.
- Access to psychosocial support.
- Investigation and management of any medical or psychiatric conditions.
- Cognitive assessment and recommendations for management.
- Post-withdrawal AOD treatment including pharmacotherapies and psychosocial interventions.
- Nominated carer, family member or support person.

## 5.4 Settings

Patients who seek withdrawal care may do so in inpatient, residential or community (home-based/ambulatory) outpatient settings. If the patient does not have a strong preference regarding a particular setting, clinical decision making regarding appropriate setting is to be informed by patient factors, social factors, substance use and co-morbidities.

**Patient factors –** patient choice should be established in planning the setting for a withdrawal episode. Patient choice may be influenced by cultural background, sexuality, gender, age or religious beliefs.

**Social factors –** consider accommodation and whether there is substance use in the home setting, and if the patient is well supported e.g. by family or friends. Do they have social commitments or dependents? Does the patient have a support person who can help monitor symptoms or medication?

**Substance use factors –** Is there dependence on one or multiple substances? Is there a history of complicated withdrawals including history of seizures, confusion, or agitation during previous withdrawal episodes?

**Co-morbidity factors –** Does the patient have serious mental health or medical co-morbidities? Is there a significant risk of self-harm or suicide? Is the patient pregnant?

Always consider outpatient or community-based withdrawal management (patient at home, supported by visits to the clinic or visits from the clinician and telephone support), as an option. Assess the risks and benefits of each setting for the individual patient and their circumstances.

**Community-based** withdrawal management is contraindicated if:

- There is **risk to the safety** of the patient or others in the household or community (see sections 4.3.8 – 4.3.10)
- the **medications** to be used are high risk.

### 5.4.1 Stepped care

Stepped care is a term describing the adaptation of the treatment plan as care needs change. For example, this may involve the transfer of withdrawal patients between home-based settings to hospital inpatient settings or psychiatric facilities if the original setting for withdrawal management becomes inappropriate for the patient's needs. Re-evaluation of the setting is therefore an essential part of the ongoing assessment of patients in withdrawal. When indicated, patients should be transferred to a more suitable treatment setting (either more or less intensive) as soon as possible.

The stepped care model of service provision is recognised as having significant benefits, including the ability to respond to changing client needs and risks by modifying intensity of care (i.e increasing level of care through "step up" transfer to hospital). It can also lead to shorter acute bed stays, where hospitals "step down" patients to lower levels of care such as community residential withdrawal settings.

## 5.5 Monitoring

The frequency of observations and evaluation of progress will depend on the severity of withdrawal and the setting. Where there are validated scales (eg the Clinical Institute Withdrawal Assessment of Alcohol Scale revised or CIWA-Ar) these should be used. Monitoring allows for the assessment of clinical signs and symptoms and communication of those to the treating team. Appendix 7 contains links to useful withdrawal monitoring tools.

## 5.6 Medication

Medication is used in withdrawal to:

- provide symptomatic relief.
- treat complications and coexisting conditions.
- reduce the intensity of withdrawal symptoms.

Medication can be an important component of withdrawal management as it optimises the individual's clinical experience of withdrawal and reduces the possibility of premature discharge or increased anxiety during withdrawal. However, caution must be exercised when administering adjunctive psychoactive medications for additional symptomatic management (such as diazepam or olanzapine) as, if prescribed injudiciously, they can increase the risk of intoxication, sedation and depressed respiration.

The choice of medication is to be tailored for the substance from which the patient is withdrawing and evidence-based where possible. Medication provision is guided by the severity of withdrawal and is limited to a short duration.

## 5.7 Supportive care

The aim of supportive care is to reduce discomfort and distress and to enhance the patient's ability to complete withdrawal successfully. It is best guided by a supportive care protocol, particularly in hospital and residential settings, and accompanied by monitoring of physical signs.

Anxiety and depression are commonly associated with substance dependence and withdrawal and can be managed effectively with supportive care. They may be part of a more pervasive disorder, but this cannot be determined until the withdrawal syndrome subsides. Usually, the need for specific treatments for anxiety and depression is reassessed 2-4 weeks after withdrawal.

*Key elements of supportive care*

**Information** about what to expect can allay fear and anxiety. Studies show that patients who are given information will have lower withdrawal scale scores than those who are not. Information given to the person in withdrawal should include:

- Orientation to the setting and primary care giver.
- A description of the likely course of withdrawal.
- The likely length and intensity of withdrawal symptoms.
- The support plan for withdrawal and afterwards.
- The risks associated with withdrawal.

The **environment** can have a significant effect on the severity of withdrawal. Minimise stress by making sure that the environment is quiet, calm, safe and private. Attention to the environment also includes considering the person's physical comfort by making adjustments to position, pillows and blankets when necessary. Hot packs, warm bath and massage can also relieve aches and increase comfort.

**Reassurance** is an effective intervention in reducing the severity of withdrawal symptoms. Reassurance might be achieved through allaying concerns and fears, positive encouragement, feedback on progress, regular contact, providing information, and dealing with immediate social and family problems. Giving information to family members will help them provide support to the person during withdrawal. Active participation and support of family may help in the completion of withdrawal.

**Coping skills**, such as relaxation techniques, dietary guidelines, sleep disturbance management, and methods to reduce craving should be introduced to the patient.

## 5.8 Involving consumer workers

Consumer workers are people who have lived experience with substance use and treatment who are volunteers or staff of a service. Their role is to share their experiences and insights with clients and other staff members and to motivate patients through provision of advice, sharing of personal experiences and being a role model.

Consumer workers can also support patients to raise issues with health services that impact on quality of care from the perspective of service users.

## 5.9 Managing acute distress

As with any acute illness, withdrawal can lead to increased anxiety, agitation, confusion and aggression. Responding to these symptoms proactively and in a manner that helps the person de-escalate will allow further assessment of any complications in the withdrawal process, such as delirium or worsening psychiatric symptoms. This also prevents any trauma or re-traumatisation from occurring and reduces the risk of harm to patient and staff.

Withdrawal can produce a range of experiences that someone using substances or alcohol has managed to avoid for an extended period. Assisting the person to tolerate these symptoms during withdrawal is a useful step towards relapse prevention. In the acute setting, **escalated behaviour** can mean **withdrawal has not been adequately treated**.

Approaches to managing distress include verbal de-escalation, low stimulus environments, frequent supervision and medications. Work towards increasing a sense of safety for the person, asking them what they need to feel safe or comfortable, and providing choice/options as much as possible to promote a sense of control.

Suggested management approaches for different types of distress appear below.

*Anxiety/agitation/panic*

- Approach in a calm and confident manner.
- Reduce stimulation and the number of people attending the patient.
- Explain interventions carefully.
- Minimise the risk of self-harm.

Confusion/disorientation//hallucinations

- Provide frequent reality orientation.
- Ensure frequent supervision.
- Explain perceptual errors.
- Ensure environment is simple, uncluttered and well lit.
- Protect from self-harm and harm to others.

*Anger/aggression*

- Use space to protect yourself.
- Remain calm and reassuring.
- Do not challenge the patient.
- Acknowledge the patient's feelings.
- Remove the source of anger, if possible.
- Be flexible within reason.
- Be aware that many patients will have experienced trauma in the past. Information on providing trauma informed care appears in section 2.2.

## 5.10 Driving safety considerations

Most withdrawal involves some psychomotor impairment, psychological difficulties or fatigue. Withdrawal could be considered a condition that renders an individual "medically unfit" to drive. Clinicians responsible for withdrawal management must ensure patients are adequately informed of the symptoms they may experience, the effects these may have on driving skills and the increased risk of being involved in an accident. Written and verbal information about fitness to drive should be provided where available and this should be documented in the patient's record. In addition to penalties under the legislation, patients may be liable at common law if they continue to drive knowing that they have a condition likely to adversely affect driving. Failure to report may also breach the terms of insurance.

Primary responsibility to assess fitness to drive and to inform patients of the potential risk rests with the medical officer, but other health professionals involved in care and case management are also responsible for advising patients not to drive if there is any doubt about their fitness to do so at that time. There may be circumstances, such as a patient's failure to report, under which a medical professional is required to report a patient's unfitness to drive to the Driver Licensing Authority if there is a known impairment and a subsequent risk to road safety.

Further resources are available at **www.drivingsafety.com.au**

*Assessing fitness to drive*

Assessing fitness to drive (2016) Austroads and the National Transport Commission (NTC). This document details the medical standards for driver licensing for use by health professionals and driver licensing authorities. It notes that a person with a substance use disorder should have been in remission for one month before being considered suitable for an unconditional licence. **https://austroads.com.au/drivers-and-vehicles/assessing-fitness-to-drive**.

## 5.11 Continuing care

Withdrawal treatment does not confer long term benefits unless followed by other drug and alcohol interventions. Clinicians must actively link patients in with post-withdrawal treatment and safely transfer care. Linking with post-withdrawal care is a collaborative process between patients and clinicians and may also involve family and significant others (with the patient's consent).

Ensure patients are aware of options to seek further assistance in the future, even if they initially decline a referrral. Where a follow-up option is agreed to, make professional contact with that service to aid the referral process. Patients have the right to refuse further follow-up. If this occurs, note the refusal in the patient's record and avoid judgmental reactions.

It is common for there to be a time gap between completing withdrawal and entering post-withdrawal care. Inform the patient of the potential waiting time to commence post-withdrawal care and provide patients with strategies to stay safe and reduce the risk of harm. Provide contact details for support to manage the period after withdrawal.

When planning continuing care, patient choice is the primary consideration. Other considerations include social factors such as stability of accommodation, whether the person lives alone or with others who use substances. the extent of their social network and their existing links with health professionals in their local community. The suitability of treatment options will also be affected by the patient's physical health, mental health and cognitive capacity, as well as their financial situation including private insurance cover. The existence of commitments such as employment and family responsibilities and capacity to travel will also be relevant.

Ensure the patient is given appropriate information and advice to maintain their wellbeing which may include information on opportunities to re-engage with support services as required (provide relevant contact numbers), strategies to manage and reduce health risks or harms with any continued substance use and access to community and/or specialist support and resources (e.g. local needle and syringe programs locations, hepatitis B and C services). For opioid users, provide take-home naloxone.

### 5.11.1 Key requirements of planning discharge from withdrawal care

At the end of an episode of withdrawal care, the clinician is to:

- Organise/facilitate follow-up appointments.
- Assess the safety needs of the patient and others – supports and referrals needed to assess and respond to risks and support the patient.
- Link the patient with further treatment and support (including rehabilitation, outpatient treatment, self-help, peer support).
- Communicate with other relevant service providers.
- Document post-withdrawal treatment planning in the patient record.

### 5.11.2 Options for continuing care

There are a number of post-withdrawal care options that have been found to be effective.

*Counselling and group programs*

These include free or fee-charging services provided by government, non-government and private organisations. Drug and alcohol counselling provided by local health districts is normally free and can be accessed via the intake lines (see **NSW Health webpage**).

*Peer based programs*

There are two main types of peer-based programs.

One is modelled on the 12 step program developed by **Alcoholics Anonymous** (AA) and includes **Narcotics Anonymous** (NA), **Crystal Meth Anonymous** (CMA), **Gamblers Anonymous** and so on. They are based on the belief that total abstinence is the only way to recovery. People interested in attending need to be motivated to attend meetings and become part of the program.

The SMART (**Self Management and Recovery Training**) program is another self-help meeting-style program available in Sydney and other parts of NSW. It is an evidence-based program structured around the principles of cognitive behavioural therapy and motivational therapy. Groups are led by trained peers and/or professional counsellors and are not faith-based.

There is no formal referral process to peer-based programs and patients can be advised to make contact with a functioning group in their area.

*Support for families*

Involving family and carers in treatment may improve outcomes. Support services for families and carers benefit both the patients and the families. Services include **Family Drug Support** (FDS) and **Al Anon** (for people affected by someone's alcohol use).

*Rehabilitation programs*

Government and private rehabilitation programs include outpatient programs and live-in programs. The length, philosophy, cost, assessment procedures, target groups (exclusions) and support afterwards all vary.

As with most service providers, the agencies will want to speak to the person being referred before offering them a place. Programs run for periods ranging from three weeks to more than a year. Patients should be advised of any waiting times and clinicians should work with patients to identify and minimise risks during this period.

Information on accessing rehabilitation programs can be found on the NSW Health website: **www.health.nsw.gov.au/aod**

*Other programs*

Individuals with moderate to severe substance use disorders who have complex needs can be referred to other NSW Health-funded programs.

The **Continuing Coordinated Care Program (CCCP)** aims to help people stay in alcohol and other drug treatment by providing intensive support. Participants are provided with living skills support and clinical care linkages as well as family and community connections. Referrals can be made by AOD clinicians directly to the organisations providing the treatment **https://www.health.nsw.gov.au/aod/resources/Pages/ccc-program-factsheet.aspx**.

### 5.11.3 Commencing pharmacotherapies

A number of pharmacotherapies are available for people completing AOD withdrawal. Opioid treatment pharmacotherapies including methadone, buprenorphine (Subutex), buprenorphine and naloxone (Suboxone), depot buprenorphine (Buvidal and Sublocade) and naltrexone are discussed in **Clinical Guidelines for NSW Opioid Treatment Program**.

Alcohol pharmacotherapies include naltrexone, acamprosate and disulfiram. The risks and benefits of these agents should be discussed with the patient.

### 5.11.4 Safety planning

The period after withdrawal is a time of high risk of relapse and in some patients increased overdose risk. It can also be associated with high levels of distress. Negotiate a safety plan with the patient prior to completion of withdrawal care. It should include emergency numbers to call and where to access support.

Explain to patients that after withdrawal they have an increased risk of overdose due to reduced tolerance to the substance. If they resume substance use they can reduce risk of overdose or toxicity by using smaller doses than previously.

Patients who have completed opioid withdrawal have reduced tolerance and therefore are at increased risk of overdose. Naloxone is a drug that reverses opioid overdoses. Offer all patients who have undertaken opioid withdrawal take-home naloxone and the relevant training. In NSW people are able to access **free naloxone and training** on how to administer the medicine. Further information is available for consumers at: **https://yourroom.health.nsw.gov.au/getting-help/Pages/Naloxone.aspx**.

### 5.11.5 Reducing harm

Give the patient information that reduces risks associated with substance use in case they resume use. Both inpatient and outpatient withdrawal provide opportunities for harm reduction interventions.

Explain to patients that after withdrawal they have an increased risk of overdose due to reduced tolerance to the substance. If they resume substance use they can reduce risk of overdose or toxicity by using smaller doses than previously. Provide opioid users with Take Home Naloxone and advice on how to use it.

Provide advice to reduce the risk of blood borne viruses. For injecting drug users, counsel on safer injecting practices including use of sterile injecting equipment to reduce risk of blood borne transmission, give information about needle and syringe programs, and where possible provide sterile injecting kits to take home. Discuss non-injecting routes of administration such as oral or rectal ('shafting /shelving') to reduce injecting and smoking related harms. Counsel on avoiding shared drug use practices including intranasal ('snorting') equipment and pipes and advise on cleaning equipment.

Also recommend against driving or operating any heavy machinery after using stimulants or sedating drugs.

# Specific Population Groups

06

In matching patients to treatment components and settings, clinicians need to consider the following issues in relation to different patient characteristics.

Appendix 4 contains further reading, resources and references.

## 6.1 Pregnant patients

Pregnant substance-dependent women requiring withdrawal care will benefit from specialist assessments and support, consistency of case manager and care team during pregnancy, and specific drug and alcohol treatments (eg counselling, pharmacotherapies). All women using substances who are pregnant or attempting to become pregnant are entitled to receive accurate information and to be treated sensitively in a non-judgmental manner.

Substance use is associated not only with adverse pregnancy outcomes but with a cascade of health, legal, social and financial problems that adversely affect the welfare of the mother and child. Broad psychosocial assessment may assist may allow these to be addressed.

When clinicians consider that an unborn child may be at 'risk of significant harm' due to substance use, they are to report their concerns to the Child Wellbeing Unit or use the NSW Mandatory Reporter Guide (MRG) to support decision making about reporting to the Department of Communities and Justice. It is important to note that a parent or carer of children wanting to withdraw from alcohol or other drugs is not itself a reason to make a child protection report.

There are obstetric risks for women who are experiencing or at risk of severe substance withdrawal, and a need for observation and monitoring. It is important to determine the most suitable location for the pregnant woman's withdrawal management.

Best practice advice regarding the management of alcohol and other drug withdrawal during pregnancy can be found in the **NSW Health Guidelines for the Management of Substance Use during Pregnancy, Birth and the Postnatal Period**. Women using substances who are pregnant should be referred to the LHD's Substance Use in Pregnancy and Parenting Services (SUPPS). SUPPS is a specialist AOD treatment service that provides support to pregnant women who use substances from the antenatal period to up to two years post-delivery. Contact the local SUPPS through the LHD's intake line or the District specialist drug and alcohol service. Alternatively contact the **Drug and Alcohol Specialist Advice Service** (DASAS).

## 6.2 Patients with co-occurring mental health and substance use disorders

Comorbid mental illness is very common in substance-using populations. The 2007 Australian National Survey of Mental Health and Wellbeing revealed that more than one-third of people with a substance use disorder have at least one co-occurring affective or anxiety disorder. Similarly, 63 per cent of those who used alcohol or other drugs nearly every day had a mental health condition in the previous 12 months.

The impact of comorbidity for the patient is significant. People in this population present with a more complex clinical profile including poorer physical and mental health, poorer psychosocial functioning, increased risk of self-harm and suicide, increased risk of side effects and less efficacious treatment.

The **National Guidelines on the Management of Co-Occurring Alcohol and Other Drug and Mental Health Conditions in Alcohol and Other Drug Treatment Settings** state that evidence on the order of onset of substance use and mental disorders is not consistent and it is likely that the disorders influence each other rather than having a causal link. They further note that 'regardless of how the comorbidity came about, both conditions may serve to maintain or exacerbate the other.'

### *Clinical tips – comorbidity*

- Withdrawal from alcohol or other drugs can precipitate or exacerbate psychiatric symptoms.
- Collaborative or integrated care with Mental Health Services and AOD Services is ideal.
- Patients' ability to attend appointments and adhere to medication regimes may be impaired as a result of multiple comorbidities, increasing the need for additional supports.

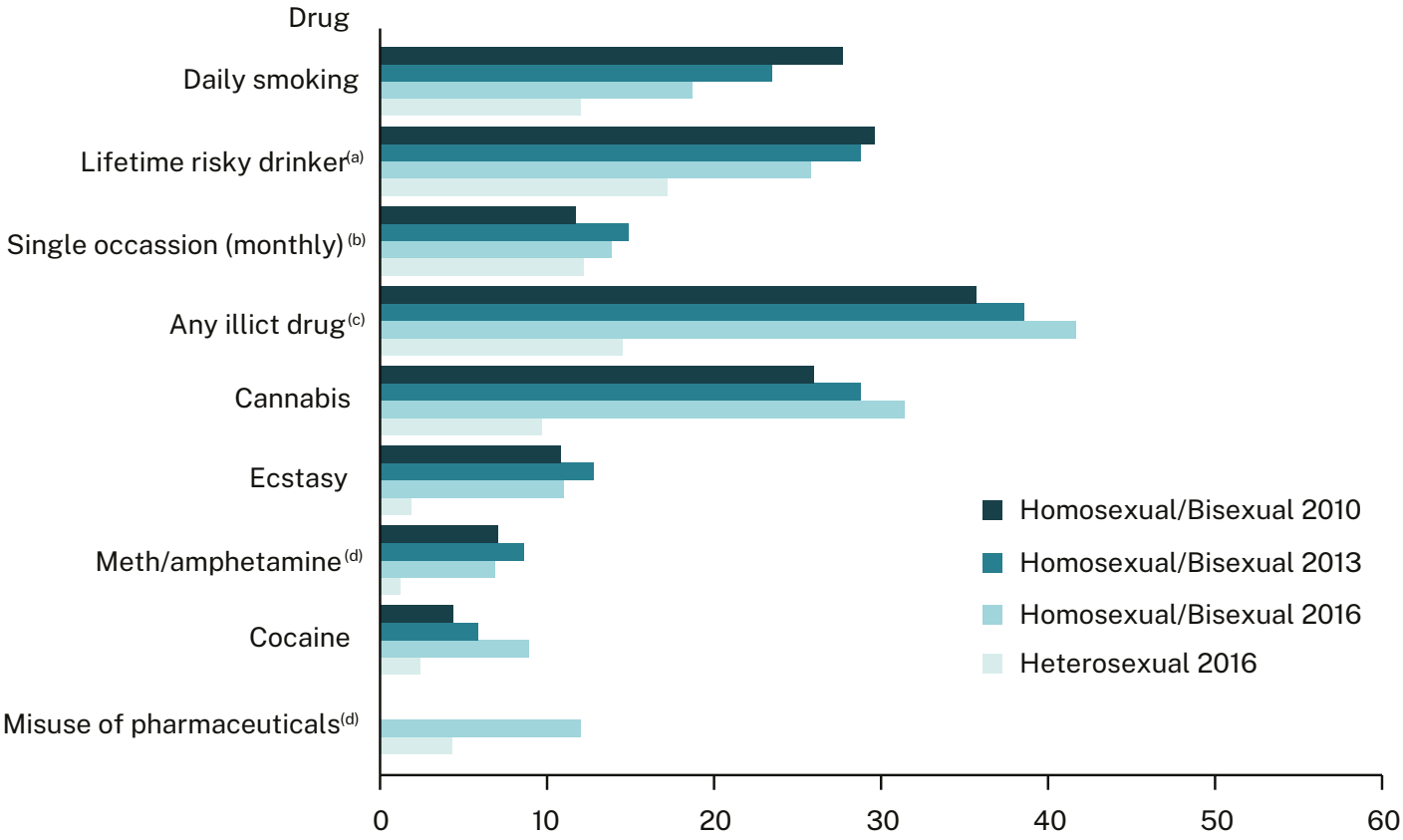
- Withdrawal may be managed in a psychiatric ward if considered medically safe to do so and can involve support from AOD Hospital Liaison services. Withdrawals involving significant medical issues are usually not managed in a psychiatric unit.

More detailed information on managing care for patients with co-occurring mental health and substance use disorders is available from _ and the National Guidelines linked above.

## 6.3 Gender and sexuality diverse patients

There are higher rates of substance use in gender and sexuality diverse communities (also known as LGBTIQ - Lesbian, Gay, Bisexual, Transgender, Intersex, Queer) compared with the general population (see Figure 6.1 below).

**Figure 6.1 Drug use by sexual orientation, people aged 14 or older, 2010-2016 (%)**




(a) On average, had more than 2 standard drinks per day.
(b) Had more than 4 standard drinks at least monthly.
(c) Used at least 1 of 16 illicit drugs in the previous 12 months in 2016; the number of illicit drugs used has changed over time.
(d) For non-medical purposes.
Note:Time series data for misuse of pharmaceuticals no longer comparable due to questionnaire changes.

*Source: AIHW National Drug Strategy Household Survey 2016 p.110*

### *Context of AOD use: Gender and sexuality diverse communities*

In responding to the needs of gender and sexuality diverse patients, it is important to understand the communities' lived experience as well as the history of experiencing discrimination. Relevant context may include:

- Substance use to cope with societal responses to their gender identity or sexuality.
- The importance of bars and clubs as safe venues for building relationships. This may have the unintended effect of creating pressure to adopt similar drinking patterns and may encourage other drug use.
- Significantly higher risk of mental illness, including attempted suicide, suicidal ideation, self-harm, depression and anxiety.

### *Clinical tips – gender and sexuality diversity*

Strategies for inclusive practice include:

- Ensuring an awareness of the lived experience of gender and sexuality diverse people and their unique AOD-related vulnerabilities.
- Allowing people to describe their biological and chosen families, as some support networks are neither heteronormative nor biological.
- Ensuring sexual health questions do not make assumptions about sexuality or gender.
- Ensuring proper privacy and disclosure processes for gender, sexuality, HIV status and AOD use, including seeking permission to disclose to external agencies.
- Being aware clients might disclose their sexual orientation or gender identity to a health service provider, but may not be out to everyone.
- Reflecting on personal values and beliefs and the organisation's expectations regarding gender and sexuality diverse inclusivity.

## 6.4 Culturally and Linguistically Diverse (CALD) communities

Available evidence suggests that harmful use of substances is less common overall among people from CALD backgrounds compared to the general population. For those who do use alcohol and other drugs, the prevalence and types of substances used is different among the various CALD communities. There is some evidence that suggests riskier injecting practices among CALD populations and that individuals often present with coexisting mental health issues.

Particularly among CALD populations, there is some evidence of decreased levels of contact with AOD treatment services. This may be due to a lack of understanding of health services delivered in Australia and because members of CALD communities may not be accustomed to Australian approaches to AOD treatment.

### *Context of AOD use: Culturally and Linguistically Diverse communities*

CALD populations may be vulnerable to the harms associated with alcohol and/or drug use due to past experiences of torture and trauma resulting from war, migration and settlement. This can be further impacted by experiences of labelling, stereotyping, social rejection, discrimination and shame. Patients from CALD backgrounds are more likely to delay seeking help and are more hesitant to disclose information about their substance use to health staff.

### *Clinical tips - Culturally and Linguistically Diverse communities*

Strategies for inclusive practice include:

- Engaging an interpreter in the process to assist in assessment, discussing options for treatment and providing referral information. Family members or friends are only to be used as an interpreter in an emergency.
- Recognising that friction with CALD clients may occur as a result of misunderstandings instead of rushing to make judgments.
- • Ensuring engagement with culturally appropriate support services for family and significant others.

- Being mindful that discussing certain topics with a member of the opposite sex or a younger person may be inappropriate. Assure the patient that you are cognisant of their concerns and offer them other options.
- Avoiding over-generalising and labelling.
- Having the capacity to demonstrate empathy, tolerance and respect when engaging with people from diverse cultures.
- Applying appropriate means of verbal and non-verbal communication.
- Recognising the impact culture and history can have on treatment methods and professional practice.
- Understanding the broader issues which impact CALD patients, such as discrimination and racism.
- Familiarising yourself with CALD communities in the area and understanding their specific AOD issues.

Ensure you are clear and concise in your explanations regarding treatment options and the rationale underpinning the treatment. It may be useful to use metaphors and spread the discussion over more than one consultation.

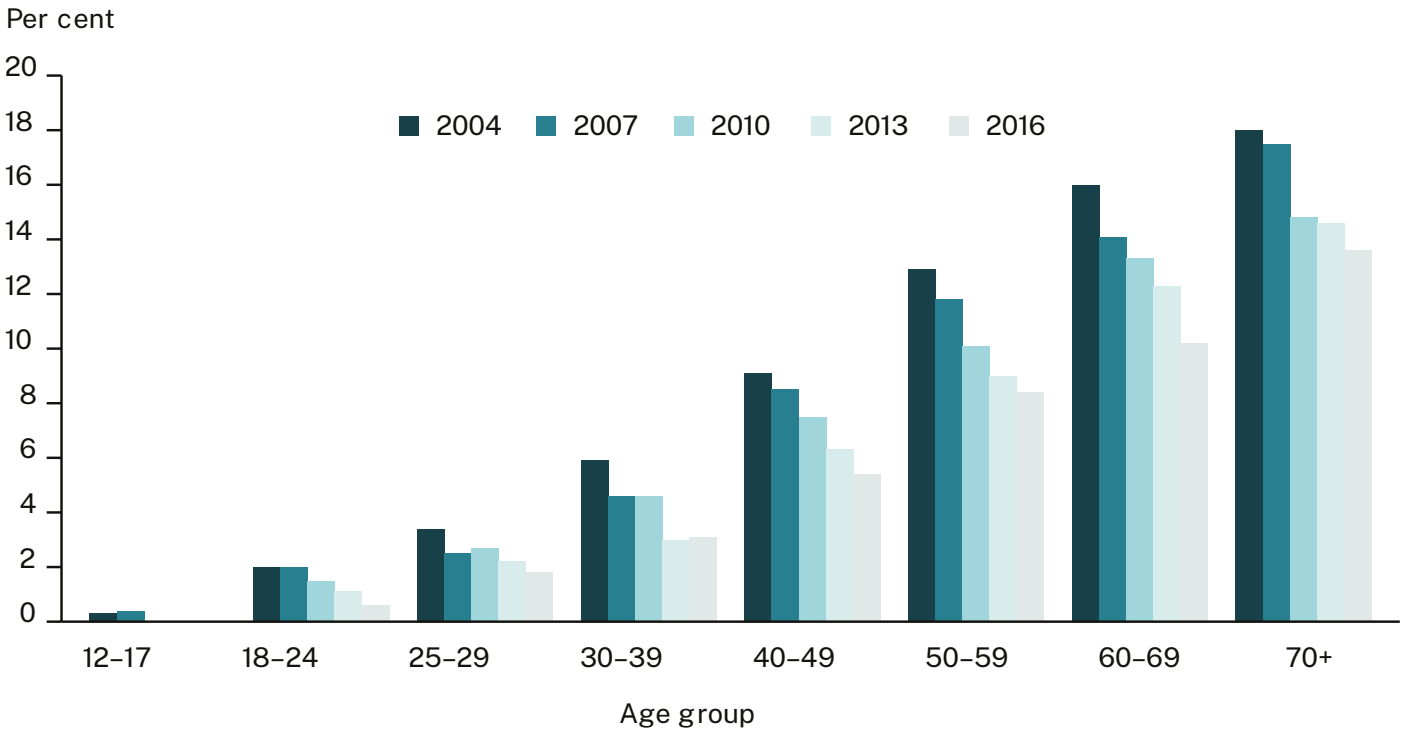
Discuss what screening and assessment processes entail, what information will be recorded and obligations related to duty of care. Tailor the screening and assessment process to the needs and concerns of the patient. Assure the patient that their personal information is kept confidential.

## 6.5 Older people

Older people in Australia have the lowest rates of alcohol misuse, illicit drug use and tobacco consumption compared to other age groups. However, some specific trends among those 50 and older are worth noting in the context of withdrawal management:

- Older Australians are using illicit drugs at a growing rate. According to Australia's National Drug Strategy Household Survey 2016, those in their 50s and the 60+ cohort are increasingly responding that they have recently used illicit drugs, particularly cannabis and pharmaceuticals. This change is driven largely by males in both groups, with their recent use nearly doubling since 2001.
- Alcohol consumption trends indicate Australians 50 years and older continue to have the highest rates of daily drinking of all age groups (see Table 6.2 below).

**Figure 6.2 Daily drinking, people aged 12 or older, 2004-2016 (per cent)**




Source: AIHW National Drug Strategy Household Survey 2016, p 36

### *Context of AOD use: Older people*

Understanding some of the underlying causes of AOD use among older people can help to contextualise clients' substance issues and help identify the appropriate strategies.

Alcohol, the most common drug used by older people, is a particular concern for withdrawal services. While most older Australians developed alcohol use disorders at a younger age, about one-third of older adults develop it later in life. This is a trend often associated with stressors common in later years such as bereavement, social isolation, boredom and cognitive impairment, as well as physical and mental health problems. While less is known about this cohort, NSW Health identified this group as often demonstrating better social functioning, family lives and professional careers.

There are also particular health issues prevalent among older Australians that are important to consider in AOD settings. For example, older people who misuse substances are more likely to be cognitively impaired.

As the NSW Health Older People's Drug and Alcohol Project notes

> "There are high risks for and rates of cognitive disorders in and amongst older people with substance use disorders, and increased risks for cognitive decline/impairment associated with alcohol use, benzodiazepine use, and tobacco smoking".

Moreover, the prevalence of chronic pain among older Australians - particularly older women and those of lower socioeconomic status - is highly relevant to AOD services. According to some estimates, 42-85 per cent of older people experience chronic, noncancerous pain. For the many older Australians who have been prescribed opioids to manage their chronic pain - particularly people aged 80 and over - there is a higher risk of substance misuse.

In the context of withdrawal, older people may have more complicated cases, experience a longer withdrawal and require more supervision. Moreover, older people may have specific clinical needs depending on the drug of dependence. For drug-specific withdrawal guidance for older people, please see the relevant drug chapter in these guidelines.

### *Clinical tips – older people*

Strategies for inclusive practice include:

- Collaborating with aged health services, older people's mental health services and primary care settings.
- Addressing barriers to access, including providing outreach services and home visiting appointments.
- Using the drug and alcohol hospital consultation liaison (HCL) service as a key point of referral for older people with substance use issues in the inpatient system.
- Incorporating the management of other physical and mental issues into AOD treatment, including screening for cognitive impairment and mental health problems.
- Developing and maintaining partnerships to engage older people in relevant sub-populations, including aboriginal people and CALD communities.
- Engaging families and carers.
- Being familiar with and engaging with other relevant services locally and statewide, including non-specialist services.
- Being familiar with and engaging with pain management specialists.
- Developing targeted services for older people.
- Understanding that prescription drug misuse is a significant and growing issue among older people, and considering this in assessment and screening processes.
- Tailoring information to the age of the patient and using a slower pace of treatment.

## 6.6 Patients from Aboriginal communities

### *Context of AOD use: Aboriginal people*

Aboriginal and Torres Strait Islander Australians can be at increased risk of harms from alcohol or drug use because of their shared and often lived history of trauma. In this document, Aboriginal and Torres Strait Islander Australians are referred to jointly as Aboriginal Australians, in keeping with guidance from NSW Health in consultation with the Aboriginal Health and Medical Research Council of New South Wales.

Trauma can be transgenerational, for example when an adult was removed as a child from their family as part of the 'stolen generations'. Their resulting experiences of grief and stress can then influence their own children. Higher rates of poverty and experience of racism can also contribute to greater stress, lower wellbeing and risk of poorer mental health among Aboriginal Australians. High levels of morbidity, mortality and imprisonment can further add to recurring and frequent experience of grief and loss. Despite this, Aboriginal Australians show resilience, and form part of the longest continuing culture on the planet.

Aboriginal Australians are less likely to have consumed any alcohol in the past year than other Australians (69% vs 77%). However, those who do drink are more likely to drink at risky levels. More than one-third (33.7%) of Aboriginal Australians report drinking more than four standard drinks at least monthly (vs 26.0% for non-Indigenous Australians).

Drinking may be episodic or intermittent, and sometimes is linked to social events such as celebrations or funerals. A smaller proportion, one in five (20.9%) Aboriginal Australians, drink an average of more than two standard drinks per day. This is only slightly higher than the percentage for non-Indigenous Australians (17.0%). These consumption figures hide large differences in drinking patterns within and between Aboriginal communities. However overall, Aboriginal Australians have an increased rate of hospitalisations and deaths linked to alcohol. Alcohol is estimated to contribute eight per cent of the burden of disease for Aboriginal Australians.

Aboriginal Australians are also almost twice as likely to have smoked tobacco or used illicit drugs in the past year compared to the general population. Though the rate of daily tobacco smoking has declined in recent years (from 41% in 2012-13 to 37% in 2018), cannabis use is almost twice as common among Aboriginal Australians than in the general community, with one in four (24%) aged 15 years and over reporting use in the past year.

Similarly, Aboriginal Australians are estimated to be twice as likely to use amphetamine-type stimulants and to misuse pharmaceuticals as non-Indigenous Australians (2.2 and 2.3 times respectively). Aboriginal Australians appear to be more likely to use heroin than the general population and are three times more likely to have received opioid pharmacotherapy. Those who inject drugs are more likely to share injecting equipment and to be infected with hepatitis C.

National treatment utilisation data shows that Aboriginal people receive one in ten of all withdrawal treatment episodes. This is an over-representation, as Aboriginal people are estimated to make up 3.3% of the Australian population.

### *Clinical tips – Aboriginal people*

Strategies for inclusive practice for individual patients are detailed below. Appendix 4 has additional information for improving the cultural competence of AOD services.

#### *Engagement and communication:*

- For many Aboriginal people there is shame associated with seeking treatment for a substance use disorder. This can include shame from internalised racism. There is also concern about legal or social implications of help-seeking. For example, concerns over losing their children may be a major barrier for Aboriginal women in seeking help. Finding ways to address these concerns at intake can help improve engagement and retention. This may include linking with legal support and seeking guidance on best ways to ensure not only a good treatment outcome, but a good way of demonstrating that outcome.

- Culturally appropriate and holistic engagement with Aboriginal patients by withdrawal services is needed. For example, consider offering the patient the option of involving others in the treatment process, such as their immediate or extended family, specialist Aboriginal drug and alcohol (D&A) workers, community workers, leaders or Elders.
- Be alert for and sensitive to the experiences of Aboriginal patients who may have been affected by economic and sociocultural marginalisation, racism and trauma from colonisation. If clients have had a bad experience of authority figures (for example those who were taken from parents and raised in damaging institutions), be aware of potential transference and ways to defuse this. Involving the patient in planning their treatment regime where appropriate can be valuable. Strive for good communication.
- Take the time to interact with the patient at a personal level. Show that you take an individual interest in them. Where possible, use an unrushed and friendly interaction, rather than a series of questions. Allow the assessment to happen as a conversation, then return to fill in any points that have not been covered.
- For Aboriginal people from relatively isolated or traditional communities, it can be polite to avoid eye contact. In someone raised in an urban setting, lack of eye contact can alternatively reflect shyness, or fear or distrust of authority figures.
- In NSW, most Aboriginal people speak English well, and fewer speak their traditional language. However, visitors from more remote parts of Australia may have limited English. They may require an interpreter and there can be large cultural differences, including very different beliefs about the causation and cure of illness.
- In Aboriginal English some terms are used differently, and Aboriginal people from an economically disadvantaged background may use a narrower English vocabulary. Level of formal schooling can vary tremendously, from tertiary education through to those who left school before year eight because of social problems. Limited formal education can impact on health literacy. Check that you and the client are understanding each other and be prepared to explain or seek clarification. Visual resources can be a useful aid to communication. The better a person understands their health condition, the more likely they will want to adhere to the treatment being offered.
- Where a patient would like it, involving a specialist Aboriginal D&A worker or an Aboriginal Liaison Officer (ALO) can greatly improve comfort and communication.

### *Integrated care*

- You can provide more appropriate care if you consider the whole person (including physical and mental health) as well as their family and community context. For many Aboriginal people connection to their traditional land is also very important.
- Many clients have major stresses in their life, financial and/or personal. These can sometimes make it difficult for them to contemplate making a big change in their life. Being aware of these stresses and offering integrated support can help. For example, social work advice on how to deal with their normal rental costs if they will be away in a residential rehabilitation facility.
- You may also be able to help the patient see the withdrawal process as the first step in starting to simplify their life. Once withdrawal symptoms have become manageable, you may be able to start the process of linking them with appropriate support for their various needs.

### Other specific clinical issues

- Many Aboriginal people share their alcohol, cigarettes or other drugs with friends or relatives. If you ask: “How much do you use?” some Aboriginal clients will answer the amount that the couple or group consumes. You can check by asking “Is that just you? Or you and your partner/group?” to avoid overestimating consumption.
- If estimating alcohol use, check what the drinking container is. For example, a ‘drink’ of wine or spirits may be a 250mL kitchen tumbler filled near to the top, or a repurposed 600mL water bottle.

- Some Aboriginal people have a stop-start pattern of substance use. This can sometimes mean less severe than expected withdrawal symptoms, given the quantity consumed. Others may be daily or continuous drinkers or users. In the case of alcohol, comorbidities such as past head injuries can increase the risk of withdrawal seizures.
- Medical comorbidities such as diabetes may need management during withdrawal.
- Smoking and cannabis use can be relatively common. Be alert to the potential need to prevent or manage withdrawal from these, if a person is withdrawing from another substance.
- Many Aboriginal people have had major traumas in their life. Memories of this can come flooding back when they stop drinking or using drugs. During the withdrawal syndrome is rarely the right time to ask about past traumas. The individual's stress level is high, and the discussion can be traumatic.
- If the patient chooses to raise these issues spontaneously, you can acknowledge their importance and the distress they cause. You can also explain that the distress can be particularly intense during withdrawal, that the intensity of the pain will reduce a little following time away from alcohol and drugs, and that help is available should they wish to discuss these in the future. The patient's efforts to escape the cycle of substance use and withdrawal is a step towards healing.

### *Inpatient or outpatient withdrawal?*

- As with other patients, careful screening for suitability for outpatient withdrawal is needed. In particular this can include considering whether the patient has somewhere safe to live (either in their own home, or that of a friend or relative), and what supports are available to them.
- Some Aboriginal community-controlled health services offer limited outpatient detoxification services. Others may not have the staffing or funding to make this possible.
- Some mainstream services offer outpatient withdrawal service or mainstream residential rehabilitation programs providing withdrawal management. With the agreement of the patient, involving Aboriginal staff or local Aboriginal health services in their care and support can be valuable.

### *Planning for relapse prevention*

- In addition to carefully explaining options like relapse prevention pharmacotherapies, counselling and mutual support groups, consider Aboriginal-specific options. For example, is there a good local men's or women's group available? This can help provide alternative activities, cultural strengthening and support. Some cultural groups also offer opportunities to return to country (where the person does not live on their traditional land), spend time in the bush or have cultural excursions. These all can be sources of strength.
- With regard to both residential and community-based treatment options, some Aboriginal clients prefer Aboriginal-specific services (eg community controlled primary care services or Aboriginal-specific residential rehabilitation). Others prefer the anonymity of a mainstream service.
- Discuss with your patient where they would like to go for follow-up when they leave a residential service (eg be linked to the mainstream service, through an Aboriginal community controlled health service, or other health service).

## 6.7 Adolescents and young adults

Adolescence and young adulthood is the peak age of initiation into alcohol and other drug use and those with early initiation are at higher risk for developing a substance use disorder in adulthood. Adolescents and young adults presenting to AOD services require a youth friendly, developmentally appropriate approach to engagement and intervention. Risk factors for adolescent substance use include adverse childhood experiences, trauma, mental health disorders, and genetic and environmental factors increasing the likelihood of alcohol, illicit substance or prescription medication use for non-medical reasons.

Alcohol and other drug use may affect children and adolescents throughout their development, including prenatal exposure, parental AOD use and/or the initiation of alcohol or other drug use during their adolescence. Chronic substance use can in turn affect the structure and function systems in the adolescent brain, which is at a particularly sensitive period of development. This increases vulnerability to addiction

and other poor health, social and wellbeing factors. Effective approaches to prevention and intervention for adolescents should be 'strengths-based', aiming to increase protective factors, reduce risk factors and build resilience into young adulthood.

### *Context of AOD Use: Adolescents and Young Adults*

Alcohol and illicit drug use are the two leading causes of total burden of disease in 15-24 year old males, and the second and third leading causes of burden of disease for 15-24 year old females. Over the past two decades, Australia has seen a trend towards the delay the onset of alcohol and other drug use in this group, resulting in decreases in tobacco smoking and use of illicit drugs among young people. Daily smoking rate more than halved between 2001 and 2019 for both males (24.5% to 10.0%) and females (23.5% to 8.5%) aged 18 to 24. However from 2016 to 2019 there has been an increase in the proportion of people aged 18-24 who have used e-cigarettes in their lifetime (from 19.1% to 26%) and 14% of 12 to 17 year-olds have tried an e-cigarette, with around 32% of these having used one in the past month. It is anticipated this increasing trend will affect nicotine dependence and risk of increased tobacco use disorder in this population.

Consumption of alcohol at risky levels remains high in adolescents and young adults despite the use of alcohol in this group generally declining since 2007. The National Health and Medical Research Council (NHMRC) drinking guidelines advise that for anyone aged under 18, not drinking alcohol is the safest option. Adolescents and young adults are at increased risk of harm from alcohol, including physical injury, potential adverse effects on the developing brain, mental health problems, self-harm and risky sexual activity.

Cannabis remains the most commonly used illicit drug in Australia and alcohol the most common primary drug of concern. However in 2018-2019 the AIHW Alcohol and Other Drug Treatment Survey identified cannabis as the principal drug of concern for young people from 10-29 years engaged in treatment (61%) and amphetamines for those aged 20-29 (32%). More than one-third of all patients in treatment were less than 30 years of age.

### *Key Principles of Practice in AOD Treatment for Adolescents and Young Adults*

**Importance of Early Intervention:** Adolescence is an opportune time for early interventions for issues related to alcohol and other substance use, including reducing risk factors and building resilience. Intervening early, before substance use progresses, is the most effective way to prevent individual and societal substance use problems.

**Screening, Brief Intervention and Referral to Treatment (SBIRT):** Screening to identify risk is the first step in identification of substance use, followed by brief interventions to increase a young person's insight into risk and motivation to change, to promote healthy choices and to reduce harms associated with use. Adolescents can benefit from early intervention even if they do not have a substance use disorder. Referral to Youth AOD treatment services may be indicated. Examples of screening tools for adolescents include HEADDS psychosocial assessment, CRAFFT substance use questionnaire, Hooked on Nicotine Checklist (HONC), Alcohol Use Disorders Identification Test (AUDIT-C), Cannabis Use Disorder Identification Test – Revised (CUDIT-R), Severity of Dependence Scale (SDS) and Readiness Rulers Screening Tool.

**Comprehensive assessment through developmental lens:** Assessment of an adolescent or young adult to inform treatment planning should include:

- Early life history (including prenatal alcohol exposure).[1]
- Family history.
- Developmental and educational history.
- Medical and immunisation history.
- Drug and alcohol history.
- Mental health/psychiatric history.
- Risk assessment.[2]
- Psychosocial HEADDS assessment.
- Medical examination and mental state examination.
- Appropriate laboratory investigations.

**Identify and treat the harms and comorbidities associated with substance use:** A harm minimisation approach can address and aim to reduce the risk of harm associated with alcohol and other substance use in adolescents and young adults. Identification of comorbid mental health conditions such as anxiety, depression, post-traumatic stress disorder (PTSD), early psychosis and other conditions is needed to provide an integrated approach to management as best practice. Opportunistic health screening and intervention such as sexual health screening, treatment of STIs, contraception advice and catchup immunisation should be considered as part of holistic health treatment.

**Tailor treatment to the unique needs of the adolescent or young adult.** Treatment should focus on the whole person rather than just the substance use alone, considering the adolescent or young adult's psychological development, social and family support, engagement in education and employment and mental health comorbidities.

**Interagency collaboration.** Adolescents with moderate to severe substance use often have multiple agencies involved with their care. These may include child protection services such as the Department of Communities and Justice, legal services such as Youth Justice, mental health services, education liaison officers, primary care providers, families and carers. Complex case management, clear communication and shared goals between the young person and treatment services is important for effective collaboration and improved outcomes.

**Identify Child Protection Risks.** Sensitive issues such as violence, abuse and neglect should be identified and addressed. Many adolescents who abuse drugs have a history of physical, emotional and/or sexual abuse or other trauma. If abuse is suspected, referrals should be made to social and protective services using the NSW Health Mandatory Reporting Guide at **https://reporter.childstory.nsw.gov.au/s/mrg**.

**Provide Trauma Informed Care and Practice.** Youth Drug and Alcohol clinical services should provide intervention in a safe, trustworthy and transparent manner, with collaboration between clinician and the adolescent or young adult to empower and provide choice in their care.

**Offer Evidence Based Interventions**. Therapeutic alliance is the key to engagement in treatment for adolescents and young adults. Evidence based interventions include Motivational Enhancement Therapy, Cognitive Behavioural Therapy, interventions that focus on emotion regulation and impulse control (ERIC), and family-based interventions. Multimodal therapy is often used to respond to the needs of the young person.

**Involve Family and Community**. Family therapy has proven efficacy for adolescents with substance use problems by focusing on close relationship and validating the experience of all family members. Involving parents or carers in treatment indirectly assists the adolescent by addressing parental concerns, building capacity, and breaking unhealthy patterns of communication and interaction.

### *Clinical Tips - Adolescents and Young Adults*

- A comprehensive drug and alcohol history is required to identify risk of substance use disorder, physiological dependence and withdrawal symptoms.
- Adolescents and young adults may have polysubstance use and may experience withdrawal symptoms from multiple substances concurrently.
- Withdrawal from alcohol or other substances may precipitate or exacerbate behavioural disturbance, risk of self-harm and/or risk of suicidal ideation.
- Emerging mental illness occurs in the adolescent and young adult population and may have a two-way relationship with substance use.
- Consider risk of behavioural disturbance and manage this accordingly. **NSW Health Policy Directive: Management of patients with Acute Severe Behavioural**

[1] Include assessment for prenatal alcohol exposure, neurodevelopmental disorders, mental health comorbidities and complex psychosocial factors that may affect substance withdrawal and engagement in treatment. Collateral history from parents or carers, child protection services such as Department of Communities and Justice and Youth Justice, primary healthcare providers and mental health clinicians is often required for complete assessment.

[2] Specific issues to identify for adolescents and young adults with substance use include risk of homelessness, risk of exploitation, violence, abuse and neglect, those disengaged from home or school and those at risk of harm to self or others.

- Medication may be prescribed during withdrawal to provide symptomatic relief, treat complications and coexisting conditions, and reduce the discomfort of withdrawal symptoms.
- Benzodiazepines may be considered for the treatment of alcohol or benzodiazepine withdrawal in young people. Consider dose requirements, safety and monitoring specific to the needs of the adolescent or young adult. Atypical antipsychotic medication may also be considered for management of substance withdrawal for the management of acute anxiety, agitation and aggression in the short term. Consultation with child and adolescent psychiatrist may be of benefit.
- Link the adolescent or young adult to ongoing treatment after substance withdrawal - this may include referral to general practitioner, Headspace, community mental health, family intervention service and/or Youth Drug and Alcohol service.
- Inpatient admission may be required if there are safety concerns, risk of withdrawal seizures or psychiatric comorbidities requiring joint medical and psychiatric approach.

# Alcohol

07

## 7.1 Chapter summary

- Withdrawal is only a part of the treatment journey. Post-withdrawal treatment planning should begin at commencement of a supported withdrawal episode.
- Patients admitted to hospitals or presenting to the emergency department should undergo screening at admission to identify those at risk of alcohol withdrawal. Anyone who reports alcohol consumption should be asked about the amount consumed and, for daily high-risk drinkers, features of alcohol use disorder including previous withdrawal. If a risk is identified, the patient should be monitored in hospital with an alcohol withdrawal rating scale.
- Onset of alcohol withdrawal is usually 6-24 hours after the last drink. Usually, withdrawal resolves after 1-3 days without treatment; occasionally, withdrawal may continue for up to 14 days.
- About 10 per cent of people with alcohol use disorder who stop drinking will experience severe withdrawal (delirium, seizures). The risk of severe withdrawal is unpredictable. Consider those with history of previous severe withdrawal, comorbidities, and those who present in withdrawal. Seizures affect about five per cent of patients, occurring early (usually 6-24 hours after the last drink). They are generalised, not focal and about one in four may recur.
- Delirium tremens ('the DTs') is the most severe form of alcohol withdrawal and is a medical emergency. It usually develops 2-5 days after stopping or significantly reducing alcohol consumption. The usual course is three days but can be up to 14 days.
- The Clinical Institute Withdrawal Assessment for Alcohol – Revised Version (CIWA-Ar) is a valid, reliable and sensitive tool for assessing the clinical course of simple alcohol withdrawal. The Alcohol Withdrawal Scale (AWS) is another useful means. Medical and psychiatric comorbidity may increase the scores, in which case withdrawal scales can be misleading. Withdrawal scales are not a replacement for clinical judgement and do not diagnose alcohol withdrawal.
- Supportive care alone is often effective in mild alcohol withdrawal.
- Diazepam is the pharmacotherapy of choice for alcohol withdrawal. Diazepam treatment is best initiated early to prevent progression to more severe withdrawal. Symptom-triggered diazepam is ideal for uncomplicated withdrawal in patients without comorbidities, or histories of seizures or alcohol-related delirium in an inpatient setting with frequent review by skilled clinicians. Diazepam loading is recommended for patients with previous seizures or who present in withdrawal, with tapering of fixed-dose diazepam for outpatient settings and complex patients who are assessed daily.
- Diazepam, like other benzodiazepines, is to be prescribed for a short term only during alcohol withdrawal.
- All people being treated for alcohol withdrawal should routinely receive thiamine for prophylaxis against Wernicke's encephalopathy. Thiamine should initially be given intravenously or intramuscularly for inpatients.

## 7.2 Use and effects of alcohol

### 7.2.1 Prevalence and patterns of use

More than 80 per cent of Australian adults report having consumed alcohol at some point over their lifetime and 77 per cent have consumed alcohol in the previous 12 months. According to data collected in the 2019 National Drug Strategy Household Survey (NDSHS), a quarter of Australians abstain from alcohol and a further 58 per cent drink at low-risk levels. However, 17 per cent of Australians consume alcohol at levels above the Australian Alcohol Guidelines lifetime risk level.

### 7.2.2 Pharmacology

Alcohol is primarily metabolised in the liver, with some minor metabolism in the stomach. The rate of absorption is impacted by food. On average people metabolise 10g of alcohol an hour, however this can vary. Blood alcohol levels drop by roughly 0.015 per cent per hour. Metabolism of alcohol can be affected by a range of variables including liver disease, medications, sex, BMI, body fat composition, genetic factors and liver size.

Alcohol is a central nervous system depressant which, in combination with other central nervous system depressants (such as opioids and benzodiazepines), can result in life threatening overdoses.

### 7.2.3 Effects of use

At low to moderate doses, alcohol causes euphoria, loss of emotional restraint, vivaciousness, feeling of warmth, flushing of skin and mild impairment of judgment. As blood alcohol levels increase, speech becomes slurred and the intoxicated person begins losing motor control. At higher levels, memory is affected and the person becomes stuporous and unable to be aroused. Coma and death can, rarely, ensue.

### 7.2.4 Harms associated with alcohol use

Alcohol is linked to a diverse range of health problems and social consequences. Key harms are outlined in table 7.1.

## 7.3 Alcohol withdrawal syndrome

*ICD-11 definition:*

Alcohol withdrawal is a clinically significant cluster of symptoms, behaviours and/or physiological features, varying in degree of severity and duration, that occurs upon cessation or reduction of use of alcohol in individuals who have developed alcohol dependence or have used alcohol for a prolonged period or in large amounts.

Presenting features of alcohol withdrawal may include autonomic hyperactivity (eg tachycardia, hypertension, perspiration), increased hand tremor, nausea, retching or vomiting, insomnia, anxiety, psychomotor agitation, depressed or dysphoric mood, transient visual, tactile or auditory illusions or hallucinations, and distractibility. Less commonly, the withdrawal state is complicated by generalised tonic-clonic seizures. The withdrawal state may progress to a very severe form of delirium characterised by confusion and disorientation, delusions, and prolonged visual, tactile or auditory hallucinations. In such cases, a separate diagnosis of alcohol-induced delirium should also be assigned.

**Table 7.1 Selected medical and psychiatric complications of alcohol use**

| System | Acute Complication | Chronic Complication |
|---|---|---|
| Cardiovascular | Atrial Fibrillation | Cardiomyopathy |
| Neurological | Ataxia, memory impairment, reduced level of consciousness | Alcohol related brain injury, peripheral neuropathy |
| Psychiatric | Emotional lability, paranoia, suicide | Depression, anxiety |
| Respiratory | Respiratory depression | Pneumonia |
| Sexual health | Sexual dysfunction, STIs | Sexual dysfunction |
| Gastrointestinal | Alcohol-related liver disease/pancreatitis | Alcohol-related liver disease/pancreatitis |
| Other | Accidents, trauma | Cancers (eg oropharyngeal, liver, bowel, breast), Nutritional deficiencies |

### 7.3.1 Onset and duration

Onset of alcohol withdrawal is usually 6-24 hours after the last drink and may occur before the blood alcohol level reaches zero. Use of benzodiazepines or other sedatives may delay the onset of withdrawal. Usually, withdrawal is brief, and resolves after 2-3 days without treatment; occasionally, withdrawal may continue for up to 10 days and in rare cases, 14 days. See figure 7.1 illustrating the typical course of alcohol withdrawal.

In some severely dependent drinkers, simply reducing the level of consumption may precipitate withdrawal, even if they have consumed alcohol recently. Withdrawal can commence when the blood alcohol level is decreasing, even if the patient is still intoxicated.

### 7.3.2 Signs, symptoms and course of alcohol withdrawal

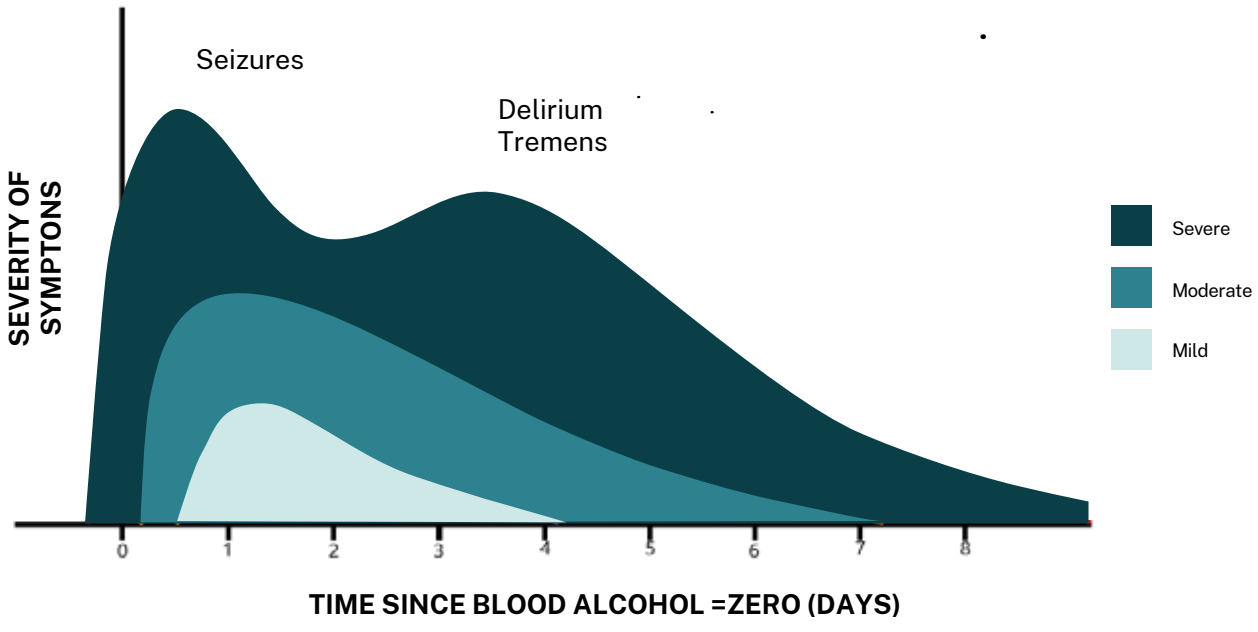
The signs and symptoms of alcohol withdrawal may be grouped into three major classes: autonomic, gastrointestinal, and central nervous system changes.

Seizures occur in about five per cent of people withdrawing from alcohol. They occur early (usually 6-24 hours after the last drink), so typically before arrival to hospital or in the ED. Seizures are grand mal in type (i.e. generalised, not focal) and are single in about 75 per cent of cases.

**Table 7.2 Signs and symptoms of alcohol withdrawal**

| Autonomic overactivity | Gastrointestinal | CNS changes |
|---|---|---|
| Sweating | Anorexia | Anxiety |
| Fever | Nausea | Insomnia or vivid dreams |
| Hypertension | Vomiting | Seizures |
| Tremor | Dyspepsia | Delusions, hallucinations |
| Tachycardia | | Delirium |

**Figure 7.1 Time course of alcohol withdrawal**[1]




[1] Figure 7.1 design: Toby Marchant

Alcohol withdrawal delirium, or delirium tremens ('the DTs'), is the most severe form of alcohol withdrawal syndrome, and a medical emergency. It usually develops 2-5 days after stopping or significantly reducing alcohol consumption. The usual course is three days but can be up to 14 days. Its clinical features are described in table 7.3.

### 7.3.3 Factors affecting severity of withdrawal

The severity of withdrawal is difficult to predict. Consider patients who have:

- Higher blood alcohol level on arrival.
- Concomitant medical conditions.
- Seizures early in withdrawal.
- Co-occurring dependencies on other central nervous system depressants.

## 7.4 Screening

Screen all patients on admission to hospitals or when presenting to the emergency department to identify those at risk of alcohol withdrawal. Check local protocols for screening tools to be used and timeframes for screening. An example screening tool is provided in Appendix 5 and here.

The **National Guidelines for Treatment of Alcohol Problems** recommends that General Practitioners routinely screen for harmful alcohol use, noting that clinical judgement alone identifies only 60% of patients with alcohol use disorder. Tools developed for the primary care setting are available on the RACGP website, including the **Drink-less program** and the **smoking, nutrition, alcohol and physical activity (SNAP) framework**.

The standard method of screening for alcohol use is to take a quantitative drinking history, such as by using a validated screening tool eg AUDIT-C. Anyone who reports alcohol consumption in excess of NHMRC recommended levels should be assessed in more detail. Ask about features of dependence, particularly prior withdrawal, and if present monitor with an alcohol withdrawal rating scale.

Heavy drinkers are often reluctant to disclose their drinking and may seriously under-report their level of consumption. Where clinically relevant, clinicians should be alert to the possibility that someone who reports only modest or no drinking may have an alcohol use problem.

**Table 7.3: Clinical features of alcohol withdrawal delirium**

| Central Nervous System | Other |
|---|---|
| Confusion and disorientation | Gross tremor |
| Extreme agitation or restlessness | Fluctuations in blood pressure or pulse |
| Paranoid ideation, typically of delusional intensity. | Disturbance of fluid balance and electrolytes |
| Distractibility and accentuated response to external stimuli. | Hyperthermia |
| Hallucinations affecting any of the senses, though typically visual (often insects like ants or spiders). | |

Particular issues that should raise the possibility of problematic alcohol use are:

- A presenting condition or previous diagnosis of an alcohol-related disease (e.g. alcohol-related hepatitis, alcohol-related cardiomyopathy, and pancreatitis).
- Symptoms such as anxiety, agitation or confusion, or other clinical features that might be due to an alcohol withdrawal syndrome.
- Signs of intoxication or alcohol-related disease such as chronic liver disease (including prominent facial capillaries, spider naevi, and palmar erythema).
- Blood tests showing raised serum gamma-glutamyl transferase or raised mean corpuscular red cell volume.

In hospitalised patients, early detection and treatment to prevent the development of withdrawal is the optimal approach. Measure blood or breath alcohol levels, consider collateral information and reassess periodically with a non-judgmental approach.

## 7.5 Assessment

The usual assessment for withdrawal should be undertaken as detailed in section 4.3, in particular:

- Substance use history and withdrawal history covering all substances used.
- Medical history and coexisting medical conditions.
- Physical examination and cognitive assessment including intoxication and delirium.
- History of seizures and delirium.
- Mental health history, mental state examination – alcohol intoxication and dependence can be associated with suicidality and major depressive symptoms.

### 7.5.1 Complications of chronic alcohol use

Chronic alcohol use is associated with a range of health conditions, some of which can complicate withdrawal management.

Patients with alcohol dependence are to be assessed for:

- Thiamine deficiency (see 7.6.8 – Wernicke's encephalopathy).
- Liver disease.
- Cognitive impairment – with consideration of capacity to consent.
- Cerebellar impairment and falls risk.
- Other nutritional deficiencies/ re-feeding syndrome.
- Acquired brain injury.
- Mood including increased suicide risk.

### 7.5.2 Intoxicated presentations

The patient may be intoxicated on presentation. This may affect their ability to provide and receive information and hence capacity and ability to provide informed consent. Mild intoxication may be missed so confirmation of blood alcohol level by breath or blood testing is recommended.

Assessment of intoxicated individuals is difficult and should focus on medical and psychiatric safety. Motivation and treatment goals may be reviewed after intoxication has resolved. Some people admitted for planned withdrawal management may present with a high blood alcohol level, without significant behavioural signs of intoxication. This is not a contraindication to admission.

### 7.5.3 Consumption history

Record average daily consumption in grams of alcohol or in standard drinks (see table below). The Australian standard drink has 10g alcohol. The Australian **standard drinks guide** is a useful tool. Table 7.4 (over the page) sets out the amount of alcohol in common drink measures and containers.

**Table 7.4 Amount of alcohol in common drink measures and containers**

| Beverage (typical alcohol content) | Container size | Type of container | Alcohol content |
|---|---|---|---|
| Beer[1] (4-5 %ABV[2]) | 285 mL | Middy | 10 g |
| | 425 mL | Schooner | 15 g |
| | 375 mL | Can/stubby (6 = six pack) | 14 g |
| | 750 mL | Large bottle (long neck) | 28 g |
| | 1 carton | 24 cans/stubbies ('slab') or 12 large bottles | 336 g |
| Table wine (10-14 %ABV) | 150 mL | Standard glass served in restaurants | 15 g |
| | 750 mL | Bottle | 60-80 g |
| | 1 L | Cask | 100 g |
| | 4 L | Cask | 400 g |
| Fortified wine (eg port, sherry) (18 %ABV) | 60 mL | Standard glass | 10 g |
| | 750 mL | Bottle | 120 g |
| Spirits (eg whisky, brandy, vodka) (40 %ABV) | 30 mL | Nip | 10 g |
| | 750 mL | Bottle | 240 g |

## 7.6 Withdrawal management

The purpose of withdrawal care is to provide appropriate support for withdrawal to be completed safely. The primary aims of substance withdrawal are to:

1. Cease substance use, whether permanently or temporarily.
2. Treat symptoms, coexisting conditions and complications of chronic use.
3. Engage in ongoing treatment and care.

Health care practitioners who would like to access specialist advice on assessing and managing alcohol withdrawal can contact the Drug and Alcohol Specialist Advisory Service (DASAS) on 1800 023 687 (or (02) 8382-1006 if within Sydney metropolitan area). This is a free call* and is available 24 hours a day, 7 days a week (*may not be free from mobile phones).

### 7.6.1 Treatment planning

Summarise the patient assessment to inform the treatment plan, ensuring that it includes post-withdrawal treatment. Attempts at reducing or ceasing alcohol use are marked by profound cravings and high rates of lapse and relapse particularly in the absence of ongoing, post-withdrawal care. Post-withdrawal treatment planning should begin **at commencement** of a supported withdrawal episode.

An important consideration for elective presentations is to ensure patient safety if there is delay in accessing withdrawal care. When there is a delay, **sudden cessation of alcohol use may be dangerous**. The usual advice is to only make small reductions in consumption until entry to treatment.

[1] Light beer usually has about half the alcohol content of normal beer. Check labels for alcohol content.

[2] %ABV = volume of alcohol by volume of the drink, expressed as a percent. The density of alcohol at room temperature is 0.79. The alcohol content in grams = volume (ml) x ABV% x 0.79. For example, a typical middy is 285 ml x 4.5/100 x 0.79 = 10.1 g

### 7.6.2 Treatment settings

Patients who seek alcohol withdrawal care may do so in inpatient, residential or community settings. In the absence of strong client preference regarding a particular setting, clinical decision making regarding appropriate setting should be informed by risk-benefit analysis, social factors, substance use and comorbidity factors.

#### *Inpatient alcohol withdrawal*

Treatment in hospital is indicated when the patient has concurrent illness that increases the risks associated with withdrawal, or when there is a high risk of severe withdrawal complications. Specialist inpatient settings are indicated when moderate or severe withdrawal is predicted; the patient has a history of alcohol-related delirium or seizures; the patient has multiple drug dependencies; the patient has other significant medical problems or there is a history of repeated inability to complete withdrawal in the community. Admission to intensive care may be required for severe withdrawal with major complications and /or those with severe intercurrent illness.

#### *Outpatient or community-based alcohol withdrawal*

Most alcohol withdrawal can be safely managed in the community in the absence of the risk factors outlined above. Outpatient alcohol withdrawal is undertaken over 5 – 7 days, with the patient monitored daily and staged supply of medication each 24 hours.

Suggested alcohol withdrawal management approaches in the community or residential settings are outlined in more detail in below and in Appendix 6. The **RACGP** has a number of resources to assist GPs managing patients undergoing alcohol withdrawal as an outpatient.

### 7.6.3 Psychosocial interventions

While psychosocial therapies have been associated with better outcomes in people with alcohol use disorder, there is little evidence to suggest that these interventions affect outcome when provided in the withdrawal setting.

### 7.6.4 Supportive care

Supportive care interventions can enable patients to cope with withdrawal symptoms including cravings, anxiety, sleep disturbance and emotional fluctuations. Supportive care alone is often effective for mild alcohol withdrawal and can assist patients to persist with completing a more severe withdrawal episode.

The general principles of supportive care involve:

- Psychoeducation regarding common withdrawal symptoms, their likely onset and duration, and coping strategies.
- Providing information about coping with cravings, which are a normal part of all withdrawal syndromes.
- Addressing environmental stressors that can have a significant effect on the severity of withdrawal. Minimise stress by making sure that the environment is quiet, calm, safe and private.
- Providing reassurance through allaying concerns and fears, positive encouragement, feedback on progress, regular contact, providing information, and dealing with immediate social and family problems.

Exercise is not supported for management of alcohol withdrawal based on the current evidence.

### 7.6.5 Medication

#### *Diazepam*

A long-acting benzodiazepine (diazepam) is the treatment of choice for alcohol withdrawal, confirmed by several randomised controlled trials. Diazepam treatment is best used early in the course of alcohol withdrawal to prevent progression to more severe withdrawal. There is cross-tolerance of alcohol with benzodiazepines such that relatively high doses may be required.

There are risks associated with diazepam and other benzodiazepine use. Limit the duration of benzodiazepine use to 5-7 days. Use of benzodiazepines for any indication other than short term withdrawal management is not recommended in someone with a history of substance use disorder.

Contraindications to benzodiazepine use include respiratory failure and decompensated liver disease, discussed below in section 7.8.3. If benzodiazepines are contraindicated, other medications may be used with specialist support, including carbemazepine or neuroleptic agents.

Benzodiazepine-related delirium is clinically challenging with no specific diagnostic features. If delirium persists despite significant benzodiazepine dosage, consider dose reduction rather than increase.

The most commonly used diazepam regimens are:

- Diazepam loading
- Fixed dose tapering
- Symptom-triggered
- Hybrid approach

These are described below and example regimens appear in table 7.4.

**Diazepam loading** which involves giving a large dose over the course of day one, then limited or no further diazepam. This is recommended for patients with previous seizures or who present in withdrawal. After 80 mg of diazepam if the patient is not settling (e.g. if CIWA-Ar is >10), a medical officer is to assess to rule out other pathology. If no other cause of anxiety or agitation is found, consider additional diazepam (10-20 mg 2nd hourly PRN, maximum 120 mg in 24 hours). If the patient is experiencing hallucinations and/or agitation, consider olanzapine 2.5-5 mg PRN up to a maximum of 20 mg in 24 hours. Persistent agitation or hallucinations require specialist advice (DASAS or on call Addiction Medicine Specialist or Addiction Psychiatrist).

**Fixed dose tapering regimens** where a predetermined dose of diazepam is administered in tapering doses over 2-6 days. This regimen is suitable for ambulatory withdrawal.

**Symptom-triggered sedation** where doses of diazepam are administered according to the severity of withdrawal symptoms, monitored 4 hourly or as indicated (see suggested frequency in table 7.6). A rising alcohol withdrawal score indicates a need for more aggressive management. Symptom-triggered diazepam is ideal for uncomplicated withdrawal in patients without co-occurring conditions in an inpatient setting, with frequent review by skilled clinicians.

**Hybrid regimens** comprising a fixed dose schedule, reviewed daily with additional doses as needed, are often the most appropriate for treatment of complex patients in hospital with co-occurring conditions. If using a hybrid regimen, prescribe diazepam in expected tapering regimen as above, guided by full clinical picture including Alcohol Withdrawal Scale (AWS) or CIWA-Ar. Prescribe as needed doses should symptoms emerge e.g. Diazepam 5-10 mg PRN max 2 doses per day. If sedation necessary: 5-10 mg oral diazepam every 6-8 hours for first 48 hours.

### *Alcohol*

Alcohol is **inappropriate** to relieve withdrawal symptoms. It is **not a safe medication**, and its use falsely suggests that alcohol has clinical benefit for the patient. In circumstances where there is a delay before the patient can access treatment, the patient may be advised to reduce intake rather than suddenly ceasing drinking. As stated in 7.6.1 **suddenly ceasing alcohol** consumption can result in significant withdrawal symptoms in alcohol dependent people.

### *Thiamine*

All patients undertaking alcohol withdrawal are to be administered thiamine for 1-2 weeks to prevent Wernicke's encephalopathy. Recommended regimen is below at 7.6.8

Other symptomatic medication

- For headache, consider paracetamol.
- For nausea or vomiting, consider metoclopramide 10 mg every 4-6 hours or prochlorperazine 5 mg every 4-6 hours orally or intramuscularly. Reduce the dose rate to eight-hourly as symptoms abate.

### Table 7.5 Example diazepam regimens

| Regimen | Dosage |
|---|---|
| Diazepam loading regimen example | **Day 1:**<br>Initial 20 mg diazepam, then 20 mg diazepam every two hours until patient is mildly sedated. No further loading diazepam generally needed once patient is settled (lightly sedated and easily rousable).<br>Medical review required if dose required exceeds 80 mg.<br><br>**Thereafter:**<br>Following loading, symptom-triggered diazepam is given over subsequent days in a reducing regimen. |
| Diazepam fixed dose tapering regimen example | **Day 1:**<br>10 mg diazepam QID<br><br>**Thereafter:**<br>Reduce by 10 mg each day, retaining nocte dose till day 5 or 6, then cease. |
| Symptom-triggered diazepam regimen example | **CIWA-Ar score under 10 or AWS score under 4:** 0-5 mg diazepam<br>**CIWA-Ar 10-20 or AWS 4-14:** 10 mg diazepam<br>**CIWA-Ar above 20 or AWS above 14:** 20 mg diazepam<br>Medical review required if dose required exceeds 80 mg |

An example of a diazepam regimen suitable for alcohol withdrawal in a community setting is in Table 7.5 below.

### Table 7.6 Ambulatory diazepam regimen example

| Regimen | Dosage |
|---|---|
| Day 1 | 10 mg diazepam six hourly |
| Day 2 | 10 mg diazepam eight hourly |
| Day 3 | 10 mg diazepam morning and night |
| Day 4 | 5 mg diazepam morning and night |
| Day 5 | 5 mg diazepam at night |
| Milder cases may respond to lower doses (half the above). | |

### 7.6.6 Monitoring and investigations

Conduct regular and frequent observations including:

- Temperature, pulse rate and rhythm and blood pressure.
- CIWA-Ar or AWS (see Appendix 7).
- Level of hydration.

Withdrawal scales provide a systematic measure of the severity of uncomplicated withdrawal by recording changes in the severity of clinical features over time. Withdrawal scales do not diagnose withdrawal. They are merely guides to the severity of an already diagnosed withdrawal syndrome. Withdrawal scales do not override clinical judgement.

The Clinical Institute Withdrawal Assessment for Alcohol - Revised Version (CIWA-Ar) has been shown to be a valid, reliable and sensitive tool for assessing the clinical course of alcohol withdrawal where there are no concurrent serious medical conditions (see Appendix 7). The Alcohol Withdrawal Scale (AWS) is another useful tool (see Appendix 7) widely used in NSW. The use of either scale is appropriate.

Frequency of monitoring depends upon treatment setting and clinical condition of the patient. The following is suggested:

Consider discontinuing use of withdrawal scales in patients with multiple pathologies as the results may be misleading. Monitoring of consciousness may be compromised in patients with head injury or cerebrovascular accident. In these situations, specialist consultation is essential.

**Re-evaluate** the patient regularly to confirm the diagnosis of alcohol withdrawal as opposed to another medical condition, particularly if the patient is not responding well to treatment.

### 7.6.7 Preventing dehydration

In some cases, dehydration may be serious and require aggressive fluid replacement.

- Assess and record nutritional intake, fluid intake and output.
- Encourage oral rehydration.
- Monitor carefully for signs of dehydration.
- **Do not give glucose** prior to thiamine as it risks exacerbating Wernicke's (see 7.6.8 below).

In severe withdrawal:

- Intravenous rehydration, 2-5 L per day may be required.
- Monitor urea, electrolytes creatinine, liver function and acid-base balance.

**Table 7.7 Monitoring frequency for alcohol withdrawal**

| Withdrawal severity | CIWA-Ar score | AWS score | Monitoring frequency |
|---|---|---|---|
| **Mild** | Less than 10 | Less than 4 | 4-6 hourly |
| **Moderate** | 10-20 | 4-14 | 2-4 hourly |
| **Severe** | More than 20 | More than 14 | Hourly |
| Medical review required for patients with rising scores or severe withdrawal that does not respond to medication | | | |

### 7.6.8 Routine prevention of Wernicke's encephalopathy

This acute neurological syndrome due to thiamine deficiency can complicate withdrawal or present in people with continuing alcohol use. It is characterised by ataxia, ophthalmoplegia, nystagmus and anterograde amnesia (or recent memory impairment) however most patients only experience some of these symptoms. Untreated, it can progress to Korsakoff's psychosis which may result in permanent cognitive damage and global memory impairment.

Wernicke's encephalopathy can be prevented in heavy or dependent alcohol users by good nutrition and by the early routine use of thiamine in all patients presenting to clinical services.

All people being treated for alcohol withdrawal should routinely receive prophylactic thiamine (as per the table below)

Alcohol is associated with thrombocytopenia and coagulopathy that may render intramuscular injection unsafe.

Administer thiamine **before giving any form of glucose** when possible. A carbohydrate load in the presence of thiamine deficiency risks precipitating Wernicke's encephalopathy.

### 7.6.9 Other nutritional deficiencies

In people who are chronic alcohol users, deficiencies of other B-complex vitamins, vitamin C, zinc and magnesium are not uncommon and an oral multivitamin preparation can be given for several days. Consider parenteral magnesium replacement when IV thiamine is used as described above.

## 7.7 Continuing care

Successful withdrawal should not be seen as an end in itself. Without further treatment, the rate of relapsing to similar rates of drinking exceeds 90 per cent. All individuals should be encouraged to consider the range of relevant treatment options that exist to assist them in maintaining their abstinence or a more controlled drinking pattern. Residential and ambulatory or community care options are tailored to severity of alcohol use disorder, patient preference and availability of services.

Medications that may be useful include those listed for alcohol use disorder (naltrexone, acamprosate, disulfiram) and others for which there is supportive evidence but which are not registered for alcohol use disorder. More information is available in the Australian

**Table 7.8- Thiamine dosing regimes**

| | |
|---|---|
| **Thiamine dosing for an otherwise healthy person with good dietary intake:** | |
| For the first 3 days | Oral thiamine 100 mg three times daily |
| For the next 11 days | Oral thiamine 100 mg daily |
| **Thiamine dosing for people with chronic high level alcohol use and poor nutrition:** | |
| For first 3 days | Administer thiamine 300 mg daily intravenously |
| Thereafter for several weeks | Oral thiamine doses of 300 mg per day |
| **Thiamine dosing for people with symptomatic or suspected Wernicke's encephalopathy** | |
| Initially | Administer thiamine 500 mg IV three times a day until a clinical response is seen |
| Thereafter for several weeks | Guided by progress and specialist addiction medicine or neurological advice |

Guidelines for Treatment of Alcohol Problems at alcoholtreatmentguidelines.com.au. Psychosocial support options include Alcoholics Anonymous (AA), SMART recovery and individual relapse prevention counselling.

For more information on continuing care, see section 5.11 and Appendix 3.

### 7.7.1 Reducing harms

Provide advice to minimise harm related to drinking alcohol by suggesting:

- Reducing the amount of alcohol consumed through strategies such as alternating with soft drinks, using smaller glasses (eg middies rather than schooners), starting drinking later in the day, drinking lower alcohol alternatives. Avoiding having glasses topped up can also help to keep track of how much is consumed and avoiding participating in buying rounds of drinks can reduce pressure to keep up with others.
- Avoiding combining alcohol consumption with other sedating substances such as benzodiazepines, GHB and opioids. These increase the risk of respiratory depression and overdose.
- Reducing risk of "drink spiking" by keeping drinks within view and buying or pouring your own drinks unless you can see them being poured at the bar.
- Eating food before and during drinking to slow the consumption and absorption of alcohol.

## 7.8 Substance-specific practice points

### 7.8.1 Seizure history

When there is a history of withdrawal seizures, early treatment with diazepam is indicated (diazepam loading). If a seizure occurs, medical assessment is required to exclude other contributing factors (e.g. head injury, electrolyte disturbances or other medical conditions).

Prophylactic treatment with anticonvulsants (e.g. phenytoin, carbamazepine and sodium valproate) has no benefit in preventing alcohol withdrawal seizures.

### 7.8.2 Alcohol withdrawal delirium (delirium tremens)

**Delirium tremens is a medical emergency** that requires hospital treatment (often in a high dependency unit).

Delirium tremens is a diagnosis by exclusion, so before commencing treatment, screen for other factors contributing to delirium, in particular subdural haematoma, head injury, Wernicke's encephalopathy, hepatic encephalopathy, hypoxia, sepsis, metabolic disturbances, intoxication with or withdrawal from other drugs. Major psychotic disorders can sometimes mimic this state.

#### *Management of established alcohol withdrawal delirium (delirium tremens)*

Patients with delirium tremens are mentally disordered, and it is not acceptable to allow them to sign themselves out of hospital. Sedation with benzodiazepines (e.g. diazepam 20 mg hourly up to 80 mg total dose in 24 hours) should be initiated however is often insufficient to reverse delirium tremens. If patients will not or cannot take diazepam orally, alternatives include use of an intravenous midazolam infusion which must be monitored in a high dependency unit, or intramuscular lorazepam if no high dependency unit is available. Aim to have the patient in a state resembling light sleep, from which he or she can be readily aroused. Occasionally, patients need doses of diazepam greater than 80 mg to achieve sedation. However, high doses of benzodiazepines can themselves produce a delirium, so specialist assessment and review is required.

Once loaded with benzodiazepines (either by intravenous infusion or oral diazepam), if patient is not settled, consider droperidol or olanzapine 2.5-5 mg orally or buccally/sublingually (wafer) to a maximum of 20 mg in 24 hours. Olanzapine can be continued on a PRN basis for several days until no longer needed.

Intravenous thiamine (typically 300 mg) should be administered as described previously.

Supportive management for patients with alcohol withdrawal delirium includes measures to ensuring the safety of patient, staff and others, typically with a single room. One-on-one nursing care may be required for a period to reorient the patient and ensure regular review of the withdrawal course. Provide adequate sedation, which will mean that manual restraint is rarely required (refer to local policies).

Monitor fluid balance and provide intravenous fluid and electrolyte replacement if required, as well as support for nutrition. Monitor for infections and other medical problem. Intensive care may be needed particularly for severe withdrawal and complex comorbidities.

*Hallucinations*

Hallucinations can be associated with both alcohol intoxication (alcohol-induced psychotic disorder or hallucinosis) and withdrawal – the history of alcohol use will enable differentiation. Where a patient is in alcohol withdrawal, hallucinations can occur in the context of a clear sensorium or as part of alcohol withdrawal delirium. Hallucinations are most commonly visual or tactile, with imagery or sensations of insects, animals or people, and may last minutes at a time or several days.

If treatment is required for hallucinations, the drug of first choice is diazepam as described above. If hallucinations do not respond to diazepam alone, add olanzapine. If olanzapine is required, the starting dose may be between 2.5-5 mg, orally or buccally/sublingually (wafer). If there is no response and no undue side effects, an additional dose may be administered. Doses are ordered as required and continued for several days until no longer required, under constant review. The patient should already be receiving diazepam, which will reduce risks of seizures or dystonic reactions. Despite cessation of alcohol use, persistent psychosis may occur, so patients should be followed-up to complete recovery.

### 7.8.3 Management of withdrawal with intercurrent illness

Alcohol withdrawal is more difficult to manage in the presence of intercurrent illness. Decompensated liver disease and respiratory disease can make management of withdrawal very difficult. Consider high dependency or intensive care unit admission.

*Severe liver disease*

Drug withdrawal regimens must be modified when the patient has severe liver disease. Long-acting benzodiazepines are not to be administered to patients who have jaundice, ascites or hepatic encephalopathy. In these instances, oxazepam (which is renally excreted) may be used with caution. Titrate a dose of 15 – 30 mg carefully against response.

*Severe chronic airflow limitation*

Do not use diazepam loading dose regimens in patients with severe chronic airflow limitation. Use benzodiazepines with caution and with close monitoring. If a high dependency unit is available, an intravenous midazolam infusion may be the best way to control withdrawal. Alternatively, a short acting benzodiazepine such as temazepam or oxazepam may be used cautiously, with close monitoring of respiration. Dexmedetomidine is increasingly used in intensive care units and may reduce the requirement for intubation.

### 7.8.4 Risks associated with benzodiazepine treatment

The duration of use of benzodiazepines in withdrawal should be limited to 5-7 days. Excess sedation delays hospital discharge and increases the risk of falls or trauma particularly in older patients and those on other sedating medications. Monitoring of consciousness may be compromised in patients with head injury or cerebrovascular accident. In these situations, specialist consultation is essential.

Contraindications to benzodiazepine use include respiratory failure and decompensated liver disease, discussed above. If benzodiazepines are contraindicated, other medications may be used with specialist support, including carbamazepine or neuroleptic agents.

Benzodiazepines are subject to misuse and dependence. This is common in alcohol use disorder and may not be recognised initially. Requests for increased medications in excess of signs of alcohol withdrawal may suggest a benzodiazepine use disorder or other mental health disorders. Use of benzodiazepines for any indication other than short term withdrawal management is not recommended in someone with a history of substance use disorder.

Benzodiazepine-related delirium is clinically challenging with no specific diagnostic features. If delirium persists despite significant benzodiazepine dosage, consider dose reduction rather than increase.

# Cannabis

08

## 8.1 Chapter summary

- Withdrawal is only a part of the treatment journey. Post-withdrawal treatment planning should begin at commencement of a supported withdrawal episode.
- Cannabis withdrawal syndrome can occur following the cessation of heavy and regular cannabis use. Common symptoms include sleep disturbances, anxiety, decreased appetite, low mood, irritability and agitation, restlessness, and physical symptoms such as nausea, stomach pain, headache and sweating.
- Symptoms usually commence 1-2 days after stopping use, peak in the first 2-5 days, and persist for up to 1-2 weeks, although sleep and mood disturbances can continue for weeks.
- Most individuals can attempt cannabis withdrawal in outpatient settings. Inpatient or residential withdrawal can be considered for individuals with severe comorbid health conditions or unsuitable home environments.
- The key aspects in management of cannabis withdrawal include consumer and carer education; supportive care (addressing withdrawal symptoms, cravings, motivation, relaxation strategies), regular monitoring and review, and treatment planning that includes the post-withdrawal period.
- Short courses of symptomatic medications can assist specific concerns during withdrawal episode, such as sleep and anxiety (e.g. benzodiazepines). However, benzodiazepines should only be used with caution in adolescents.
- When treating cannabis withdrawal, treatment should also be provided for nicotine withdrawal where present.
- Underlying psychiatric illnesses or symptoms can be exacerbated during withdrawal, and particular attention should be paid to patients with severe coexisting mental health disorders.

## 8.2 Use and effects of cannabis

### 8.2.1 What is cannabis?

Cannabis is made from the dried flowering heads and leaves the cannabis sativa and cannabis indica plants. It is available is a number of forms, including powdered leaves, resin/hashish, edible tinctures, wax, shatter and – increasingly common – oil.

In Australia cannabis is usually smoked, often with tobacco – either in 'joints', pipes or 'bongs' (water pipes). Whereas most Australian cannabis strains have a THC content of approximately 5-15 per cent, cannabis extracts (e.g. liquids) can be much more potent (in excess of 40 per cent THC content), increasing the potential for severe and prolonged intoxication effects.

### 8.2.2 Prevalence and patterns of use

In 2019, 36 per cent of Australians surveyed by the AIHW reported they had used cannabis in their lifetime. Around 10 per cent of Australians report using cannabis in the previous year, making it the most used illicit drug in the country. Over one third of recent users report using it at least weekly. People in their 20s make up the largest group of users (24 per cent), but cannabis is now also being used more frequently in older aged groups (50+).

### 8.2.3 Pharmacology

The two major chemicals of cannabis are tetrahydrocannabinol (THC) and cannabidiol (CBD), both of which act on cannabinoid receptors (CB1 and CB2). THC is the principal psychoactive chemical.

Cannabis products vary in their strength, ratios and routes of intake, hence can have very different pharmacological profiles. For example, Nabiximols, a cannabis product approved by the TGA for use in specific conditions, contains 2.7 mg of THC and 2.5 mg of CBD in each 100 microlitre spray. On the other hand, illicit cannabis can be sold at a variety of concentrations but is typically around 5-15 per cent ie 5-15 mg of THC per 100 mg.

Cannabis is most commonly smoked or ingested. When THC is smoked it is rapidly absorbed at up to 30 per cent bioavailability, hence is the preferred route of administration. The bioavailability of oral products is only around 10-15 per cent. Oral routes of use are associated with more prolonged effects (e.g. 4-8 hrs) compared with inhaled or smoked routes (typically 1-2 hours of peak effects).

THC is highly lipophilic and therefore easily absorbed into tissues. Its half-life is therefore highly variable and depends on amount and duration of use. Chronic users can have THC detectable on drug tests for more than 30 days post cessation of use. Metabolism is primarily via the liver, and many of the metabolites are themselves psychoactive. Excretion is primarily via faeces (65 per cent) and urine (20 per cent).

### 8.2.4 Effects of cannabis use

Effects of cannabis include quiet euphoria, feeling 'mellow' and content. Sedation is commonly reported, and many individuals use cannabis to aid sleep. Increasingly, many individuals report using cannabis to cope with a range of health conditions, including pain, mental health issues, sleep and neurological conditions.

In overdose, patients may become dehydrated and have electrolyte disturbances if there is severe nausea and vomiting, and may require monitoring for tachycardia/arrythmia.

### 8.2.5 Harms associated with cannabis use

Adverse mental health effects can include anxiety, depression, perceptual disturbances (although frank hallucinations are rare) and thought disorder and paranoia. Physical adverse effects can include respiratory problems and cardiac arrhythmias.

Intoxication can be associated with impaired cognitive function (processing speed, reaction time, impaired memory), although there is little evidence for long term impairments following abstinence. The potential for impaired cognition and performance means that tasks such as driving or operating machinery may be impaired.

**Table 8.1 Acute effects of cannabis use**

| Common subjective effects | Common physical effects |
|---|---|
| Feeling of wellbeing | Sedation |
| Euphoria | Pain relief |
| Reduced stress | Increased appetite |
| Heightened senses and creativity | Vomiting |
| Reduced or increased anxiety | Impaired coordination and reaction time |
| Paranoia, psychosis | Tachycardia |
| Impaired cognition or memory | |

Cyclical vomiting, termed cannabinoid hyperemesis, has been described in a number of case series. It is characterized by intractable vomiting which does not usually respond to anti-emetics. This occurs in the context of daily cannabis use, resolves with cannabis cessation, and returns following resumption of regular cannabis use. It is often associated with excessive showering with hot water.

Adverse events may be related to dose (e.g. cannabis concentrates) and individual vulnerability (e.g. underlying mental health conditions).

## 8.3 Cannabis withdrawal syndrome

Many regular cannabis users can stop their cannabis use without significant symptoms or concerns – and many do so without seeking specific treatment. Studies suggest that approximately 50 per cent of regular or dependent cannabis users meet the threshold for a cannabis withdrawal syndrome following cessation, with higher proportions (approximately 80-90 per cent) in inpatient settings.

*ICD-11 definition: Cannabis withdrawal*

Cannabis withdrawal is a clinically significant cluster of symptoms, behaviours and/or physiological features, varying in degree of severity and duration, that occurs upon cessation or reduction of use of cannabis in individuals who have developed cannabis dependence or have used cannabis for a prolonged period or in large amounts.

Presenting features of cannabis withdrawal may include irritability, anger or aggressive behaviour, shakiness, insomnia, restlessness, anxiety, depressed or dysphoric mood, decreased appetite and weight loss, headache, sweating or chills, abdominal cramps and muscle aches. **https://www.who.int/publications/i/item/9789241510240**.

**Table 8.2 Common signs and symptoms of cannabis withdrawal**

| Psychological | Physical |
|---|---|
| Sleep disturbances | Decreased appetite |
| Anxiety | Nausea |
| Low mood | Stomach pain |
| Irritability and agitation | Headache |
| Restlessness | Sweating |

### 8.3.1 Onset and duration

Most symptoms commence within 1-2 days after cessation, peaking at day 2-5 and returning to baseline after 7-14 days. Some withdrawal symptoms (e.g. sleep and mood disturbances) and cravings may persist for several weeks.

### 8.3.2 Factors affecting severity of withdrawal

Severity of cannabis withdrawal symptoms is associated with the amount of cannabis use. Higher doses and frequency of cannabis use is associated with increased withdrawal severity. Tobacco use and polysubstance use are also associated with more severe withdrawal symptoms.

While there is variation between studies, factors such as coexisting mental health conditions, age, gender and ethnicity have not been shown to consistently independently impact upon withdrawal severity.

## 8.4 Assessment

The usual assessment for withdrawal should be undertaken as detailed in section 4.3, including:

- Substance use history and withdrawal history covering all substances used.
- Medical history and coexisting medical conditions.
- Physical examination.
- Cognitive assessment including intoxication.
- Mental health history and mental state examination.

The patient may be intoxicated on presentation. This may affect their ability to provide and receive information and hence may not be able to provide informed consent. Signs and symptoms of intoxication are in Table 8.1 above. Assessment of intoxicated individuals is difficult but should be pursued as far as is possible. Assessment findings may be reviewed after signs of intoxication have abated.

### 8.4.1 Consumption history

Assessment for cannabis withdrawal includes route of consumption, quantity and frequency of use and pattern of use over time. Heavy users can smoke more than 1 ounce/28 g a week, however as the strength of the THC is variable, frequency of use is a better measure. Daily use is the strongest predictor

of likelihood of withdrawal syndrome. Previous experiences in stopping cannabis (emergence of withdrawal symptoms) and periods of prolonged abstinence (duration, how achieved, relapse triggers) should also be determined.

## 8.5 Withdrawal management

Withdrawal from cannabis is not medically dangerous, and no specific treatment has been shown to be more effective than others in reducing withdrawal symptoms.

The purpose of withdrawal care is to provide appropriate support for withdrawal to be completed safely. The primary aims of withdrawal are to:

1. Cease substance use, whether permanently or temporarily.
2. Treat symptoms, coexisting conditions and complications of chronic use.
3. Engage in ongoing treatment and care.

Health care practitioners who would like to access specialist advice on assessing and managing cannabis withdrawal can contact the Drug and Alcohol Specialist Advisory Service (DASAS) on 1800 023 687 (or (02) 8382-1006 if within Sydney metropolitan area). This is a free call* and is available 24 hours a day, 7 days a week (*may not be free from mobile phones).

### 8.5.1 Treatment planning

The following need to be considered when planning treatment for clients seeking cannabis withdrawal: comorbid substance use, current psychosocial stressors, medical and psychiatric conditions, home environment and social networks that may be enablers or barriers to successful completion of withdrawal.

*Sudden cessation or gradual reduction in use?*

The severity of cannabis withdrawal is increased in individuals suddenly stopping a pattern of heavy and regular use. Some individuals may benefit from a gradual reduction in their frequency and quantity of cannabis over time – which may help to diminish withdrawal symptoms and cravings when attempting complete cessation at a later time. Gradual dose reduction may not be able to be achieved by all patients. It requires the patient to have confidence that they can reduce their use, identified targets and monitoring of levels of consumption (e.g. diaries), social supports (e.g. counsellor, family, friends), and no significant stressors or comorbidities. Gradual dose reductions are particularly suited to outpatient settings, reflecting the protracted treatment period. A range of tips for assisting patients to control their cannabis use is shown in Table 8.3 below.

**Table 8.3 Tips for gradually reducing cannabis use**

| Gradual tapering of cannabis use may involve one or more of the following strategies |
|---|
| Using a weekly substance use diary and recording daily use, with date, time and the amount used |
| Reducing the number of bongs or joints each day, to reduce total daily consumption of cannabis |
| Gradually lengthening the time after waking to the first use of cannabis. This also gives the patient opportunity to do some non-drug reinforcing activity, preferably one incompatible with smoking or other substance use, such as exercise. |
| For joint smokers, rolling smaller or weaker joints, or not smoking the whole joint at once. |
| Having an agreed dose reduction schedule tailored to the individual, such as 25% reduction each week, reducing to zero at week 4. |

*Attending to other health issues*

Alternative strategies for coping with underlying health problems (e.g. chronic pain) associated with the patient's cannabis use should be explored with the client and their health providers and should form part of the treatment plan.

### 8.5.2 Treatment settings

Most individuals can undertake withdrawal from cannabis in a community, ambulatory or outpatient setting.

**Inpatient** (hospital) withdrawal from cannabis may be indicated if the patient has significant mental or physical health problems (e.g. psychosis, cardiac problems, dehydration). If there is doubt over the existence of coexisting psychopathology, a period of confirmed abstinence with observation and monitoring within an inpatient unit may assist in assessment and diagnosis. Similarly, if there is significant other substance use and likely withdrawal from multiple substances (e.g. alcohol and/or benzodiazepines), a period of close monitoring and treatment in an inpatient setting may be required.

Some individuals will not require admission to hospital but would benefit from greater psychosocial and residential support during cannabis withdrawal, such as in residential rehabilitation programs with the capacity for withdrawal management. Individuals with an unsuitable home environment in which to undertake withdrawal (e.g. homeless, violence in the home, other substance users) or who have a history of repeated unsuccessful attempts at ambulatory withdrawal may benefit from a residential setting. Note however that some residential rehabilitation facilities require individuals to withdraw in an inpatient setting prior to being accepted into a residential rehabilitation program.

### 8.5.3 Psychosocial interventions

While psychosocial therapies have been associated with better outcomes in people with cannabis use disorder, there is little evidence to suggest that these interventions affect outcome when provided in the withdrawal setting.

### 8.5.4 Supportive care

Supportive care during cannabis withdrawal includes:

- Psychoeducation regarding common withdrawal symptoms, their likely onset and duration, and coping strategies.
- Providing information about coping with cravings, which are a normal part of all withdrawal syndromes.
- Addressing environmental stressors that can have a significant effect on the severity of withdrawal. Minimise stress by making sure that the environment is quiet, calm, safe and private.
- Providing reassurance through allaying concerns and fears, positive encouragement, feedback on progress, regular contact, providing information, and dealing with immediate social and family problems. Many things can change during a withdrawal attempt – social circumstances, patient's motivation to stop, health problems, and events unrelated to the withdrawal attempt.

Section 5.7 above contains more details on supportive care.

*Diet, exercise and relaxation*

Many patients have reduced appetite during withdrawal, which together with nausea, vomiting and poor hydration can result in dehydration and electrolyte disturbances if severe. Recommend that patients try to maintain small regular light meals over the course of the withdrawal episode, and to maintain hydration (at least 2-3L of liquids daily). Patients should refrain from caffeinated drinks as they may increase restlessness, irritation and insomnia.

Exercise may improve moods, improve sleep and reduce agitation and cravings. Many individuals also find benefits in structured exercise-relaxation-breathing techniques such as yoga. Medical comorbidities need to be carefully considered in identifying appropriate exercise regimes.

### 8.5.5 Medications

There are no specific pharmacotherapies listed by the TGA for managing cannabis withdrawal. A range of medications is commonly used for relief of specific symptoms (see Table 8.4 over the page).

Table 8.4 Symptomatic medications

| Symptom | Medication (up to 7 days duration, as required) |
|---|---|
| Sleep problems | Benzodiazepines (e.g. diazepam 5-10 mg nocte) or z-drugs (e.g. zolpidem 10-20 mg nocte, zopiclone 7.5-15 mg nocte). |
| Restlessness, anxiety, irritability | Diazepam (e.g. 5-10 mg BD or TDS PRN) or antipsychotic medication (e.g. olanzapine 2.5-5 mg BD PRN) |
| Stomach pains | Hyoscine butylbromide (e.g. Buscopan 20 mg TDS PRN) |
| Physical pain, headaches | Paracetamol, non-steroidal anti inflammatory agents |
| Nausea | Metoclopramide, Ondansetron |

*Symptomatic medications*

The most common withdrawal symptoms that clients seek assistance with are sleep, anxiety, irritability and dysphoria. Some examples of medications that are effective in managing specific symptoms are shown in the table below. Individuals should be assessed for current medical conditions, concomitant medications and past medication experiences, including side effects, dose used, and perceived effectiveness.

Symptomatic medications should generally not be continued beyond seven days without medical review and a clear indication. For patients attempting inpatient or residential withdrawal, medications should be ceased 1-2 days prior to discharge to ensure their ability to cope with withdrawal symptoms without medication. Patients who had been mixing cannabis with tobacco are to be provided with Nicotine Replacement Therapy.

In general, caution is required when prescribing any psychoactive medications (including benzodiazepines, z-drugs (e.g. zopiclone) and anti-psychotic medications) to patients with a substance use disorder. Access to medication should be supervised (e.g. daily dispensing or supervised by carer) and limited to several days (no more than one week) – corresponding to the peak withdrawal symptoms. Use benzodiazepines with caution in adolescents and children.

### 8.5.6 Monitoring and review

Regular patient contact, monitoring and review is to take place– daily in outpatient settings (either by telehealth or in person), and more often in residential or inpatient units. Monitor the severity of withdrawal symptoms, cravings, any substance use, medication use, and other health and social conditions. Monitoring is more frequent during the first 3-5 days and then tapers until the patient has transitioned into the post-withdrawal treatment phase.

The Cannabis Withdrawal Scale (Appendix 7) – a 19-item validated scale assessing symptoms in the preceding 24-hour period – can be used to assist patient monitoring. The scale does not provide a validated link to the use of medications in response to symptoms.

### 8.5.7 Reducing harms

Harm reduction advice for cannabis users can include:

- Avoid daily use.
- Lower THC/higher CBD cannabis is less harmful than higher THC/lower CBD cannabis.
- Avoid cannabis use in teen years.
- Avoid mixing cannabis and tobacco together.
- Avoid drawing deeply into the lungs and holding the smoke in – it's not necessary for effect.

- Avoid bucket bongs as they may push the smoke deeply into the lungs.
- Glass utensils may be less harmful than plastics/hoses/aluminium.
- Vaporisers produce lower amounts of tar.
- Avoid driving while intoxicated.

## 8.6 Continuing care

Standard interventions aimed at reducing relapses and sustaining motivation should be used, including motivational enhancement, relapse prevention, cognitive behavioural therapies and other psychosocial interventions. Supportive group programs may be useful for some.

For general information on continuing care post-withdrawal, see section 5.11 and Appendix 3.

## 8.7 Consumer information, peer and carer supports

Consumer information and psychoeducation regarding cannabis withdrawal should be provided to all patients (e.g. **Your Room Fact Sheet**), For individuals likely to receive medication, the dosing schedule, duration of treatment and possible side effects should be explained and written information should be provided. Some individuals may benefit from self-help or peer engagement (e.g. Marijuana Anonymous 12-step meetings, SMART Recovery) during withdrawal, continuing into the post-withdrawal period.

Where the client consents, educating family or carers about the clinical picture of cannabis withdrawal, the purpose, side effects and doses of any prescribed medications, and advice on how to avoid exacerbating withdrawal can be beneficial.

## 8.8 Substance-specific practice points

### 8.8.1 Cannabis and pregnancy

While cannabis withdrawal in pregnancy is not usually associated with foetal distress or complications in the pregnancy, clinicians should refer to the Substance Use in Pregnancy and Parenting Services (SUPPS) **Guidelines** for more detailed information. Specialist advice is recommended in the treatment of pregnant women using cannabis.

### 8.8.2 Withdrawal from medical cannabis

In general, patients are advised to gradually taper THC-based medicines over several weeks before stopping to minimise withdrawal or other discontinuation effects. In these patients, careful consideration needs to be given to providing alternative management of the conditions for which the cannabis was prescribed when reducing cannabis use.

### 8.8.3 Synthetic cannabis

Synthetic cannabinoids are a group of compounds that bind to both the cannabidiol-1 and cannabadiol-2 receptors, but are not structurally the same as THC, nor extracted from cannabis plants. There are vast numbers of synthetic cannabinoids, and as such it can be difficult to quantify potency and efficacy between products. There is no ‘THC conversion’ in the same fashion as morphine conversion for opioids. Nonetheless they mostly have a higher affinity for cannabinoid receptors than THC, leading to intense cravings when abruptly stopped. More recognised products include Kronic, K2 and Spice. They are difficult to detect via drug testing. Synthetic cannabinoids may also activate receptors outside the endocannabinoid system, and therefore have a variety of sequelae for the user.

Outside of the typical features of cannabis withdrawal, patients withdrawing from synthetic cannabinoids may experience palpitations, dyspnoea and chest pain. They may have tachycardia and hypertension. Seizures have been reported, though only in cases with polysubstance withdrawal. Features may come on quickly following cessation of use, even within an hour, though typically they peak around day two, and last for around one week.

Symptomatic management of potential withdrawal symptoms is recommended, as previously described.

### 8.8.4 Cannabis and mental health conditions

Mental health conditions or symptoms may emerge during withdrawal. Particular attention should be paid to patients with coexisting mental health disorders, especially schizophrenia and mood disorders. Depression, anxiety and paranoia are commonly reported by individuals with a cannabis use disorder. Features of psychosis (including thought or perceptual changes) are less common. Cannabis use may be associated with poor medication or psychiatric treatment adherence, which can further impair outcomes.

Management of cannabis withdrawal in patients with severe mental health comorbidity requires close monitoring, a safe environment (inpatient or residential care may be required), and appropriate use of medications.

Brief courses of benzodiazepines can assist with anxiety and sleep problems. Antipsychotic medications (e.g. olanzapine) may be of benefit for those with psychotic symptoms or severe agitation not responding to benzodiazepines. Where possible, symptomatic withdrawal medications should be discontinued prior to discharge to better assess the patient's condition. Assessment after withdrawal may permit the accurate diagnosis and appropriate treatment of concomitant psychiatric disorders.

# Psychostimulants

09

## 9.1 Chapter summary

- Withdrawal is only a part of the treatment journey. Post-withdrawal treatment planning should begin at the commencement of a supported withdrawal episode.
- Psychostimulants are a group of drugs that affect the central nervous system and include methamphetamine, cocaine and methylenedioxymethamphetamine (MDMA, ecstasy).
- Withdrawal symptoms emerge among some, but not all people, who use methamphetamine chronically. Symptom severity is related to quantity, frequency and duration of use, along with other substance use and coexisting conditions.
- Withdrawal typically commences 1-3 days after last methamphetamine use. Features include low mood, fatigue, cravings, agitation, disturbed sleep and poor concentration. Disturbance of thought (e.g. paranoia, delusions) and perception (e.g. misperceptions, auditory hallucinations) may persist into the withdrawal period. Withdrawal largely resolves within the first week of abstinence, however mood disturbance, disturbed sleep and craving in particular can persist for weeks to months.
- Withdrawal signs and symptoms can fluctuate over time and may require reassessment.
- Withdrawal assessment should include formal mental state examination to detect psychosis and mood disorders, as well as assessment of coexisting conditions associated with chronic methamphetamine use such as cardiovascular, cerebrovascular and dental disease, sexually transmitted infections, cognitive impairment, malnutrition and movement disorders.
- Withdrawal from psychostimulant drugs is not usually medically dangerous. Treatment consists largely of psychosocial interventions and supportive care. A supported withdrawal program is part of an ongoing treatment plan; alone it does not change clinical outcomes. The usual objectives in treating stimulant withdrawal are to cease a period or pattern of compulsive use, identify and manage complications and comorbid conditions, and link with ongoing treatment and relapse prevention.
- The role of medication in managing psychostimulant withdrawal is unclear. Short term benzodiazepines and atypical antipsychotics have been used to treat symptoms of withdrawal or complications of chronic stimulant use, such as agitation and psychosis.
- Effective linking to post-withdrawal services is required to manage the protracted nature of the extinction phase of psychostimulant withdrawal and to promote comprehensive biopsychosocial treatment of methamphetamine use disorder.

## 9.2 Use and effects of psychostimulants

### 9.2.1 What are psychostimulants?

Psychostimulants are a group of drugs including methamphetamine, cocaine, methylenedioxymethamphetamine (MDMA, ecstasy), novel synthetic stimulants and pharmaceutical stimulants. **Methamphetamine** is a potent derivative of amphetamine. It typically comes in three forms, crystal methamphetamine (commonly referred to as 'ice'), 'speed' and 'base'. 'Crystal meth' or 'ice' is the most potent form of methamphetamine. It has the appearance of crystalline powder or crystals and is white or translucent. It is the highest purity form of methamphetamine and is usually smoked or injected. 'Speed' is a powdered or pill form and the least potent form of illicit methamphetamines. It is usually injected, snorted or swallowed. 'Base' is an oily, waxy, sticky form of methamphetamine with the appearance of a moist paste or damp powder.

**Cocaine** is a white powder and it usually snorted, injected or swallowed. It is from the coca plant and is a naturally occurring local anaesthetic. Crack cocaine, a solid form that is heated then smoked, has been rarely reported in Australia.

**MDMA** is usually in tablet, capsule, powder or crystal forms. Tablets and capsules may contain varying amounts of MDMA and may be mixed with other drugs including methamphetamine. Products sold as ecstasy and MDMA sometimes contain no MDMA.

**Novel synthetic stimulants** include synthetic cathinones, sometimes known as 'bath salts'. These substances (e.g. mephedrone, methcathinone etc) are designed to be chemically similar to cathinone occurring naturally in the khat plant, but with increased potency and often additional psychotropic effects.

A number of pharmaceutical stimulants are available for the treatment of various conditions. These include the prescription medications methylphenidate (tradename Ritalin®), dexamphetamine, lisdexamfetamine (Vyvanse®), phentermine (Duramine®) and the over-the-counter medication pseudoephedrine (Sudafed®). Pharmaceutical stimulants may also be used non-medically or illicitly. Other stimulants can be found in commonly available beverages including caffeine and guarana.

### 9.2.2 Prevalence and patterns of use

In Australia psychostimulants are the most commonly used illicit drugs after cannabis. People who use methamphetamine are 2-3 times more likely to use more than once a week, compared to people who use cocaine and MDMA. Cocaine and MDMA are used by more people than methamphetamine, but they use it less frequently.

Australasia has the highest rate of methamphetamine dependence worldwide. Psychostimulant drugs are commonly used in combination with other drugs such as alcohol, tobacco, benzodiazepines, opioids, gamma hydroxybutyrate (GHB) and its precursors, and ketamine. There is limited data available regarding synthetic stimulants, however prevalence of use remains low in NSW.

Most people who use methamphetamine do so less than once a month. A binge-crash pattern is typical of someone with severe disorder/dependence (with around three days' use a week), increasing to daily or near-daily use in some people.

A number of Australian sub-populations have higher rates of stimulant use than the general population. Homosexual and bisexual people report rates of methamphetamine and MDMA use almost six times greater, and cocaine use almost four times greater, than heterosexual people. Rates of methamphetamine use are approximately two times greater in Aboriginal and Torres Strait Islander people.

### 9.2.3 Pharmacology

Following consumption, psychostimulants affect the central and peripheral nervous systems, and cause an efflux of neurotransmitters (dopamine, serotonin and noradrenaline) in the brain. The differing subjective effects of these substances can be in part explained by the different neurotransmitter affinities, i.e. MDMA more strongly affects serotonergic systems whereas methamphetamine predominantly influences dopaminergic and noradrenergic systems. Methamphetamine however also inhibits monoamine reuptake and may inhibit monoamine oxidase, so extending duration of action of monoamines.

Abrupt cessation of a psychostimulant can cause neurotransmitter depletion due to the impairment of dopamine and serotonin transporters as a result of chronic stimulant use. This can lead to protracted withdrawal symptoms and structural changes in the brain. Damage to these systems is associated with slow reaction times, cognitive impairment, increased impulsivity and impaired judgement; however, structural changes are not permanent and improve over time.

### 9.2.4 Effects of psychostimulants

In general, stimulants increase alertness, energy, focus, concentration and attention, as well as a sense of wellbeing. Physiological dependence, negative features of withdrawal, and craving are thought to contribute to repeated methamphetamine self-administration. Cocaine is short acting and effects can start to wear off after an hour. MDMA effects last around six hours if ingested orally (shorter if snorted). Methamphetamine effects last up to 12 hours or longer.

Table 9.1 summarises the acute effects of psychostimulants. All effects are substance, dose and route of administration dependent. Information about managing psychostimulant intoxication can be found **here**.

### 9.2.5 Harms associated with psychostimulant use

Harms associated with psychostimulant use can be categorised as acute or chronic. It is important to note that many complications present in the acute setting, as well as following chronic use, and include dependence and withdrawal as well as cardiovascular, neurological, psychiatric, respiratory and social complications (Table 9.2). Importantly there is significant crossover with acute and chronic complications.

## Table 9.1 Acute effects of psychostimulants

| Stimulant | Subjective effects | Physical effects | Time to peak effect | Plasma half-life |
|---|---|---|---|---|
| **Methamphetamine** | Arousal | Increased: heart rate, blood pressure<br>Elevated body temperature<br>Pupil dilation<br>Blurred vision<br>Dry mouth<br>Reduced: appetite, somnolence<br>Muscle tension (characteristically clenched /grinding jaw, restless legs) | Highly dependent on mode of administration. <15 minutes (intravenous) – 180 minutes (oral) | 9-12 hours |
| **Cocaine** | Arousal<br>Euphoria<br>Increased alertness, focus, attention<br>Increased libido<br>Increased alertness<br>Talkativeness<br>Hyperactivity<br>Restlessness<br>Anxiety<br>Insomnia | Increased: heart rate, blood pressure<br>Elevated body temperature<br>Pupil dilation<br>Blurred vision<br>Dry mouth<br>Reduced: appetite, somnolence<br>Local anaesthetic | Approximately 10 minutes (intranasal)<br>30 seconds (intrave-nous) | 1.5-4 hours (intranasal)<br>20-60 minutes (intravenous) |
| **MDMA** | Arousal<br>Euphoria<br>Increased libido<br>Increased alert-ness<br>Closeness to oth-ers<br>Enhanced sensory perception<br>Talkativeness<br>Extroversion<br>Hyperactivity<br>Anxiety<br>Insomnia | Increased: heart rate, blood pressure<br>Elevated body temperature<br>Pupil dilation<br>Dry mouth<br>Blurred vision<br>Reduced: appetite, somnolence<br>Decreased urine production<br>Muscle tension (characteristically clenched /grinding jaw, restless legs) | 1-1.5 hours (oral) | 8-9 hours |

## Table 9.2 Medical and psychiatric complications of psychostimulant use

| System | Acute Complication | Chronic Complication |
|---|---|---|
| Cardiovascular | **Arrhythmias:** tachycardia, bradycardia, ventricular tachycardia.<br>**Hypertension:** may lead to cerebrovascular accidents.<br>**Spasm of arteries:** leading to myocardial infarcts or cerebrovascular accidents | Cardiomyopathy and congestive heart failure<br>Hypertension: may lead to cerebrovascular accidents |
| Neurological | **Seizures**<br>**Cerebrovascular accident:** including brain haemorrhages, infarcts and ischaemic episodes.<br>**Neuropsychological changes:** deficits in attention, concentration, memory and learning new skills, confusion and dizziness<br>**Movement disorders:** e.g. tics, disturbed gait, stereotyped repetitive movements, choreoform movements | **Cerebrovascular accident:** including brain haemorrhages, infarcts and ischaemic episodes<br>**Neuropsychological changes:** deficits in attention, concentration, memory and learning new skills. Decrease with abstinence<br>**Movement disorders:** e.g. tics, disturbed gait, stereotyped repetitive movements, choreoform movements, Parkinsonism (bradykinesia, tremor, rigidity). |
| Psychiatric | **Paranoia**, ranging from hypervigilance to paranoid psychosis<br>**Anxiety and aggression**, ranging from irritability and agitation to panic attacks<br>**Delirium**, with clouding of consciousness, disorientation, confusion<br>**Psychosis**, characterised by paranoia and anxiety, impaired reality testing with loss of insight and delusions (e.g. ideas of reference, persecutory delusions) and perceptual disturbances (including misperceptions and visual, auditory or tactile (formication) hallucinations)<br>Following periods of use, depressed mood characterised by anhedonia and lethargy, and/or suicidal ideation | **Depressed mood** characterised by anhedonia and lethargy<br>**Paranoia**, ranging from hypervigilance to paranoid psychosis<br>**Anxiety and aggression**, ranging from irritability and agitation to panic attacks<br>**Psychosis**, characterised by paranoia and anxiety, impaired reality testing with loss of insight and delusions (e.g. ideas of reference, persecutory delusions) and perceptual disturbances (including misperceptions and visual, auditory or tactile (formication) hallucinations) |

## Table 9.2 Medical and psychiatric complications of psychostimulant use (cont.)

| System | Acute Complication | Chronic Complication |
|---|---|---|
| Respiratory | | Smoking of cocaine and methamphetamine can result in chronic lung damage (including pulmonary fibrosis, pneumonia, pulmonary oedema, bronchitis) |
| Sexual health | Sexually transmitted infection associated with unsafe sex | Difficulties achieving orgasm, reduced libido and erectile dysfunction |
| Reproductive health | Stimulant use during pregnancy is asso-ciated with higher rates of obstetric com-plications (spontaneous abortion, miscar-riage and placental abruption), and harm to the foetus | Altered menstruation (oligomenorrhea, amenorrhea)<br>Lower birth weight babies<br>Expression in breast milk |
| Other | Hyperpyrexia (elevated body temperature), which can contribute to seizures, cardiac arrhythmias and death. Rhabdomyolysis can also occur, resulting in acute renal and hepatic failure, disseminated intravascular coagulation and death<br>Serotonin syndrome (hyperthermia, hypertension, tachycardia, sweating, dilated pupil, agitation, overactive reflexes) (especially MDMA and methamphetamine)<br>Sleep disturbances, insomnia<br>Loss of appetite<br>Bacterial and viral (eg hepatitis C or HIV) infection associated with unsafe injecting by people who inject drugs<br>Low sodium/decreased urine production (especially MDMA) | Weight loss (chronic loss of appetite and increased metabolism)<br>Sleep disturbances |

## 9.3 Psychostimulant withdrawal syndrome

Withdrawal symptoms emerge among some, but not all, people who cease or reduce chronic psychostimulant use. Methamphetamine and cocaine withdrawal are clinically similar except cocaine withdrawal has a shorter duration.

The ICD-11 describes stimulant withdrawal as:

> Stimulant withdrawal is a clinically significant cluster of symptoms, behaviours and/or physiological features, varying in degree of severity and duration, that occurs upon cessation or reduction of use of stimulants in individuals who have developed stimulant dependence or have used stimulants for a prolonged period or in large amounts. Stimulant withdrawal can also occur when prescribed stimulants have been used in standard therapeutic doses.
>
> Presenting features of stimulant withdrawal may include dysphoric mood, irritability, fatigue, insomnia or (more commonly) hypersomnia, vivid and unpleasant dreams, increased appetite, psychomotor agitation or retardation, and craving for amphetamine or related stimulants.

### 9.3.1 Onset and duration

Withdrawal has been typically characterised as occurring in three phases: crash, withdrawal and extinction. However, not all three may present in people with differing patterns of use. While not all people experience a 'crash' phase, it is more likely in people who 'binge' on high doses of stimulants over short periods or use high doses in a more protracted, daily pattern. The natural history of psychostimulant withdrawal is yet to be reliably categorised in the literature.

- Table 9.3 describes potential symptoms and time course for withdrawal from psychostimulants. Methamphetamine is the most common psychostimulant drug for which people seek withdrawal support in Australia.

### 9.3.2 Factors affecting severity of withdrawal

There is considerable variation in the severity of withdrawal upon ceasing regular and heavy psychostimulant use. The severity of withdrawal appears to be affected by the intensity of psychostimulant use (the dose, frequency and duration of use) as well as the type of psychostimulant. Less potent psychostimulants, e.g. ephedrine and phentermine are likely to produce less severe withdrawal. The mode of administration also affects withdrawal, with injecting often associated with greater amounts of psychostimulant use, higher incidence of psychopathology, higher severity of dependence, and perhaps more severe withdrawal.

Patients who have had previous severe withdrawal episode(s), who use multiple substances or who have mental health and other coexisting health conditions are also at increased risk of severe withdrawal symptoms. Individual expectations, environment and the presence or absence of psychosocial supports also play a role.

## 9.4 Assessment

The purpose of assessment is to determine the risk of withdrawal syndrome occurring, the potential severity of withdrawal, any coexisting medical, psychiatric and social issues and to exclude other conditions that can present as a withdrawal state. It is also an opportunity to clarify the patient's treatment goals.

The patient may be intoxicated on presentation. This may affect their ability to provide and receive information and hence may not be able to provide informed consent. Assessment of intoxicated individuals is difficult but should be pursued as far as is possible. Assessment findings may be reviewed after signs of intoxication have abated.

Undertake the usual assessment for withdrawal as summarised in section 4.3. Ensure that it includes a substance use history and a withdrawal history covering the particular psychostimulants being used, as well as all other classes of substances. Perform a mental state examination and assessment for psychiatric illness. The most common co-occurring

### Table 9.3 Symptoms and time course of psychostimulant withdrawal

| Phase | Time since last use | Common signs and symptoms |
|---|---|---|
| 'Crash'<br>(as psychostimulant effects wear off) | Methamphetamines: typically commences 12-24 hours after last use, and subsides by days 2-3<br>Cocaine: occurs within hours of last use, with short duration (up to 48 hours) | Exhaustion, fatigue, typically increased sleep, low mood or dysphoria; may be associated with anxiety or agitation |
| Withdrawal | Methamphetamines: typically commences 1-3 days after last use, peaks around day 3-5, and most symptoms except for cravings subside by the end of the first week<br>Cocaine: typically shorter onset and duration | Strong cravings which persist for several weeks<br>Fluctuating mood and energy levels, alternating between: irritability, restlessness, anxiety, and agitation<br>Fatigue, lacking energy, anhedonia<br>Disturbed sleep, including vivid dreams, insomnia<br>General aches and pains, headaches<br>Increased appetite<br>Poor concentration and attention<br>Disturbances of thought (eg paranoid ideation, strange beliefs) and perception (misperceptions, hallucinations) can re-emerge during withdrawal phase after having been masked during the crash phase. |
| Extinction | Weeks to months | Lacking energy, anhedonia, irritability, restlessness, anxiety, agitation, fatigue<br>Episodic cravings, disturbed sleep. |

conditions are anxiety and depression, while psychosis can be a persisting effect from intoxication.

Assess coexisting physical health conditions with risks increased by methamphetamine use such as:

- Neurological: seizures, cerebrovascular complications/stroke.
- Cardiovascular: hypertension, cardiomyopathy myocardial infarct, arrhythmias.
- Renal impairment - consider creatinine kinase to screen for rhabdomyolysis.
- Hyperpyrexia.
- If injecting, consider complications of injecting drug use such as blood borne virus transmission, infective endocarditis, abscesses.
- Dehydration.
- Poor nutrition, weight loss and anorexia.
- Skin integrity.
- Poor dental health.

Assess any associated psychosocial issues, such as homelessness, domestic violence, child safety, driving implications, risky sexual behaviours and use of contraception. Consider the patient's home environment and access to support for withdrawal and post-withdrawal planning.

Other baseline investigations to be completed are: screening for blood borne viruses, sexually transmitted infections, pregnancy and cardiac disease (ECG +/- further investigations as indicated).

### 9.4.1 Assessment of potential complications of chronic psychostimulant use

Psychiatric and medical complications of chronic psychostimulant use are to be assessed (see above, section 9.2.5). Psychosocial distress, anxiety and depression are common among people who use methamphetamine regularly. Cognitive impairment and methamphetamine-associated psychosis are important complications of methamphetamine use disorders, particularly among those with frequent high dose use and severe dependence. Features such as paranoia, delusions or perceptual disturbances occur commonly. If signs and symptoms of mental illness are severe or persist for several weeks, specialist psychiatric assessment and treatment may be useful.

Cardiovascular complications (including hypertension, cardiomyopathy) of high dose regular methamphetamine use can be medically serious and should be assessed. Acute cardiovascular events (including acute myocardial infarct) and cerebrovascular accidents (stroke, particularly haemorrhagic) are known complications of use, and risk increases with dose and duration of use. Sexually transmitted and blood borne virus infections should be addressed. Clients may present severely underweight following long-term chronic stimulant use and should be assessed. If the above are apparent during withdrawal, they should be investigated and either treated or referred for treatment and monitoring.

## 9.5 Withdrawal management

The purpose of withdrawal care is to provide appropriate support for withdrawal to be completed safely. Withdrawal from psychostimulant drugs is not medically dangerous, and no specific treatment has been shown to be more effective than others in reducing withdrawal symptoms.

The primary aims of withdrawal from substances are to:

1. Cease substance use, whether permanently or temporarily.
2. Treat symptoms, coexisting conditions and complications of chronic use.
3. Engage in ongoing treatment and care.

Health care practitioners who would like to access specialist advice on assessing and managing psychostimulant withdrawal can contact the Drug and Alcohol Specialist Advisory Service (DASAS) on 1800 023 687 (or (02) 8382-1006 if within Sydney metropolitan area). This is a free call* and is available 24 hours a day, 7 days a week (*may not be free from mobile phones).

**Table 9.4 Complications of chronic use of psychostimulants**

| Neurological | Cardiovascular | Other |
|---|---|---|
| Seizures | Hypertension | Hyperpyrexia |
| Cerebrovascular complications | Cardiomyopathy | Rhabdomyolysis |
| Stroke | Myocardial infarct | Cognitive impairment |
| | Arrhythmias | Psychosis |

### 9.5.1 Treatment planning

Summarise the patient assessment to inform the treatment plan, ensuring that it includes post-withdrawal treatment. Withdrawal is only a part of the treatment journey. Attempts at reducing or ceasing methamphetamine use are marked by profound cravings and high rates of lapse and relapse. Post-withdrawal treatment planning should begin at commencement of a supported withdrawal episode.

Treatment planning needs to consider the specific characteristics of psychostimulant withdrawal. The onset of withdrawal discomfort may be delayed for several days after stopping psychostimulant use, and subacute symptoms may persist for many weeks to months. A stepped care approach to treatment of psychostimulant use disorders is recommended. This involves an incremental approach to care, comprising a hierarchy of interventions to match a person's needs. People may enter care at whatever level is indicated and be escalated or deescalated as their needs develop. Management of complications for people withdrawing from psychostimulants requires adequate resources (e.g. staffing) and coordinating with medical, psychiatric and social services (e.g. housing).

### 9.5.2 Treatment settings

Most individuals can undertake withdrawal from psychostimulants in a community, ambulatory or outpatient setting. Inpatient (hospital) withdrawal from psychostimulants may be indicated if the patient has significant mental or physical health problems (e.g. psychosis, cardiac problems, dehydration) and/or significant other substance use with likely withdrawal from multiple substances.

Some individuals will not require admission to hospital but would benefit from psychosocial and residential support during psychostimulant withdrawal, such as in residential rehabilitation programs with the capacity for withdrawal management. This includes patients with an unsuitable home environment in which to undertake withdrawal (e.g. homeless, violence in the home, other substance users), or people who have had repeated unsuccessful attempts at ambulatory withdrawal.

### 9.5.3 Supportive care

Patients will require supportive care, which involves:

- Psychoeducation and coping with withdrawal symptoms. Clients should be educated regarding common withdrawal symptoms, their likely onset and duration, and coping strategies (e.g. relaxation techniques, sleep hygiene, advice regarding diet).
- Specific strategies for addressing agitation, anger and sleep disturbances.
- Frequent orientation, reassurance and explanation of procedures to clients with thought or perceptual disturbances.
- Crisis intervention, addressing accommodation, personal safety or other urgent welfare issues.
- Coping with cravings. Cravings are a normal part of all withdrawal syndromes, and all clients should be educated regarding the nature of cravings and strategies for coping with them during withdrawal.

Section 5.7 contains more details on supportive care.

### 9.5.4 Medication

Short term medications can be used to treat symptoms of withdrawal and persisting symptoms associated with stimulant use. Medications used to treat symptoms of withdrawal are based on clinical experience rather than evidence from research on effectiveness. Use these medications in conjunction with supportive care strategies to manage withdrawal features.

Benzodiazepines may be considered for the management of withdrawal-related agitation, such as diazepam 5-10 mg orally as required six-hourly to maximum 40 mg a day over three days. As benzodiazepine dependence may coexist with methamphetamine dependence, all clients should be assessed for coexisting benzodiazepine dependence and withdrawal risk.

Atypical antipsychotics can also be considered for the treatment of withdrawal symptoms, including agitation, and low-level psychotic symptoms such as delusions and paranoia. Consider olanzapine 2.5 - 5 mg orally as required 6 - 8 hourly, to a maximum of 20 mg in 24 hours; alternatively, quetiapine immediate release 25-50 mg orally as required eight-hourly to a maximum of 150 mg in 24 hours.

### 9.5.5 Managing coexisting conditions

Psychostimulant withdrawal in itself does not cause serious medical conditions. However, patients who are withdrawing may have serious medical illnesses caused by psychostimulant use or simply coexisting. Withdrawal often presents an opportunity to investigate and treat conditions and/or link the client to appropriate care. For example, in the case of a complication thought to have been associated with psychostimulant use and to have resolved (e.g. seizure), specialist referral and investigation for underlying predisposing conditions or alternative diagnoses (e.g. epilepsy) should be undertaken for clients who have not previously been investigated.

Mental health conditions can persist into withdrawal or emerge during withdrawal. Mood and energy levels may fluctuate during withdrawal — a client may present with low mood, flat affect and psychomotor retardation at one time, yet be quite restless and agitated later in the same day. An underlying mental health disorder may be difficult to detect during the initial assessment or crash phase and may emerge later in the withdrawal period. Care should be taken in making mental health diagnoses during the withdrawal period. If any mental health treatment is commenced in withdrawal, the client should be linked to ongoing post-withdrawal mental health monitoring and care.

### 9.5.6 Monitoring and review

Withdrawal scales for psychostimulant withdrawal can be helpful for staff in understanding the withdrawal syndrome. However, they are not validated for linking medication or treatment provision to the scores.

## 9.6 Continuing care

Integration of withdrawal services with post-withdrawal services is required to manage the protracted nature of the extinction phase of psychostimulant withdrawal. Post-withdrawal care may include relapse prevention counselling, other counselling, self-help groups, and residential rehabilitation. Consider specialist assessment for people with medical or mental health complications of psychostimulant use (e.g. persistent or severe features of psychosis or depression). Harm reduction interventions are to be provided to people who plan to, or may, resume psychostimulant use.

For more information on continuing care post-withdrawal, see section 5.11 and Appendix 3.

### 9.6.1 Reducing harms

Both inpatient and outpatient withdrawal provide opportunities for interventions that aim to reduce harms associated with psychostimulant use. Advise all patients about the reduction of tolerance following withdrawal and abstinence from a substance and if resuming use, that they need to use lower doses than previously to reduce overdose or toxicity risk.

Provide information about safer injecting practices including use of sterile injecting equipment to reduce risk of blood borne transmission, information regarding needle and syringe programs, and where possible, provision of sterile injecting kits to take home. Discussion of non-injecting routes of administration such as oral or rectal (shafting /shelving) to reduce injecting and smoking related harms is also recommended.

Advise patients that sharing pipes and intranasal (“snorting”) equipment is a risk for infectious disease transmission (e.g. Hepatitis B, Herpes Simplex Virus, respiratory infections, COVID-19, TB etc). Also advise that use of heat-resistant (e.g. Pyrex®) pipes is less risky than glass and recommend avoidance of use of broken or cracked pipes to reduce chance of shatter. Provide information on regularly cleaning inside pipes to reduce inhaling burnt residue and warn about burns from handling hot pipes immediately after use.

Provide counselling regarding safer sex, access to condoms/dental dams, pre- and post-exposure prophylaxis for gay and bisexual men who are HIV negative and other people at risk of HIV infection, and adherence to antiretroviral medications for people who are living with HIV.

Other harm reduction advice includes not operating any vehicle after using stimulants as well as general health advice re exercise, sleep, nutrition to reduce impacts of long-term stimulant use. Counsel regarding dental hygiene, including regular tooth brushing and flossing to avoid dental disease, and sugar free chewing gum to avoid dry mouth.

## 9.7 Substance-specific practice points

### 9.7.1 Pregnancy and early post-natal period:

Psychostimulants can cross the placenta and be present in breast milk and clinicians are to advise mothers not to breastfeed if they may resume using these substances. Infants exposed to methamphetamines prior to birth may be of low birth weight and can have difficulties feeding and sleeping which may resolve spontaneously. Cessation of methamphetamine use during pregnancy can result in fatigue, anxiety, agitation and depression.

As a general principle, discontinuation and abstinence is recommended during pregnancy. There are no specific evidence-based recommendations for supporting methamphetamine withdrawal during pregnancy. Comprehensive, individualised treatment and care programs are required that link with a range of services including antenatal and obstetric services.

The **NSW Clinical Guidelines for the Management of Substance Use During Pregnancy, Birth and the Postnatal Period** are available on the NSW Health website and are a useful resource.

People who hold commercial driver's licences and drive for long periods of time may be at increased risk of psychostimulant use, due to the ability of psychostimulants to reduce drowsiness.

Austroads considers a person unfit to hold an unconditional licence if they have a substance use disorder or frequent substance use that is likely to impair safe driving. A person holding a commercial licence will have to be in treatment and not using substances for at least three months before a conditional licence may be issued (one month for a private driver's licence).

People who use psychostimulants are also at higher risk of traffic accidents. This should be discussed with patients and the advice provided documented in the patient's medical record. People diagnosed with a substance use disorder are legally obligated to disclose this to their licencing authority. Clinicians should communicate these risks to all patients. Clinicians are referred to the Austroads standards: **Assessing Fitness to Drive for commercial and private vehicle drivers**.

# Opioids

10

## 10.1 Chapter summary

- Withdrawal is only a part of the treatment journey. Post-withdrawal treatment planning should begin at commencement of a supported withdrawal episode.
- Long term opioid agonist treatment has a robust evidence base and is the preferred treatment for opioid dependence.
- The onset and duration of withdrawal from opioids depends on the half-life of the drug being taken. For heroin, the onset of subjective symptoms of withdrawal is usually 6-24 hours after the last dose, reaches a peak at 24-48 hours and resolves after 5-10 days. For methadone, onset is usually 36-48 hours after the last dose. The peak severity of withdrawal from methadone tends to be considerably lower than for heroin withdrawal, however withdrawal is more prolonged, with a potentially debilitating low-grade withdrawal lasting 3-6 weeks (or longer).
- Daily review includes monitoring symptoms with the use of a withdrawal scale such as the Clinical Opioid Withdrawal Scale.
- Buprenorphine is the principal treatment option for managing opioid withdrawal. It is commenced after the onset of withdrawal symptoms.
- During the first week of treatment, post-withdrawal management options should be discussed with the patient. These include continuing with buprenorphine treatment or abstinence-focused therapies which may include counselling and residential support.
- Peer administered naloxone (take-home naloxone) should be offered to patients on completion of opioid withdrawal as the reversal of tolerance increases the risk of overdose.
- When opioid use is complicated by comorbid chronic pain, consider referral to chronic pain services.

## 10.2 Use and effects of opioid drugs

### 10.2.1 Pharmacology

Opioids can be natural drugs derived from the opium poppy or synthetic drugs. They have a depressant or sedating effect, causing the brain and central nervous system to slow down. Opioids act at a range of receptors in the body, particularly the mu, but also the kappa, and delta receptor subtypes.

Pharmaceutical opioids include morphine, oxycodone, fentanyl, hydromorphone, methadone, buprenorphine, tapentadol, tramadol and codeine. Illicit opioids include heroin as well as diverted pharmaceuticals.

Commonly used opioid drugs may be ‘agonists’ or ‘partial agonists’. Agonist drugs bind to opioid receptors and have high levels of activity at the receptor (including heroin, oxycodone, morphine and methadone). Partial agonists bind to the same receptors, sometimes very strongly as in the case of buprenorphine, but have less of an activation effect. There are also ‘antagonist’ drugs that bind to receptors but do not activate them and block activation by an agonist. Naloxone and naltrexone are antagonists that bind to and prevent the activation of the opioid receptors.

### 10.2.2 Prevalence and patterns of use

Opioid use is common in Australia and harms from prescription opioids have increased significantly over the past 15 years. In 2016, around one in 10 (11%) of Australians aged 14 and over had ever used at least one type of opioid for illicit or non-medical purposes. Most had used pharmaceutical opioids rather than illegal opioids, with 9.7% having ever used painkillers/analgesics and pharmaceutical opioids, compared with 1.3% who had ever used heroin.

### 10.2.3 Effects of opioids

Opioid agonist drugs have a range of pharmacological actions and side effects, described in table 10.1 below.

**Table 10.1 Effects of opioids**

| Pharmacological actions | Side effects |
|---|---|
| Analgesia (particularly for relieving the affec-tive component of pain) | Nausea and vomiting |
| A sense of wellbeing (euphoria). | Constipation |
| Sedation | Increased sweating |
| CNS depression including respiratory rate, heart rate and blood pressure | Decreased sexual function (impotence) |
| Miosis (pupillary constriction) | |

### 10.2.4 Harms associated with opioid use

The economic and social cost of opioid drug use is relatively high due to:

- Loss of life through fatal overdose, with opioid-related deaths occurring at a much younger age than deaths attributed to alcohol or tobacco.
- Medical and mental health consequences, including transmission of hepatitis C, hepatitis B and HIV from injecting opioids with shared equipment.
- Social consequences to individuals and their communities, including the impact upon relationships, employment, education, housing, parenting, finances and crime.
- Cost to health and social services, law enforcement and judicial systems.

Every day in Australia, nearly 150 hospitalisations and 14 emergency department (ED) presentations involve opioid harm, and three people die from drug-induced deaths involving opioid use. In 2016, opioid deaths accounted for 62 per cent of all drug-induced deaths. This rate had been increasing over a number of years.

Pharmaceutical opioids are now responsible for significantly more deaths and poisoning hospitalisations than illegal opioids (such as heroin). Opioid deaths occur in younger people, and the average loss of potential years of life from opioid deaths is double that of people who die from major psychiatric disorders or cancer.

## 10.3 Opioid withdrawal syndrome

*ICD-11 definition*

The ICD-11 describes opioid withdrawal as:

> Opioid withdrawal is a clinically significant cluster of symptoms, behaviours and/or physiological features, varying in degree of severity and duration, that occurs upon cessation or reduction of use of opioids in individuals who have developed opioid dependence or have used opioids for a prolonged period or in large amounts.
>
> Opioid withdrawal can also occur when prescribed opioids have been used in standard therapeutic doses.
>
> Presenting features of opioid withdrawal may include dysphoric mood, craving for an opioid, anxiety, nausea or vomiting, abdominal cramps, muscle aches, yawning, perspiration, hot and cold flushes, lacrimation, rhinorrhoea, hypersomnia (typically in the initial phase) or insomnia, diarrhoea, piloerection, and pupillary dilatation.

Table 10.2 Medical and psychiatric complications of opioid use

| System | Acute Complication | Chronic Complication |
|---|---|---|
| Cardiovascular | Hypotension, bradycardia | Some opioids prolong QTc |
| Gastroenterological | Constipation | Constipation |
| Dental/oral | Dry mouth | Dental caries |
| Respiratory | Respiratory depression | |
| Sexual health | Sexual dysfunction | Reduced libido, sexual dysfunc-tion |
| Reproductive health | | Amenorrhoea/oligomenorrhoea, infertility, higher rates of preg-nancy complications, neonatal abstinence syndromes |
| Other | | Osteoporosis (association) |

### 10.3.1 Signs and symptoms of withdrawal

Table 10.3 Signs and symptoms of opioid withdrawal

| Common signs of opioid withdrawal | Common symptoms of opioid withdrawal |
|---|---|
| Perspiration | Restlessness |
| Vomiting | Agitation |
| Diarrhoea | Anorexia and nausea |
| Dilated pupils | Abdominal cramps or pain |
| Yawning | Hot and cold flushes |
| Rhinorrhoea | Bone, joint and muscle pain |
| Lacrimation | Insomnia and disturbed sleep |
| Piloerection | Intense craving for opioids |

### 10.3.2 Onset and duration of withdrawal

*Short-acting opioids*

Heroin is a relatively short-acting drug. Symptoms of withdrawal usually commence 6-24 hours after the last dose, reach a peak at 24-48 hours and resolve after 5-10 days. Other short acting opioids with a similar withdrawal profile include morphine, oxycodone, hydromorphone, codeine and fentanyl.

Slow release short-acting opioids may have a delayed onset of withdrawal but otherwise the withdrawal syndrome is similar. Transdermal fentanyl will transfer from skin reservoirs to the systemic circulation over an unpredictable but potentially prolonged time. Therefore, withdrawal may take a number of days to develop after removal of a patch.

*Long-acting opioids*

Withdrawal from a long half-life opioid such as methadone usually commences 36-48 hours after the last dose. The peak severity of withdrawal tends to be lower than for heroin withdrawal, however withdrawal may be more prolonged, lasting 3-6 weeks.

The symptoms and signs of withdrawal from buprenorphine are similar to those found in withdrawal from other opioids. However, withdrawal from buprenorphine is generally milder than withdrawal from methadone or heroin. Symptoms commence generally within 3-5 days of the last dose and can last for several weeks.

Following acute withdrawal, protracted, low-grade symptoms of discomfort (psychological and physical) may last many months.

### 10.3.3 Factors affecting severity of withdrawal

The presence of opioid dependence (as defined by ICD 11) indicates the likelihood of opioid withdrawal developing. However, some opioid dependent patients may not develop opioid withdrawal. The patient's prior experience of withdrawal may indicate the severity of withdrawal expected. Withdrawal severity can be impacted by purity, dose and duration of use.

## 10.4 Assessment

The usual assessment for withdrawal should be undertaken as set out in section 4.3, including:

- Substance use history and withdrawal history covering all substances used.
- Medical and mental health history.
- Risk of harm to self and others.
- Physical examination.
- Mental state examination and cognitive assessment.

Document information on the patient's previous experiences in stopping opioids and periods of prolonged abstinence (duration, how achieved, relapse triggers) as well as past overdoses involving opioids. Note whether the person has received, and been educated on using, take home naloxone. Assess and document risk of blood borne viruses (including HCV, HBV, and HIV) – see section 4.3.6 for more detail.

Also note current or prior treatment with methadone or buprenorphine in an opioid treatment program, the outcomes achieved and reasons for ceasing. If the patient advises they are on opioid agonist treatment, confirm this through the Ministry of Health (Ph: (02) 9424 5921 or 9391 9944; **www.health.nsw.gov.au/pharmaceutical/Pages/contacts.aspx**), and contact the dosing point to obtain the patient's dosing history.

The patient may be intoxicated on presentation, and this may affect their ability to provide and receive information and provide informed consent. Assessment of intoxicated individuals may be difficult, and assessment findings should be reviewed after signs of intoxication have abated.

### 10.4.1 Consumption history

Assessment is to include type of opioid/s, route of consumption, quantity and frequency of use, and pattern of use over time.

*Illicit opioids*

Illicit opioids can include heroin, fentanyl analogues and diverted prescription opioids. Dosage estimates are difficult because of wide variations in the concentration and purity of illicit preparations. Consumption may be recorded as number of injections per day, number of

grams ingested or dollars spent. Table 10.4 provides guidance on estimating levels of use. Note that 'street' usage patterns alter frequently. Given the variable strength of illicit opioids, frequency of use can be a better indicator of severity of dependence than grams used.

**Table 10.4 Approximate guide to a patient's level of heroin use**

| Low end | High end |
|---|---|
| One to two injections per day, or | Four or more injections per day, or |
| 0.5 g ('five points') or less per day | 1-2 g or more per day. |

*Prescription opioids*

Increasingly, patients are presenting with opioid use disorder solely from prescribed opioids. It may be difficult to estimate amounts used and corroborative information sources include accessing Real Time Prescription Monitoring systems (eg SafeScript NSW) where available, contacting GP/prescribers and My Health Record.

For clinicians interested in the relative potencies of prescribed opioid analgesics, the Faculty of Pain Medicine's website includes an Opioid Dose equivalence Calculation table for this purpose (**link**).

### 10.4.2 Assessing potential complications of chronic opioid use

Chronic use of opioids can result in endocrinological changes including reduced testosterone levels, increased prolactin and reduced FSH and LH. Oligomenorrhea or amenorrhea can be caused by long term use of opioids, as can infertility.

Dental problems can occur in chronic opioid use as a result of reduced salivary flow added to poor dental hygiene. In addition, chronic constipation is commonly seen which can cause anorexia, abdominal discomfort, and abdominal cramps.

Injecting drug use is a risk for bacterial infections that can cause infective endocarditis, cellulitis, epidural abscesses or septicaemia. It is also associated with contracting infections including blood borne viruses e.g. hepatitis C, hepatitis B, and much less commonly, HIV. Test for blood borne viruses and ensure all results are followed up. Appendix 9 contains the recommended protocol for BBV follow up.

When opioid use is complicated by coexisting chronic pain, seek the assistance of pain services.

## 10.5 Withdrawal management

The purpose of withdrawal care is to provide appropriate support for withdrawal to be completed safely. The primary aims of withdrawal are to:

1. Cease substance use, whether permanently or temporarily.
2. Treat symptoms, coexisting conditions and complications of chronic use.
3. Engage in ongoing treatment and care.

Health care practitioners who would like to access specialist advice on assessing and managing opioid withdrawal can contact the Drug and Alcohol Specialist Advisory Service (DASAS) on 1800 023 687 (or (02) 8382-1006 if within Sydney metropolitan area). This is a free call* and is available 24 hours a day, 7 days a week (*may not be free from mobile phones).

### 10.5.1 Treatment planning

Summarise the patient assessment to inform the treatment plan, ensuring that it includes post-withdrawal treatment and addresses risk of overdose post-withdrawal. Provide assistance in accessing take home naloxone and training in its use.

Address the patient's reasons for seeking treatment, social circumstances, and expectations about withdrawal and identify short- and long-term goals of treatment. Agree on the setting for withdrawal and establish a pattern of monitoring and review

of progress. Include regular review of the patient's objectives, which may change during the course of withdrawal. Patients identifying abstinence as their goal can be encouraged to consider an opioid agonist treatment program.

### 10.5.2 Treatment settings

Withdrawal management can be undertaken in outpatient settings, inpatient settings or some residential rehabilitation programs. Inpatient management is to be considered for patients with significant cardiovascular disease or other co-occurring conditions where it is advisable to avoid sympathetic nervous system over-activity. Patient choice and social support network should also be considered, and where ambulatory attempts have been unsuccessful.

### 10.5.3 Unplanned withdrawal

Patients in hospital, prison or other institutional care may undergo unplanned opioid withdrawal when they lose access to opioids. Patients may not always reveal their use of opioids. Consider the possibility of opioid dependence and therefore subsequent unplanned opioid withdrawal if the patient has:

- Opioid withdrawal symptoms and signs (see table 10.3).
- Presence of injection sites.
- Difficult control of pain or high analgesic requirements.
- Patients who are opioid tolerant may require higher than usual doses of analgesic drugs to achieve reasonable levels of acute pain relief.

Methadone or buprenorphine treatment may be required for hospitalised patients to prevent withdrawal while other medical or psychiatric disorders are prioritised and managed. If so, consult a drug and alcohol specialist with experience in methadone or buprenorphine prescribing.

### 10.5.4 Psychosocial interventions

While psychosocial therapies have been associated with better outcomes in people with opioid use disorder, there is little evidence to suggest that these interventions affect outcome when provided in the withdrawal setting.

### 10.5.5 Supportive care

Supportive care interventions can enable patients to cope with withdrawal symptoms and persist with the withdrawal episode. Supportive care may involve:

- Psychoeducation and coping with withdrawal symptoms. Patients should be educated regarding common withdrawal symptoms, their likely onset and duration, and coping strategies (e.g. relaxation techniques, sleep hygiene, advice regarding diet).
- Addressing environmental stressors that can have a significant effect on the severity of withdrawal. Minimise stress by making sure that the environment is quiet, calm, safe and private.
- Crisis intervention addressing accommodation, personal safety or other urgent welfare issues.
- Coping with cravings. Cravings are a normal part of all withdrawal syndromes, and all patients should be educated regarding the nature of cravings and strategies for coping with them during withdrawal.

Section 5.7 contains more details on supportive care.

#### *Preventing dehydration*

In untreated or inadequately treated opioid withdrawal, there may be fluid loss due to sweating, vomiting and diarrhoea. In some cases, dehydration may be serious and require parenteral fluid replacement.

### 10.5.6 Medication

A tapering regimen of opioid agonist medication is the preferred treatment for opioid withdrawal[12]. Either buprenorphine or methadone can be used to assist in opioid withdrawal. No benefit of buprenorphine over methadone has been identified in duration in treatment or retention, although withdrawal intensity is less severe. Due to its pharmacological profile, including

*Source: Australian and New Zealand College of Anaesthetists, Faculty of Pain Medicine*

[11] Methadone, fentanyl lozenges and neuraxial opioids are not included in this table due to their complex and variable pharmacokinetics.

safety, buprenorphine is preferred for withdrawal from other opioids. A pragmatic approach is to use methadone for withdrawal in people already consuming methadone, and use buprenorphine for withdrawal from all other opioids as first line treatment.

Other symptomatic medication may still be required in addition to opioid agonists as set out in table 10.8 below. Caution is to be used if prescribing other sedating medications due to synergistic toxicity. Combined use of other sedative substances (e.g. benzodiazepines, alcohol and tricyclic antidepressants) with opioids may result in respiratory depression, coma and death. Give consideration to the need for more intensive monitoring in an inpatient setting if patient is at increased risk of oversedation.

### *Buprenorphine tapering regimens*

Buprenorphine treatment is commenced after the onset of withdrawal, with tapering regimens varying from three to 60 days. No optimal tapering duration has been identified. Duration may be dictated by treatment setting and patient choice, with shorter duration in inpatient settings. Sublingual buprenorphine is the formulation of buprenorphine used for opioid withdrawal treatment.

Buprenorphine **may precipitate withdrawal** in an opioid dependent person who has used short acting opioids (e.g. heroin) in the previous 12-24 hours or long acting opioids (e.g. methadone) in the previous 48 hours or longer. For this reason, if the patient does not present in overt withdrawal, give them a test dose of buprenorphine before larger doses are given. Specialist consultation is recommended if precipitated withdrawal is suspected. This is indicated by a sustained and marked increase in the severity of withdrawal symptoms commencing within one hour of the first sublingual buprenorphine dose (e.g. Clinical Opiate Withdrawal Scale (COWS) increased by >6, Subjective Opiate Withdrawal Scale (SOWS) increased by >8). Note that onset of withdrawal, or marked increases in withdrawal symptoms, more than 6 hours after buprenorphine may reflect under-dosing rather than precipitated withdrawal.

### *Test dose of buprenorphine*

Defer the first dose of buprenorphine until the patient is experiencing withdrawal (anxiety,

abdominal or joint pain, dilated pupils, sweating) as measured by an objective scale such as the COWS (see Appendix 7). When a COWS score of 8 is reached, give 2 mg of sublingual buprenorphine as a test dose then review the patient in one hour.

### *Outpatient medication regimen*

Following the 2 mg test dose, if the patient is experiencing no increase in withdrawal severity and is still reporting withdrawal, give another 6 mg of buprenorphine. A total of 8 mg-12 mg is appropriate on day 1. This regimen is illustrated in Table 10.6 below. Patients should be reviewed daily by an experienced health professional during the first few days of the withdrawal regimen. Adjust doses as necessary.

### *Inpatient medication regimen*

In an inpatient setting, higher doses can be given. Following the 2 mg test dose, if the patient is experiencing no increase in withdrawal severity and is still reporting withdrawal, give another 6 mg of buprenorphine. A total of 8-16 mg is appropriate on day 1. Reduce the buprenorphine dose by 2-4 mg daily subject to assessment of patient response. Cease buprenorphine 1-2 days prior to discharge to assess and manage any rebound withdrawal.

Fixed regimens can be negotiated for inpatient settings where staff may have limited or no experience in managing opioid withdrawal. More flexible regimens (with orders for additional doses as required) may be used where staff have suitable expertise. In both cases, multiple small doses (e.g. 0.4-2 mg) can be administered as required throughout the day.

### *Maintenance opioid agonist treatment in NSW*

If the plan is to continue buprenorphine in the post-withdrawal period (ie as opioid agonist treatment), then increase buprenorphine dose to effective range (e.g. usually 12-24 mg). See the **NSW Health Clinical Guidelines for Treatment of Opioid Dependence** for further details of regulatory requirements and recommended dosages.

[11] In NSW regulations govern approvals to prescribe buprenorphine in the community setting, see the **NSW Health OTP website** or the **NSW Clinical Guidelines for Treatment of Opioid Dependence**.

Outside hospital, methadone and buprenorphine may only be used in the treatment of opioid dependence by medical practitioners authorised to deliver this treatment. In hospital settings, doctors may use methadone or buprenorphine without authority as part of management of opioid dependent individuals hospitalised with medical problems. In NSW this is limited to 14 days by **policy directive**.

*Symptomatic treatments*

Medication of symptoms and supportive care are often sufficient in treating mild withdrawal (see table 10.8 below). Adjunctive therapies such as massage may also be helpful.

Clonidine may be prescribed for treatment of symptoms such as sweating and agitation. Before administering clonidine take baseline blood pressure and heart rate measurements before first dose. Do not use clonidine if patient is hypotensive (i.e. blood pressure is less than systolic 90mmHg or diastolic 50mmHg), heart rate is less than 50 per minute or there is clinical evidence of impaired circulation.

*Initial test dose:*

- Administer 75 microgram test dose and monitor for hypotension after half an hour. Measure the patient's blood pressure lying and standing. If hypotensive, clonidine is not recommended.
- If no hypotension occurs, and dizziness or other side effects of clonidine are not a problem, give a second 75 microgram dose and continue treatment as shown in the table of symptomatic treatments.

After prolonged, regular clonidine use, consider graduated reduction to avoid rebound hypertension.

Lofexidine is an alternative medication that offers very minor benefits for blood pressure but is not currently on the Australian Register of Therapeutic Goods and may be very expensive.

*Naltrexone*

Planned (rapid) naltrexone-assisted opioid withdrawal is associated with high rates of adverse events and cannot be recommended.

### 10.5.7 Monitoring and review

Review the patient regularly according to the patient's condition, severity of withdrawal and treatment settings. Review is to include risk assessment, assessment of withdrawal symptoms and severity, adverse events, other drug use and any patient concerns.

Monitoring should be clinically based on observations, objective signs and subjective symptoms and may include structured withdrawal scales. Withdrawal scales **do not diagnose** withdrawal, they are only a guide to the severity of an already diagnosed withdrawal syndrome. They do not replace clinical judgement.

The Clinical Opiate Withdrawal Scale (COWS - see Appendix 7) rates 11 items describing severity of symptoms from scores of 0 (not present) to >36 (severe). The COWS is considered a reliable and valid withdrawal scale. The Subjective Opiate Withdrawal Scale (SOWS - see Appendix 7) rates 16 items from 0 to 64 and is used in some clinical settings. COWS is recommended as it assesses both objective and subjective measures.

For inpatient treatment, undertake the COWS 6-hourly. Re-evaluate the patient regularly to ensure that it is opioid withdrawal and not another underlying medical condition, particularly if the patient is not responding well to treatment.

## 10.6 Continuing care

During the first week of treatment, discuss post-withdrawal management options with the patient and nominated carer or family member. These include continuing with opioid agonist treatment, or abstinence counselling and residential rehabilitation.

Long term opioid agonist treatment has a robust evidence base and is often preferred by patients. Decisions are to be made in partnership with patients and based on informed consent. Further detail is available in the **NSW Clinical Guidelines for the Treatment of Opioid Dependence**. Section 3.4.3 (Patient information and perspective) is particularly relevant.

### Table 10.6 Example outpatient buprenorphine tapering regimen example

| Day | Buprenorphine dose (sublingual, mg) |
|---|---|
| 1 | 8-12 mg (including 2 mg test dose) |
| 2-4 | Titrate dose so that patient is comfortable and not using additional opioids. Typical-ly requires doses between 8-16 mg daily |
| 5-14 | Review patient progress regularly and taper dose. Aim to reduce daily dose by 2-4 mg every 1-2 days. Aim for last 1-2 days of dosing to be on 2 mg dose. |

Source: Adapted from NSW Health Clinical Guidelines for Treatment of Opioid Dependence (2018)

### Table 10.7 Example inpatient buprenorphine tapering regimen

| Day | Buprenorphine dose (sublingual, mg) | Common range |
|---|---|---|
| 1 | 8 mg at onset of opioid withdrawal (including 2 mg test dose).<br>Additional 4 mg or 8 mg for uncomfortable withdrawal | 8-16 mg |
| 2 | Reduce Day 1 dose by 2-4 mg | 6-12 mg |
| 3 | Reduce Day 2 dose by 2-4 mg | 4-8 mg |
| 4 | 4 mg as morning dose | 2-6 mg |
| 5 | 2 mg as morning dose | 2 mg |
| 6 | Cease | 0 |

Reduced opioid tolerance post withdrawal increases the risk of overdose if the patient returns to opioid use subsequently. Peer administered take home naloxone is to be offered to all patients undertaking opioid withdrawal management, with education on its use.

Post-withdrawal management services include self-help programs (e.g. Narcotics Anonymous, SMART recovery, online resources), outpatient programs, counselling and residential services. A variety of outpatient and community-based services may also be combined with agonist or antagonist maintenance treatment.

The evidence does not support the use of oral naltrexone in prevention of relapse to opioid use. The routine use of naltrexone implants has not been approved in Australia.

See section 5.11 and Appendix 3 for more information on continuing care.

### 10.6.1 Reducing harms

Provide the patient with advice to reduce harms associated with opioid and other substance use. It is critical to advise all patients about the reduction of tolerance following withdrawal and abstinence from opioids and that if resuming opioid use, they need to use lower doses than previously to reduce overdose risk.

Also provide information about safer injecting practices including use of sterile injecting equipment to reduce risk of blood borne transmission, information regarding needle and syringe programs, and where possible, provision of sterile injecting kits to take home. Discussion of non-injecting routes of administration such as oral or rectal ("shafting"/"shelving") to reduce injecting- and smoking-related harms is also recommended.

Also provide general lifestyle advice re exercise and nutrition to reduce impacts of long-term opioid use. Warn patients against operating vehicles if sedated. Provide counselling regarding safer sex, access to condoms/dental dams, pre- and post-exposure prophylaxis for gay and bisexual men who are HIV negative and other people at risk of HIV infection, and adherence to antiretroviral medications for people who are living with HIV.

Further advice on harm reduction can be found on the NSW Users and AIDS Association's (NUAA) website athttps://nuaa.squarespace.com/harm-reductionsafer-using.

Further advice on pharmaceutical opioid medications is available via **HealthDirect**.

**Table 10.8 Symptomatic treatments**

| Symptoms | Suggested treatments |
|---|---|
| Muscle aches/pains | Paracetamol 1 g every 4 hours as required (maximum 4 g in 24 hours) or<br>Ibuprofen 400 mg every 6 hours as required (if no history of peptic ulcer/ gastritis). |
| Nausea | Metoclopramide 10 mg, every 4-6 hours as required or<br>prochlorperazine 5 mg, every 4-6 hours as required or<br>ondansetron 4-8 mg, every 12 hours as required |
| Abdominal cramps | Hyoscine 20 mg, every 6 hours as required. Second line treatment for continued severe gastrointestinal symptoms (for use in a hospital setting only): octreotide 0.05-0.1 mg, every 8-12 hours as required by subcutaneous injection. |
| Diarrhoea | Kaomagma or loperamide 2 mg as required. |
| Insomnia | Temazepam 10-20 mg at night. Cease the dose after 3-5 nights. |
| Agitation or anxiety | Diazepam 5mg four times daily as needed. Taper/cease the dose over 3-5 days. |
| Dehydration/ electrolyte disturbance | Fluid and electrolyte replacement. |
| Restless legs, sweating, agitation | Clonidine 75-150 microgram every 6-8 hours as tolerated with regular BP monitoring. |

## 10.7 Substance-specific practice points

### 10.7.1 Pregnancy and breastfeeding

The preferred treatment of pregnant opioid users is opioid agonist maintenance treatment (methadone or buprenorphine). Acute opioid withdrawal presents risks to the foetus and is usually avoided in pregnancy. If undertaken it requires specialist management.

Patients (including those on methadone or buprenorphine maintenance treatment) are encouraged to breastfeed in conjunction with appropriate postnatal support. For further advice on patients who are pregnant or breastfeeding and dependent on opioids, contact the Substance Use in Pregnancy and Parenting Service in your LHD or refer to the **NSW Health Clinical Guidelines on Substance Use and Pregnancy**.

### 10.7.2 Pain management and use of buprenorphine

Buprenorphine has high affinity for the mu opioid receptor and there is a theoretical risk that it may limit the effectiveness of other opioids prescribed for acute pain management. However, studies identify efficacy of full agonist opioids for analgesia while continuing buprenorphine. For advice on acute pain management when taking buprenorphine contact DASAS or consult the Acute Pain Management, Scientific Evidence guidelines issued by Faculty of Pain Medicine ANZCA.

### 10.7.3 Advice about driving

Patients are to be advised not to drive while undertaking withdrawal treatment, especially where sedative medications may be prescribed. Patients can be referred to resources on the NSW Health website: **https://www.health.nsw.gov.au/aod/resources/Pages/driving-safety-medicines.aspx**.

### 10.7.4 Overdose risk and take-home naloxone

Patients who have completed opioid withdrawal have reduced tolerance and therefore are at increased risk of overdose. Naloxone is a drug that reverses opioid overdoses. Clinicians are to advise patients of the risk of overdose and provide them with harm minimisation advice specifically relating to reducing the dose of opioids used if they relapse. Peer administered (take home) naloxone is to be offered to all patients undertaking opioid withdrawal management, and appropriate education provided to patients and partners/carers/family. In NSW people are able to access free naloxone and training on how to administer the medicine. Further information is available for consumers at: https://yourroom.health.nsw.gov.au/getting-help/Pages/Naloxone.aspx.

A variety of resources on overdose prevention and treatment are available on the NUAA website: **https://nuaa.org.au/overdose**.

# Gamma Hydroxybutyrate (GHB) and related substances

11

## 11.1 Chapter summary

- Withdrawal is only a part of the treatment journey. Post-withdrawal treatment planning should begin at commencement of a supported withdrawal episode.
- GHB use is becoming more prevalent, including among men who have sex with men, and is often used in combination with other substances.
- As there is increasing use of GHB in the community and high rates of concurrent use of other substances, ask about GHB use as part of a regular drug and alcohol history.
- GHB has a steep dose-response curve, which means a small dose difference between stimulant and sedative effects. Toxicity can occur with only small dose increases.
- It has a short half-life and is typically used at very frequent intervals among people who are dependent.
- Severe withdrawal can be fatal if untreated due to the occurrence of delirium, seizures, muscle rigidity, and rhabdomyolysis and can require management in an intensive care setting.
- Most evidence to guide management of GHB withdrawal is observational and derived from case series and case reports. Current pharmacological management includes the use of diazepam, baclofen and antipsychotics.

## 11.2 Use and effects of GHB

### 11.2.1 Pharmacology

Gamma hydroxybutyrate (GHB) has a number of street names, including 'fantasy', 'grievous bodily harm', 'GBH', 'liquid ecstasy' or 'liquid E'. It usually comes as a colourless and odourless, bitter or salty tasting liquid. It sometimes comes as a blue liquid and rarely in tablet or powder form.

GHB, gammabutyrolactone (GBL) and 1,4-butanediol (1,4-BD) are the main forms used in NSW. GHB acts on GABA-B and GHB receptors in the brain. GBL and 1,4-BD quickly convert to GHB once ingested. GBL is absorbed more rapidly and has a higher bioavailability than GHB. GHB is rapidly absorbed via the oral route, with peak blood concentrations typically occurring within one hour. It is metabolized primarily in the liver and is eliminated rapidly with a reported 20-60 minute half-life. Most of a dose is eliminated completely within 4-8 hours.

Patients are generally not aware of whether they are taking GHB, GBL or 1,4-BD. In NSW over the past 2 years, surveillance data indicates that use is mostly GBL, with small amounts of 1,4-BD; and is almost never GHB. However, as GHB is the more common used term, all forms will be referred to as GHB in this document.

One millilitre of liquid typically contains 1 g of GHB, although purity and concentration may vary. Single doses can range from 0.5 g to 5 g, and dependence and tolerance develop with a usual daily dose of 25 g/day GHB or 15 g/day GBL.

### 11.2.2 Prevalence and patterns of use

GHB emerged in Australia as a party drug at the beginning of the new millennium. Use of GHB has been increasing in NSW. By 2016, one per cent of Australians over the age of 14 years had used GHB. Use in regular ecstasy users is higher, with seven per cent reporting recent use. It is commonly used in conjunction with other drugs including stimulants and to enhance sexual pleasure. People who are GHB dependent are more frequently male, and often men who have sex with men (MSM).

Episodic use during parties at home or at music festivals is the most common pattern of use. People who are GHB dependent typically ingest GHB every day in one- to four-hour intervals, with a mean frequency of dosing reported as every four hours.

### 11.2.3 Effects of use

Lower doses produce stimulant-like effects including euphoria, disinhibition and increased libido, however, supra-therapeutic doses can lead to profound CNS and respiratory depression. As GHB has a narrow dose difference between stimulant and sedative effects, overdose can occur with small increases in dose. CNS depressant toxicity is increased when taken in combination with other CNS depressants such as alcohol or benzodiazepines.

GHB toxicity is characterised by sudden onset of effects, as well as abrupt awakening and resolution of effects. Signs of acute toxicity include nausea and vomiting, hyper salivation, headache, drowsiness, amnesia, confusion, urinary incontinence, tremor, hypothermia, hypotension, bradycardia, seizures, CNS and respiratory depression and death.

**Table 11.1 Acute effects of GHB**

| | Subjective effects | Physical effects |
|---|---|---|
| Lower dose | Euphoria<br>Disinhibition<br>Increased libido | |
| Higher dose/ toxicity | | Nausea, vomiting, hypersalivation, headache, sedation, confusion, tremor, hypothermia, bradycardia, seizures, respiratory depression, CNS depression |

### 11.2.4 Harms associated with GHB use

There have been a significant number of GHB-related deaths reported in the literature. Traumatic injuries from motor vehicle accidents in GHB-using drivers or pedestrians and injuries from falls have been associated with GHB use, as have sexually transmitted infections and sexual assaults. Memory problems have also been reported in users of GHB.

### 11.2.5 GHB withdrawal syndrome

The range and severity of GHB withdrawal symptoms appears to vary between individuals according to prior exposure to the drug.

**Table 11.2 Signs and symptoms of GHB withdrawal**

| Mild to moderate | Severe |
|---|---|
| Cravings | Myoclonus |
| Tremor | Disorientation |
| Insomnia | Perceptual disturbance |
| Diaphoresis | Delirium |
| Anxiety | Bradycardia |
| Nausea | Rhabdomyolysis |
| Tachycardia | Renal impairment |
| Hypertension | |
| Agitation | |
| Hyperthermia | |

### 11.2.6 Onset and duration of withdrawal

Onset of withdrawal can be rapid: symptoms may begin within 1-12 hours of the last dose and typically within 1-4 hours of the last dose. It is therefore important that patients at risk of GHB withdrawal **are assessed and managed as a priority and treatment commenced early**. Features of withdrawal have been reported to last up to 21 days.

### 11.2.7 Factors affecting severity of withdrawal

The length of use and dose may influence the severity of withdrawal; previous withdrawal symptoms can be a useful guide to the likely withdrawal to come. Early disorientation or delirium and hallucinations may indicate a severe or complex withdrawal and may require early involvement of intensive care (ICU) as transfer to ICU can be necessary in severe withdrawal.

Predictors of severe withdrawal and delirium on assessment include:

- Short time intervals between dosing (≤2-4 hrs).
- Higher daily doses (>15 ml of GHB).
- Onset of withdrawal symptoms within 2-3 hours.
- Awakening throughout the night due to withdrawal symptoms and using regularly throughout the night.
- Previous severe withdrawal.
- No days without GHB for more than 4-6 weeks.

Severe withdrawal can lead to treatment-resistant delirium, seizures, muscle rigidity, and rhabdomyolysis, cardiac arrest and renal failure, and in rare cases can be fatal if left untreated. **ICU referral is necessary** in patients with features of very severe withdrawal.

## 11.3 Assessment

The usual assessment for withdrawal should be undertaken, including:

- Substance use history and withdrawal history covering all substances used
- Medical and mental health history.
- Risk of harm to self and others.
- Physical examination.
- Mental state examination and cognitive assessment.

More information on assessment for withdrawal is detailed in section 4.3.

Be mindful of other possible causes of signs and symptoms of GHB withdrawal. The onset of delirium resulting from GHB withdrawal is a diagnosis of exclusion, so other potential causes of delirium are to be excluded.

The patient may be intoxicated on presentation. This may affect their ability to provide and receive information and hence may not be able to provide informed consent. Assessment of intoxicated individuals is difficult but should be pursued as far as is possible. Assessment findings may be reviewed after signs of intoxication have abated.

### 11.3.1 Consumption history

Physiological dependence with regular use of GHB can occur in a matter of weeks. Initial assessment is to include a substance use history to elicit:

- Pattern of GHB use.
- Severity of dependence.
- Previous withdrawal episodes.
- Timing and quantity of last dose.

Ask about use of all substances, class by class, to identify amount and frequency of substances used. There is a high prevalence of concomitant substance use disorder.

Biological sample testing for GHB is generally not useful and can be cost-prohibitive. GHB is not routinely detected in urine drug screens and testing requires sending the urine to a laboratory that can perform gas chromatography-mass spectrometry (GCMS). GHB is detectable in blood for four to six hours and urine typically remains positive for up to 12 hours post-ingestion. A urine drug screen can provide information on other recent drug use.

### 11.3.2 Assessing potential complications of chronic GHB use

Little data exists on the long-term effects of chronic GHB use. Impairment in recall has been reported subsequent to GHB withdrawal, as have cognitive problems, tremor, depression, anxiety and insomnia, which may persist for weeks or months and potentially contribute to relapse.

## 11.4 Withdrawal management

The purpose of withdrawal care is to provide appropriate support for withdrawal to be completed safely. The primary aims of withdrawal are to:

1. Cease substance use, whether permanently or temporarily.
2. Treat symptoms, coexisting conditions and complications of chronic use.
3. Engage in ongoing treatment and care.

Health care practitioners who would like to access specialist advice on assessing and managing GHB withdrawal can contact the Drug and Alcohol Specialist Advisory Service (DASAS) on 1800 023 687 (or (02) 8382-1006 if within Sydney metropolitan area). This is a free call* and is available 24 hours a day, 7 days a week (*may not be free from mobile phones).

### 11.4.1 Treatment planning

Summarise the patient assessment to inform the treatment plan, ensuring that it includes post-withdrawal treatment. Provide advice about risk of overdose post-withdrawal.

Address the patient's reasons for seeking treatment, social circumstances, and expectations about withdrawal and identify short- and long-term goals of treatment. Agree on the setting for withdrawal and establish a pattern of monitoring and review of progress.

### 11.4.2 Treatment settings

Withdrawal management can be undertaken in either outpatient or inpatient settings. Where a moderate to severe withdrawal is predicted, patients are to be managed in an acute hospital or supervised inpatient withdrawal setting. This includes people who have concurrent high-level substance use or co-occurring significant mental health or medical issues. Management of severe withdrawal syndrome is to be conducted in a high dependency setting.

Patients with infrequent use may not experience withdrawal and can be managed at home with support from healthcare providers.

### 11.4.3 Supportive care

Supportive care interventions can assist patients to cope with withdrawal symptoms including cravings, anxiety, sleep disturbance, and emotional fluctuations. The general principles of supportive care involve:

- Psychoeducation and coping with withdrawal symptoms. Patients should be educated regarding common withdrawal symptoms, their likely onset and duration, and coping strategies (eg relaxation techniques, sleep hygiene, advice regarding diet).
- Specific strategies for addressing agitation, anger and sleep disturbances.
- Frequent orientation, reassurance and explanation of procedures to patients with thought or perceptual disturbances.
- Crisis intervention, addressing accommodation, personal safety or other urgent welfare issues.
- Coping with cravings. Cravings are a normal part of all withdrawal syndromes, and all patients should be educated regarding the nature of cravings and strategies for coping with them during withdrawal.

Section 5.7 contains more details on supportive care.

### 11.4.4 Medication

The treatment of GHB withdrawal is primarily supportive, including the administration of medication to control agitation, delirium and seizures, with careful monitoring for respiratory depression and potential complications.

High-dose benzodiazepines are the primary treatment for GHB withdrawal. Doses used vary, however **diazepam** 10-20 mg every 1-2 hours is recommended, commenced early (within two hours of the last dose of GHB if not sedated) until light sedation and control of agitation is achieved.

Regular medical review is to be undertaken. A medical officer is to review the patient prior to exceeding 120 mg of diazepam in the first 24 hours of GHB withdrawal treatment. Consultation with an addiction specialist is recommended at this point.

Ongoing monitoring and administration of diazepam according to symptoms can be continued carefully. Diazepam is weaned over approximately seven days when treating GHB withdrawal.

Refer to ICU for consideration of management in a critical care setting if doses above 150-200 mg of diazepam are required in 24 hours, there is early confusion or delirium or severe symptoms.

Diazepam is used with caution in patients who have hypersensitivity to diazepam, have severe liver disease, are taking potent inhibitors of CYP-450 (e.g. ritonavir), are elderly or who present with a head injury or other significant co-occurring conditions (e.g. severe lung disease, cerebrovascular disease and reduced level of consciousness). Oxazepam is an appropriate alternative.

**Baclofen**, a high affinity GABA-B agonist, has been used in conjunction with diazepam to reduce the severity of GHB withdrawal symptoms. Baclofen can be used as an adjunct in severe cases refractory to benzodiazepine therapy or if moderate to severe withdrawal is predicted. Doses typically range from 10-25 mg TDS and are initiated at the start of withdrawal management. This can be ceased on discharge or tapered over several weeks. Given safety concerns with baclofen overdose, it is recommended to be dispensed weekly from a community pharmacy if continued following discharge.

Other medications that may be useful include short term **olanzapine** (2.5-5 mg PO as required to a maximum 20 mg in 24 hours) or **quetiapine** (25-50 mg as required to a maximum of 200 mg in 24 hours) which have well-established efficacy in managing agitation.

If the patient is not responding, obtain specialist advice urgently given the potential risks in GHB withdrawal. The Drug and Alcohol Specialist Advisory Service (DASAS) (ph 1800 023 687) is a free 24/7 telephone service that provides advice to health professionals who require assistance with the clinical diagnosis and management of patients with alcohol and other drug-related concerns.

### 11.4.5 Monitoring and review

Regular and frequent observations and clinical monitoring is recommended for GHB withdrawal. Monitoring should be clinically based on observations, objective signs and subjective symptoms, with the frequency determined by the severity of the withdrawal. In more severe cases, hourly or even more frequent monitoring may be required until the patient settles. Monitor vital signs, fluid balance and blood tests (full blood count, electrolytes, liver function tests, blood alcohol level and creatine kinase) in patients who are acutely unwell.

There is currently no widely accepted or validated scale for the assessment of withdrawal from GHB or its precursors.

### 11.4.6 Managing complications

Management for severe complications should be conducted in a high dependency setting. The treating team should always be mindful of other possible causes of signs and symptoms in GHB withdrawal. The onset of delirium resulting from GHB withdrawal is a diagnosis of exclusion, so other potential causes of delirium should be excluded.

## 11.5 Continuing care

Withdrawal treatment does not confer long term benefits unless followed by other drug and alcohol interventions including counselling. Relapse following discharge from an episode of GHB withdrawal is common and can be extremely risky due to reduced tolerance. Warn patients of the possibility of reduced tolerance and hence the potential risk of overdose if returning to using GHB post-withdrawal. Further information on continuing care is in section 5.11 and Appendix 3.

Actively link patients with ongoing AOD treatment services post-withdrawal, including AOD counselling, rehabilitation services, psychological therapies, family support, accommodation assistance and financial and legal services.

### 11.5.1 Reducing harm

Education on the principles of harm minimisation should be provided. Advise the patient on steps to minimise the risk of overdoses including avoiding combining GHB with other depressants like alcohol, benzodiazepines, sedating antihistamines and opioids. Suggest they avoid using GHB alone, or in other situations where help might not be available and that they tell a friend what they are using and where. Also note that they can reduce the risk of overdose by waiting long enough to feel any effects before taking more GHB

As GHB is a colourless and odourless liquid, it is often stored in water bottles and takeaway soy sauce containers and therefore can easily be inadvertently consumed. Advise that patients be careful where it is stored. Keep it out of reach of children or others who might mistakenly consume it as it creates high risk of accidental poisoning and overdose.

Intoxication may decrease capacity to consent to sex and place individuals at increased risk of sexual assault or risky sexual behaviour. Provide information on the need for sexual health screening and contraceptive advice. Further information on continuing care is in section 5.11.

# Gabapentinoids

12

## 12.1 Chapter summary

- Withdrawal is only a part of the treatment journey. Post-withdrawal treatment planning should begin at commencement of a supported withdrawal episode.
- Non-prescription use or overuse of gabapentinoids and the associated withdrawal syndrome is a relatively new phenomenon and is often associated with other substance use disorders.
- Symptoms are similar to the withdrawal symptoms of other sedating agents – diaphoresis, tachycardia, agitation – though there are cases of severe withdrawal involving seizure and catatonia.
- There is little evidence for any pharmacological treatment other than slow taper of the gabapentinoid.
- Supportive care during withdrawal includes offering patients strategies to cope with anxiety, sleep disturbance and craving.
- Continuing care after withdrawal includes counselling, psychosocial support and management of comorbidities including pain, anxiety, trauma and/or mood disorders, and other substance use disorders.

## 12.2 Use and effects of gabapentinoids

### 12.2.1 Pharmacology

The gabapentinoids (pregabalin and gabapentin) are GABA analogues. GABA-ergic activity has not been demonstrated, but they do reduce neurotransmitter release.

Pregabalin is absorbed effectively and rapidly with oral bioavailability of 90 per cent, and peak plasma concentrations are observed within 90 minutes. Gabapentin reaches peak concentrations within two hours. Both drugs are cleared renally with minimal metabolism and have a half-life of around six hours.

### 12.2.2 Prevalence and patterns of use

Pregabalin and gabapentin have TGA approval for the treatment of neuropathic pain in adults, and some seizure disorders. Gabapentinoid prescribing has increased dramatically in Australia as they are considered by many prescribers to be a safe, non-addictive alternative to opioids. Concomitant with this increased prescribing, harms have increased including problems with dependence and overdose.

When used recreationally gabapentinoids are typically taken orally, however they can also be used rectally, nasally, intravenously and smoked. The pattern of use can be bingeing or regular use. Other drug use in association with gabapentinoids is common. They can also be used to augment the effect of opioids.

Risk factors for harmful use include concurrent opioid use disorder, male gender, prescription of antipsychotics or benzodiazepines, low income, previous substance use disorder, mental health comorbidity and youth.

### 12.2.3 Effects of use

Desired effects from recreational use of gabapentinoids include sedation, euphoria, hallucinations, disinhibition and dissociation. Reports have suggested sedating effects similar to benzodiazepines, with euphoria similar to amphetamines. Users have also reported feeling more sociable and talkative.

The most commonly reported adverse events are ataxia, incoordination and oedema. Other adverse events include dizziness, diplopia, amblyopia, vertigo, disrupted thinking, dry mouth, weight gain, insomnia, attention problems and constipation.

Overdose of gabapentinoids can lead to respiratory depression requiring mechanical ventilation, seizure, cardiac conduction disturbances and death.

Table 12.1 Acute effects of gabapentinoids

| Subjective effects | Physical effects |
|---|---|
| Euphoria | Sedation |
| Increased sociability | Dizziness |
| Disinhibition | Ataxia |
| Hallucinations | Oedema |
| Nausea | Tremor |
| Chills | |
| Fatigue | |

Table 12.2 Adverse effects of gabapentinoids

| Symptoms | Signs |
|---|---|
| Drowsiness | Reduced consciousness |
| Dizziness | Disinhibited behavior |
| Dissociation | Seizure |
| Hallucinations (auditory and visual) | Slurred speech |
| Euphoria | Ataxia |
| Chills | |
| Fatigue | |

## 12.3 Gabapentinoid withdrawal syndrome

Patients can be on gabapentinoids for as little as four weeks before developing tolerance and withdrawal symptoms when usage is ceased. Patients can develop withdrawal symptoms on therapeutic doses of gabapentinoids, typically up to 300 mg of pregabalin or 3600 mg of gabapentin, but the majority are taking supratherapeutic doses. Not all patients using gabapentinoids daily or almost daily will experience a withdrawal syndrome. The risk appears to be increased with multiple substance dependence, higher dose, and concomitant psychiatric comorbidities.

All patients on gabapentinoids **should have their dose titrated down** when ceasing use.

### 12.3.1 Onset and duration of withdrawal

Gabapentinoid withdrawal onset usually is within 1-2 days of last use. The duration of the withdrawal syndrome without treatment is up to 3-5 days for severe symptoms. Residual mild symptoms can persist for up to a few weeks. Tapering of gabapentinoids will modify the severity and duration of symptoms.

### 12.3.2 Signs and symptoms of withdrawal

Withdrawal symptoms can include headache, anxiety, craving, diarrhoea, chills, fatigue, palpitations, nausea and insomnia. Signs of gabapentinoid withdrawal include agitation, diaphoresis, tachycardia, hypertension and tremor.

### 12.3.3 Factors affecting severity of withdrawal

Factors predicting withdrawal severity have not been clearly established. Duration of use, amount used and tolerance may be predictors of withdrawal and its severity. Histories of medical and mental health comorbidities have also been suggested as associated with more severe withdrawal.

**Table 12.3 Signs and symptoms of gabapentinoid withdrawal**

| Symptoms | Signs |
|---|---|
| Headache | Agitation |
| Anxiety | Diaphoresis |
| Cravings | Tachycardia |
| Diarrhoea | Hypertension |
| Nausea | Tremor |
| Chills | |
| Fatigue | |

## 12.4 Assessment

The usual assessment for withdrawal should be undertaken, including:

- Substance use history and withdrawal history including any associated complications.
- Medical and mental health history.
- Risk of harm to self and others.
- Physical examination. History or signs of renal disease is important in assessment given the metabolism of gabapentinoids.
- Mental state examination and cognitive assessment.

Further information on assessment for withdrawal is provided in section 4.3 above.

The patient may be intoxicated on presentation, and this may affect their ability to provide and receive information and provide informed consent. Assessment of intoxicated individuals may be difficult, and assessment findings should be reviewed after signs of intoxication have abated.

Collaborative history from other service providers, PBS history (if able to be obtained) and Real Time Prescription Monitoring systems can assist in clarifying duration and amount of use of other medications ingested.

Pain and mental health comorbidities are common and may be the reason gabapentinoids were initiated. Assessment and management of other substance use disorders, medical and mental health comorbidities should be undertaken. History or signs of renal disease is important in assessment given the metabolism of gabapentinoids.

Physical examination should include assessment for signs of intoxication or withdrawal (see tables 12.2 and 12.3 above) and assessment for complications from route of administration. Standard urine drug screens may not look for gabapentinoids. If required, discussion with the local laboratory for specific testing may be necessary.

## 12.5 Withdrawal management

The purpose of withdrawal care is to provide appropriate support for withdrawal to be completed safely. The primary aims of withdrawal are to:

1. Cease substance use, whether permanently or temporarily
2. Treat symptoms, coexisting conditions and complications of chronic use.
3. Engage in ongoing treatment and care.

Health care practitioners who would like to access specialist advice on assessing and managing gabapentioid withdrawal can contact the Drug and Alcohol Specialist Advisory Service (DASAS) on 1800 023 687 (or (02) 8382-1006 if within Sydney metropolitan area). This is a free call* and is available 24 hours a day, 7 days a week (*may not be free from mobile phones).

### 12.5.1 Treatment planning

Summarise the patient assessment to inform the treatment plan, ensuring that it includes post-withdrawal treatment. Address the patient's reasons for seeking treatment, social circumstances, and expectations about withdrawal and identify short- and

long-term goals of treatment. Agree on the setting for withdrawal and establish a pattern of monitoring and review of progress. Include regular review of the patient's objectives, which may change during the course of withdrawal.

Obtain specialist advice for patients with significant renal impairment. Specialist advice is also required for patients who are pregnant, as gabapentinoids are not recommended in pregnancy (Category B3). Contact local obstetrics specialists or the Substance Use in Pregnancy and Parenting (SUPPS) team through the Local Health District intake line.

Communication with the patient's gabapentinoid prescriber is critical in treatment planning. Checking regularly that the patient is not obtaining gabapentinoids from other sources may be necessary. Real time prescription monitoring systems are being implemented nationally. Information on the NSW SafeScript program can be found here.

*Driving*

Patients who will be taking gabapentinoids before planned inpatient withdrawal or during community tapering are to be advised about risks of driving under the influence of gabapentinoids.

### 12.5.2 Treatment settings

Withdrawal from gabapentinoids can be undertaken in inpatient or outpatient settings. The setting in which withdrawal is undertaken will be determined through consideration of:

- Amount of gabapentinoid used.
- Concomitant medical and mental health conditions.
- Other drug use disorders.
- Social situation and supports.

Rapid reductions from high doses are suitable for an inpatient setting over 5-7 days. If patients are unable or unwilling to be admitted to an inpatient unit for this period, careful consideration can be given to a planned withdrawal that commences in an inpatient setting and continues as an outpatient in the community.

Gradual reductions from typical therapeutic doses are usually suited to an outpatient setting. This involves staged supply of medication and initially second daily review, tapered according to individual responses. Higher dose reductions may include an initial rapid reduction in an inpatient setting followed by a more gradual taper in the outpatient setting.

### 12.5.3 Supportive care

Supportive care interventions can enable patients to cope with withdrawal symptoms including cravings, anxiety, sleep disturbance, and emotional fluctuations. The general principles of supportive care involve:

- Psychoeducation and coping with withdrawal symptoms. Patients should be educated regarding common withdrawal symptoms, their likely onset and duration, and coping strategies (e.g. relaxation techniques, sleep hygiene, advice regarding diet).
- Specific strategies for addressing agitation, anger and sleep disturbances.
- Frequent orientation, reassurance and explanation of procedures to patients with thought or perceptual disturbances.
- Crisis intervention, addressing accommodation, personal safety or other urgent welfare issues.
- Coping with cravings. Cravings are a normal part of all withdrawal syndromes, and all patients should be educated regarding the nature of cravings and strategies for coping with them during withdrawal.

Section 5.7 contains more details on supportive care.

### 12.5.4 Medication

Tapering of the gabapentinoid is the mainstay of treatment. Negotiate the rate of reduction with the patient. This should be slower in patients on high therapeutic/supratherapeutic doses, those on gabapentinoids for more than four weeks, and those with co-occurring mental health disorders or substance dependence.

For planned withdrawals where the stated dose is at or beyond the maximum daily dose (pregabalin 600 mg, gabapentin 3600 mg), begin the taper in a controlled setting to confirm the patient's tolerance. Admit the patient for at least 24 hours to enable monitoring of the patient in case of toxicity due to lower tolerance than expected.

Patients reporting supratherapeutic doses can be started at maximum doses (pregabalin 600 mg, gabapentin 3600 mg) divided into four doses spaced throughout the day. This will be sufficient to suppress significant withdrawal symptoms. Doses are to be reduced or withheld if the patient becomes sedated.

In an inpatient setting, tapering over 5-7 days is appropriate, with a daily reduction in dose. Patients who are unable to be reduced to zero during 5-7 days of inpatient treatment due to significant medical or mental health conditions, or who are experiencing significant distress from withdrawal symptoms, can be reduced to a manageable amount of gabapentinoid as an inpatient and then continue to taper in the community.

A dose below 300 mg daily of pregabalin or 1800 mg daily of gabapentin would usually be suitable for community management. An outpatient reduction is usually undertaken over 4-6 weeks, with weekly dose reductions. Use a staged supply to ensure only small amounts of gabapentinoids are dispensed at a time.

Symptomatic relief can be provided according to table 12.4 below:

### 12.5.5 Managing complications

Seizures should be treated with benzodiazepines per standard protocols for seizure management. For other severe complications, such as psychosis or delirium, usual treatments are recommended.

### 12.5.6 Monitoring and review

Patients should be monitored regularly, with the frequency of observations determined by the severity of the withdrawal. No formal scales for measuring gabapentinoid withdrawal have been demonstrated to be valid. Monitoring should be clinically based on observations, objective signs and subjective symptoms.

## 12.6 Continuing care

Withdrawal treatment does not confer long term benefits unless followed by other drug and alcohol interventions. Ensure the patient is actively linked with continuing care after withdrawal. This may include counselling, psychosocial support and management of co-occurring conditions including pain, anxiety, trauma and/or mood disorders, and other substance use disorders.

See section 5.11 and Appendix 3 for further information on continuing care.

**Table 12.4 Symptomatic medications**

| Symptoms | Medication (up to 7 days duration, as required) |
|---|---|
| Sleep problems | Benzodiazepines (e.g. diazepam 5-10 mg nocte) or z-drugs (e.g. zolpidem 10-20 mg nocte, zopiclone 7.5-15 mg nocte). |
| Restlessness, anxiety, irritability | Diazepam (e.g. 5-10 mg BD or TDS PRN) or antipsychotic medication (e.g. olanzapine 2.5-5 mg BD PRN) |
| Stomach pains | Hyoscine butylbromide (e.g. 20 mg TDS PRN) |
| Physical pain, headaches | Paracetamol, non-steroidal anti inflammatory agents |
| Nausea | Metoclopramide, Ondansetron |

### 12.6.1 Harm reduction

For those who may continue to use gabapentinoids, harm reduction advice is to be provided. Educate patients that if they recommence gabapentinoid use post-withdrawal they will have reduced tolerance and should not use at their pre-withdrawal dose due to the risk of overdose. Note the risks associated with driving under the influence of gabapentinoids due to sedation.

Provide the patient with education and advice to reduce harms associated with gabapentinoid and other substance use. Other overdose avoidance tips include waiting long enough to feel any effects before taking more – typically 90 minutes for gabapentinoids – and avoiding combining gabapentinoids with other substances. Suggest patients avoid taking large amounts of gabapentinoids alone, so other people can seek help in the event of an overdose.

If the patient injects, provide information about safer injecting practices including use of sterile injecting equipment to reduce risk of blood borne transmission, information regarding needle and syringe programs, and where possible, provision of sterile injecting kits to take home. Discuss non-injecting routes of administration. Advise that oral use is safer than intravenous injection and explain that the high bioavailability makes the oral route almost equivalent to intravenous for gabapentinoids.

# Benzodiazepine Receptor Agonists (BZRA)

13

## 13.1 Chapter summary

- Withdrawal is only a part of the treatment journey. Post-withdrawal treatment planning should begin at commencement of a supported withdrawal episode.
- BZRAs include benzodiazepines and z-drugs.
- BZRAs have hypnotic, anxiolytic, anticonvulsant and muscle relaxant properties. 1.9% of Australians have reported non-medical use of BZRAs.
- Patients experiencing dependence on BZRAs are classified as having a low dose therapeutic dependence or a high dose dependence.
- Low dose therapeutic dependence may be managed by the patient's general practitioner. GPs may wish to obtain support and advice from addiction medicine specialists.
- More complex cases such as high dose dependence or patients with polysubstance use disorder are best managed in consultation with specialist services.
- Onset of BZRA withdrawal usually occurs approximately 2-5 days after the last dose, reaches a peak around days 7-10, and then begins to abate. The half-life of BZRA involved determines onset of symptoms.
- Abrupt withdrawal after BZRA treatment may result in two or three days of 'rebound' anxiety and insomnia. The symptoms are generally the same as those for which BZRAs were initially prescribed.
- The major complications are the development of delirium and seizures. Avoiding these is a priority in BZRA withdrawal care.
- Withdrawal is best managed by having clear guidance, effective patient communication, stabilisation and progressive withdrawal from long-acting BZRAs.
- Treatment effectiveness can be enhanced by structured and supervised treatment.
- A staged supply of BZRA can enhance safety and support patients to control their BZRA use.

## 13.2 Use and effects of Benzodiazepine Receptor Agonists (BRZAs)

### 13.2.1 What are BZRAs?

Benzodiazepine receptor agonists (BZRAs) are a class of drugs that act on the central nervous system. They include benzodiazepines such as diazepam, alprazolam and temazepam as well as non-benzodiazepine 'z-drugs' zolpidem and zopiclone.

Drugs referred to as BZRAs act as allosteric modulators of gamma-aminobutyric acid (GABA) activity by binding to inotropic benzodiazepine receptors at the GABA A receptor complex. BZRAs increase GABA binding and chloride ion channel opening, facilitating inhibitory activity.

### 13.2.2 Effects of BZRAs

BZRAs have hypnotic, anxiolytic, anticonvulsant and muscle relaxant properties. Some of these drugs have a benzodiazepine chemical structure (ie alprazolam, bromazepam, clobazam, clonazepam, diazepam, lorazepam, midazolam, nitrazepam, oxazepam, temazepam, triazolam) while others, referred to as non-benzodiazepine receptor agonists, novel benzodiazepine receptor agonists or z-drugs (ie zolpidem, zopiclone) do not. Z-drugs show subtle differences in pharmacology from benzodiazepines, as well as having an improved kinetic profile for sleep induction with reduced 'next day hangover'.

All BRZAs have similar benefits, side effects and risks; and as such the same management approach should be adopted. In higher doses BZRAs can cause excessive sedation and incoordination including ataxia and slurred speech. In some people, paradoxical excitement with increased anxiety, irritability, or hyperactive or disinhibited behaviour can occur.

### 13.2.3 Harms associated with BZRA use

Problems associated with BZRA use include:

- Cognitive and psychomotor impairment.
- Memory and learning impairment.
- Emotional blunting.
- Misuse and dependency.
- Morbidity and mortality related to overdose and withdrawal.
- Driving impairment.
- Accidents, falls and injuries.
- Societal harms associated with diversion.
- Synergistic toxicity with other sedatives.

Ongoing BZRAs use in older people has been associated with cognitive decline, dementia and increased falls. There is evidence of increased mortality with long term use.

The rate of deaths from benzodiazepines increased from 2.4 per 100,000 population in NSW in 1997-1999 to 3.3 per 100,000 in 2016-2018. In Australia in 2018, 42 per cent of unintentional drug-induced deaths were related to benzodiazepines.

### 13.2.4 Prevalence and patterns of use

In addition to reducing anxiety and inducing sleep, BZRAs can cause euphoria and therefore are subject to misuse as recreational drugs. Although for more than two decades now most countries have had consistent recommendations for a maximum two to four weeks' short-term use of BZRAs, these recommendations are not consistently observed by prescribers and their patients.

The proportion of Australians who reported using BZRAs either in their lifetime or in the previous 12 months (1.9% of total population) has not changed substantially since 2016. In Australia, the current level of prescribing BZRAs is likely to represent a significant. Over the last 20 years the quantity of BZRAs on each prescription has increased. Alprazolam became the second most popular drug, increasing more than eightfold. In 2014, in response to increasing illicit use and associated harms, NSW rescheduled alprazolam to a schedule eight medication.

## 13.3 BZRA withdrawal syndrome

Specific withdrawal symptoms are subjective, with few observable signs (see table 13.1 below). Most patients discontinuing BZRAs experience a degree of 'rebound' anxiety and insomnia.

*ICD 11 definition*

The ICD-11 definition applying to BZRA withdrawal is as follows:

> Sedative, hypnotic or anxiolytic withdrawal is a clinically significant cluster of symptoms, behaviours and/or physiological features, varying in degree of severity and duration, that occurs upon cessation or reduction of use of sedatives, hypnotics or anxiolytics in individuals who have developed dependence or have used sedatives, hypnotics or anxiolytics for a prolonged period or in large amounts. Sedative, hypnotic or anxiolytic withdrawal can also occur when prescribed sedatives, hypnotics or anxiolytics have been used in standard therapeutic doses.
>
> Presenting features of sedative, hypnotic or anxiolytic withdrawal may include anxiety, psychomotor agitation, insomnia, increased hand tremor, nausea or vomiting, and transient visual, tactile or auditory illusions or hallucinations.

There may be signs of autonomic hyperactivity (e.g. tachycardia, hypertension, sweating), or postural hypotension. The withdrawal state may be complicated by seizures. Less commonly, there may be progression to a more severe withdrawal state characterised by confusion and disorientation, delusions, and more prolonged visual, tactile or auditory hallucinations. If so, a separate diagnosis of sedative, hypnotic, or anxiolytic-induced delirium should be assigned.

### 13.3.1 Onset and duration

Onset occurs between 2-5 days after stopping, reaching a maximum on days 7-10, and usually abating by the end of the second or third week. Withdrawal may occur earlier or later depending on the half-life of the BZRA involved.

### 13.3.2 Factors affecting severity of withdrawal

Severity of withdrawal is affected by:

- Dosage.
- Potency.
- Duration of use.

Delirium is more common in frail and elderly individuals. People with pre-existing anxiety, sleep or seizure disorders will usually experience higher levels of these symptoms.

## 13.4 Assessment

The usual assessment for withdrawal should be undertaken as summarised in section 4.3, including:

- Substance use history and withdrawal history covering all substances used.
- Medical and mental health history.
- Risk of harm to self and others.
- Physical examination.
- Mental state examination and cognitive assessment.
- History of seizures or delirium.

It is important to note that among older adults, some of these criteria may be modified by the ageing process or their social roles (e.g. retirement from work), resulting in more subtle presentations.

The patient may be intoxicated on presentation. This may affect their ability to provide and receive information and hence may not be able to provide informed consent. Assessment of intoxicated individuals is difficult but should be pursued as far as is possible. Assessment findings may be reviewed after signs of intoxication have abated.

**Table 13.1 Signs and symptoms of BZRA withdrawal**

| Common | Less common | Uncommon |
|---|---|---|
| **Anxiety** | Nightmares | Delusions |
| **Insomnia** | Agoraphobia | Paranoia |
| **Restlessness** | Feelings of unreality | Hallucinations |
| **Agitation** | Depersonalisation | Seizures |
| **Irritability** | Panic attacks | Persistent tinnitus |
| **Poor concentration** | Decreased appetite, weight loss, GI upset | Confusion |
| **Poor memory** | Sweating, tremor | |
| **Depression** | Lethargy | |
| **Muscle tension and twitching** | Perceptual disturbances | |
| | Headache, body ache | |
| | Blurred vision | |
| | Increased temperature | |

## 13.5 Withdrawal management

Providing appropriate support for withdrawal to be completed safely is fundamental to withdrawal care. The primary aims of substance withdrawal are to:

1. Cease substance use, whether permanently or temporarily.
2. Treat symptoms, coexisting conditions and complications of chronic use.
3. Engage the patient in ongoing treatment and care.

Health care practitioners who would like to access specialist advice on assessing and managing BZRA withdrawal can contact the Drug and Alcohol Specialist Advisory Service (DASAS) on 1800 023 687 (or (02) 8382-1006 if within Sydney metropolitan area). This is a free call* and is available 24 hours a day, 7 days a week (*may not be free from mobile phones).

As management will differ according to whether patients are dependent on a low dose or high dose of BZRA, assess the patient's BZRA consumption history using the oral daily diazepam equivalence (ODDE) (see table 13.2 below).

In this context:

- Low dose therapeutic dependence is ≤10 mg ODDE;
- High-dose dependence is >10 mg ODDE.

Dependence is defined in the ICD-11 as:

> Sedative, hypnotic or anxiolytic dependence is a disorder of regulation of sedative use arising from repeated or continuous use of these substances. The characteristic feature is a strong internal drive to use sedatives, hypnotics, or anxiolytics, which is manifested by impaired ability to control use, increasing priority given to use over other activities and persistence of use despite harm or negative consequences. These experiences are often accompanied by a subjective sensation of urge or craving to use these substances.
>
> Physiological features of dependence may also be present, including tolerance to the effects of sedatives, hypnotics or anxiolytics, withdrawal symptoms following cessation or reduction in use, or repeated use of sedatives or pharmacologically similar substances to prevent or alleviate withdrawal symptoms. The features of dependence are usually evident over a period of at least 12 months but the diagnosis may be made if sedative use is continuous (daily or almost daily) for at least one month (see **https://icd.who.int/browse11**).

Table 13.2

| Drug | Approximate equivalent dose (mg)[13] to diazepam 5mg |
|---|---|
| Alprazolam | 0.5 |
| Bromazepam | 3 |
| Clobazam | 10 |
| Clonazepam | 0.25[14] |
| Diazepam | 5 |
| Flunitrazepam | 0.5 |
| Lorazepam | 1[14] |
| Nitrazepam | 5 |
| Oxazepam | 15 |
| Temazepam | 10 |

*Source: Therapeutic Guidelines Ltd (eTG March 2021 edition)*

[13] The widely varying half-lives and receptor-binding characteristics of these drugs make exact dose equivalents difficult to establish. Conversion for z-drugs is unclear and not included in this table.

[14] Particular care is needed if changing from clonazepam to a dif ferent benzodiazepine because there is a wide variety of reported equivalences.

[15] Lorazepam may be more potent at higher doses

### 13.5.1 Management of low dose therapeutic BZRA dependence

Many people take prescribed benzodiazepines for many years without dose escalation, prescribed by a single doctor or practice usually for management of anxiety or insomnia. In this group, withdrawal may produce more distress and problems than continuing on a long-term stable dose. The benefits of attempting withdrawal need to be set against the risks of continued prescribing, such as risk of falls and cognitive decline particularly with increasing age. If the doctor and patient agree that an attempt to withdraw should be made, undertake it slowly with good preparation and patient education.

There is emerging evidence to suggest that a tailored GP's letter to low dose patients, a standardised interview, or provision of written information/ instructions from the prescriber can be effective. There is no evidence to suggest that this is effective with patients using high doses or illicit benzodiazepines.

### 13.5.2 Management of high dose BZRA dependence

In engaging patients with high dose BZRA dependence, a structured approach as described below is required. Explain the risks associated with high dose BZRA use and the rationale behind the structured approach to withdrawal at the outset.

On rare occasions, there may be a need for a bridging script until a specialist review is conducted. In order to ensure the safety of the patient, this treatment is only to be continued if there are frequent reviews and avoidance of higher risk BZRAs such as alprazolam. A clear treatment agreement between patient and prescriber is to be reached which unequivocally states that this is an interim arrangement.

The Royal Australian College of General Practitioners (RACGP) has some resources to guide BZRA prescribing including managing requests for prescriptions: Guide for Prescribing Drugs of Dependence in General Practice.

### 13.5.3 Treatment planning

It is critical that the withdrawal management is structured and the patient properly assessed and prepared for the treatment plan. If the patient is ambivalent or pre-contemplative, motivational interviewing techniques are recommended.

Summarise the patient assessment to inform the treatment plan, ensuring that it includes post-withdrawal treatment. Address the patient's reasons for seeking treatment, social circumstances, and expectations about withdrawal. Agree on the withdrawal setting and identify the patient's short- and long-term goals.

Establish the pattern of monitoring and review and include regular review of the patient's objectives, which may change during the course of withdrawal. Identify co-occurring conditions requiring management. Ensure that advice is provided about risk of overdose increasing post-withdrawal due to decreased tolerance.

### 13.5.4 Treatment settings

Low risk patients can be managed in general practice. High risk patients are best managed with initial stabilisation and commencement of tapering in a specialist inpatient or outpatient withdrawal service.

An outpatient setting is preferred except when:

- The safety of the patient would be at risk (e.g. documented history of seizures, delirium, alcohol dependence or significant untreated mental illness).
- The patient reports erratic, uncontrolled use of high doses of BZRAs or use of other CNS depressants.
- The likelihood of a successful outcome is poor in an outpatient setting (repeated inability to complete outpatient reductions, other drug use, unstable social environment, co-occurring mental health conditions, emotional dysregulation or impulsivity).

Specialist inpatient withdrawal units are most suitable for patients withdrawing from other drugs in addition to benzodiazepines, including alcohol, GHB and gabapentinoids, and for older patients and patients with other illnesses (especially mental health disorders). As noted above, such units should also be considered for commencing high dose users on a safe reduction regimen.

General hospital withdrawal is rarely necessary for a planned withdrawal admission, unless specialist withdrawal facilities are unavailable (e.g. in a rural setting).

### 13.5.5 Unplanned withdrawal

Patients in hospital for other reasons may undergo unplanned BZRA withdrawal. This can be a particular problem in elderly patients who may develop delirium as a result of BZRA withdrawal.

For hospitalised patients, take a history of BZRA use to identify risk of withdrawal. Do not abruptly discontinue BZRA, even at low doses, because of the risk in the sick and the elderly of precipitating withdrawal. Generally, maintain benzodiazepine use at preadmission levels for therapeutic dependence. Hospitalisation and sickness make a very poor context for initiating elective withdrawal.

Patients taking high doses of BZRAs or with polysubstance use disorder are to be stabilised on a long-acting benzodiazepine (preferably diazepam) at a dose about 40 per cent that of their regular intake before admission (or 40 mg/day, whichever is lower). Reduction and withdrawal in partnership with the patient should follow once their other medical condition has been stabilised.

### 13.5.6 Psychosocial interventions and supportive care

Establish a good therapeutic relationship with the patient. Without this, any attempts to address the risks associated with long term BZRA use may be negatively affected.

Psychological interventions are key components in the treatment of BZRA withdrawal. Both cognitive behavioural therapy and relaxation training – as adjuncts to BZRA taper – can be effective in reducing BZRA use in the short term (three-month period).

Provide supportive care, such as:

- Psychoeducation and coping with withdrawal symptoms. Patients should be educated regarding common withdrawal symptoms, their likely onset and duration, and coping strategies (e.g. relaxation techniques, sleep hygiene, advice regarding diet).
- Specific strategies for addressing agitation, anger and sleep disturbances.
- Frequent orientation, reassurance and explanation of procedures to patients with thought or perceptual disturbances.
- Crisis intervention, addressing accommodation, personal safety or other urgent welfare issues.
- Coping with cravings. Cravings are a normal part of all withdrawal syndromes, and all patients should be educated regarding the nature of cravings and strategies for coping with them during withdrawal.

Section 5.7 contains more details on supportive care.

### 13.5.7 Medication

BZRA withdrawal is managed with a **taper and cease** schedule, with or without first converting to diazepam. People who are on 10 mg ODDE or less may be able to reduce their BZRA dose without a switch to diazepam.

For patients on higher doses, switching to diazepam is recommended for most patients. This includes:

- People using the short-acting potent benzodiazepines such as alprazolam and lorazepam.
- People using preparations such as alprazolam that do not easily allow for small reductions in dose.
- People taking temazepam who choose to withdraw from diazepam after discussing the advantages and disadvantages.
- People experiencing difficulty or who are likely to experience difficulty withdrawing directly from temazepam, oxazepam or z-drugs due to a high degree of dependency (associated with long duration of treatment, high doses and a history of anxiety problems).

Use the equivalency table (table 13.2 above) for the conversion to diazepam. In most cases a daily maximum dose of 40 mg will prevent major withdrawal symptoms including withdrawal seizures.

Seek specialist advice before converting to diazepam for patients with severe hepatic dysfunction, as diazepam may accumulate to a toxic level in these people. An alternative BZRA without active metabolites (such as oxazepam) may be preferred.

Negotiate a gradual drug withdrawal schedule (dose tapering) that is flexible. Titrate the reduction of dose according to the severity of withdrawal symptoms. Be guided by the patient in making adjustments so that they remain comfortable with withdrawal. Withdrawal may take three months to a year or longer. Some people may be able to withdraw in less time. There are no standard tapering regimens and the rate of tapering depends on the starting dose, duration of therapy, risk of relapse and how well tapering is tolerated by the patient. A general suggestion for the rate of reduction is 10 per cent dose reduction every 10-14 days.

High risk, high dose BZRA patients may need to commence withdrawal in an inpatient setting and continue a more gradual step-down regimen in the community post-discharge. For patients withdrawing in the community, 'staged dispensing' is to be used and is effective in both withdrawal and maintenance. This can be done by regular dispensing of small quantities at a local pharmacy with clinical review, for example daily dispensing with fortnightly clinical review. Liaison with a community pharmacist is a useful strategy.

Concurrent use of other medications such as the anticonvulsant carbamazepine or medications such as pregabalin is not supported by evidence.

### 13.5.8 Monitoring and review

Undertake regular patient monitoring (either by telehealth or in-person). Monitoring is to include severity of withdrawal symptoms, cravings, any substance use, medication use and other health and social conditions.

Benzodiazepine withdrawal scales such as Clinical Institute Withdrawal Assessment Scale. – Benzodiazepines (CIWA-B) offer a systematic measure of the withdrawal phenomena, but if used they should only be a guide to complement clinical assessment. Good assessment and clinical judgment remain the gold standard for guiding management and clinicians should not rely on withdrawal scale scores alone.

Monitor whether the patient has obtained BZRA prescriptions elsewhere through prescription monitoring programs. Real time prescription monitoring systems are being implemented nationally. Information on the NSW SafeScript program can be found **here**.

If used, urine drug screening is a tool to engage the patient rather than a basis for punitive measures. Routine urine drug screening will report the presence of benzodiazepines and may be helpful in ensuring patient safety. Confirmatory testing is used if specific benzodiazepine drugs need to be identified, but care is required for the interpretation of urine drug screen results. For example, temazepam and oxazepam are metabolites of diazepam which may lead the practitioner to conclude the patient had been taking other benzodiazepines during diazepam treatment. Newer BZRAs such as etizolam are generally not reported on unless requested.

## 13.6 Continuing care

Withdrawal treatment does not confer long term benefits unless followed by other drug and alcohol interventions. Ensure the patient is actively linked with continuing care after withdrawal. Psychosocial interventions to treat conditions including anxiety disorders, trauma-related conditions or sleep disorders that may have contributed to using benzodiazepines in the past are the mainstay of ongoing care.

If patients did not achieve the desired outcomes on their first attempt at withdrawal, encourage the person to try again. Remind the person that reducing benzodiazepine dosage, even if this falls short of complete drug withdrawal, can still be beneficial.

If another attempt is considered, reassess the person first and treat any underlying problems (such as depression) before trying again.

## 13.7 Substance-specific practice points

BZRAs are sought-after drugs for example among young people who use multiple drugs. There is an illicit market for BZRAs, and people may also obtain prescriptions from multiple doctors. Counterfeit BZRAs sourced from the internet, including dark web, are not pharmaceutical grade and have widely variable dosages. Public health alerts are published on the NSW Health **website** when surveillance indicates new or increasing risks.

The general principles governing BZRA prescribing are:

- Do not prescribe any medications for patients not known to you without a clear indication.
- Do not prescribe BZRAs without performing a thorough substance use assessment.
- Do not prescribe BZRAs for patients with a current history of polysubstance use disorder (if concerned, these patients can be referred for specialist assessment).

Do not prescribe BZRAs for patients on opioid agonist treatment without discussion with their prescriber, regardless of indication. Up to 35 per cent of people in the NSW Opioid Treatment Program take BZRAs regularly or intermittently. Prescribing BZRAs to those who are concurrently using illicit opioids or on OAT or high dose opioid analgesia poses serious risks, as the combination of opioids and BZRAs is associated with drug-related deaths.

On rare occasions, prescribers may find themselves in a situation where the refusal of a BZRA script for those not willing to participate in a structured treatment program might result in a situation in which the prescriber feels intimidated. The RACGP has some resources that may be helpful to review, including their **Guide for Prescribing Drugs of Dependence in General Practice**. NPS MedicineWise also has **resources**.

In such a scenario, de-escalation techniques should be used. If it is not possible to de-escalate and the prescriber feels unsafe then the prescription of a small dose of BZRAs may be helpful in defusing the tension. In this instance it is important to emphasise that this script is strictly one-off and the aggressive behaviour is not welcome. Clinical reasoning should be documented clearly.

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**Useful resources and further information**

ACON and Network of Alcohol and other Drugs Agencies. AOD LGBTIQ Inclusive Guidelines for Treatment Providers: https://nada.org.au/resources/aod-lgbtiq-inclusive-guidelines-for-treatment-providers/.

National Mental Health Consumer & Carer Forum. Advocacy Brief – Culturally and Linguistically Diverse (CaLD) Mental Health: https://nmhccf.org.au/our-work/advocacy-briefs/culturally-and-linguistically-diverse-cald-mental-health.

Dudgeon P, Milroy H, Walker R, (eds). Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice: https://www.telethonkids.org.au/globalassets/media/documents/aboriginal-health/working-together-second-edition/working-together-aboriginal-and-wellbeing-2014.pdf.

NSW Health. Communicating positively: a guide to appropriate Aboriginal terminology: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2019_008.pdf.

NSW Centre for the Advancement of Adolescent Health and Transcultural Mental Health Centre. Adolescent Health GP Resource Kit 2nd Edition: https://www.health.nsw.gov.au/kidsfamilies/youth/Documents/gp-resource-kit-revised-2nd-edition.pdf.

NSW Health. Substance Use and Young People Framework: https://www.health.nsw.gov.au/aod/professionals/Publications/substance-use-young-framework.pdf.

NSW Health. NSW Youth Health Framework: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2017_019.pdf.

Screening tools to screen patients for substance use. SBIRT, CRAFFT AUDIT: https://www.sbirt.care/tools.aspx.

Youth Support + Advocacy Service. Youth Drug and Alcohol Advice for Professionals: https://ysas.org.au/for-professionals-1.

National Health and Medical Research Council (NHMRC). Australian guidelines to reduce health risks from drinking alcohol: https://www.nhmrc.gov.au/health-advice/alcohol.

Deprescribing guide for benzodiazepines and z drugs: https://www.nswtag.org.au/wp-content/uploads/2018/06/1.1-Deprescribing-Guide-for-Benzodiazepines-and-Z-Drugs.pdf.

NSW Health. Take Home Naloxone training site: https://www.health.nsw.gov.au/aod/programs/Pages/naloxone-public-health-services.aspx#bookmark2.

# Glossary of terms

## Acronyms & Abbreviations

| | |
|---|---|
| AA | Alcoholics Anonymous |
| ABV | alcohol by volume |
| AHPRA | Australian Health Practitioner Regulation Agency |
| ALO | Aboriginal Liaison Officer |
| AOD | alcohol and other drug |
| ASSIST | Alcohol, Smoking and Substance Involvement Screening Test |
| AUDIT and AUDIT-C | Alcohol Use Disorders Identification Test |
| AWS | alcohol withdrawal scale |
| BD | twice a day |
| BZRA | benzodiazepine receptor agonists |
| CALD | Culturally and Linguistically Diverse |
| CBD | Cannabidiol |
| CCCP | Continuing Coordinated Care Program |
| CIWA-Ar | Clinical Institute Withdrawal Assessment of Alcohol Scale revised |
| CIWA-B | Clinical Institute Withdrawal Assessment Scale – Benzodiazepines |
| CMA | Crystal Meth Anonymous |
| CNS | central nervous system |
| COWS | Clinical Opiate Withdrawal Scale |
| D&A | drug and alcohol |
| DASAS | Drug and Alcohol Specialist Advisory Service |
| DSM 5 | Diagnostic and Statistical Manual 5th Edition |
| DT | delirium tremens |
| DV | domestic violence |
| ED | emergency department |
| FBC | full blood count |

| | |
|---|---|
| FDS | Family Drug Support |
| FSH | follicle-stimulating hormone |
| GHB | gamma hydroxybutyrate |
| GI | gastrointestinal |
| HBV | hepatitis B virus |
| HCL | hospital consultation liaison |
| HCV | hepatitis C virus |
| HIV | human immunodeficiency virus |
| ICD-11 | International Classification of Diseases 11th Revision (World Health Organisation) |
| ICU | intensive care unit |
| IRIS | Indigenous Risk Impact Screen |
| LFTs | liver function tests |
| LH | luteinizing hormone |
| LHD | local health district |
| MDMA | Methylenedioxy Methamphetamine |
| MR | modified release |
| MRG | Mandatory Reporter Guide |
| NA | Narcotics Anonymous |
| Nocte | at night |
| NUAA | NSW Users and AIDS Association |
| ODDE | oral daily diazepam equivalence |
| oMEDD | oral Morphine Equivalent Daily Dose |
| QID | four times a day |
| RACGP | Royal Australian College of General Practitioners |
| PHN | Primary Health Network |
| PRN | as required |
| TDS | three times a day |
| TGA | Therapeutic Goods Administration |
| SDS | Severity of Dependence Scale |
| SMART | Self Management and Recovery Training |
| SOWS | Subjective Opiate Withdrawal Scale |

| | |
|---|---|
| STI | sexually transmitted infection |
| SUPPS | Substance Use in Pregnancy and Parenting Services |
| TB | tuberculosis |
| THC | Tetrahydrocannabinol |
| UEC | urea electrolytes and creatinine |

## Glossary

**Alcohol Withdrawal Scale (AWS)** – A tool to measure alcohol withdrawal severity.

**Ambulatory** – Treatment in which the patient attending a clinic or hospital from home without an overnight stay. Also known as 'outpatient' treatment.

**Abstinence** – Refraining from drug and alcohol use at all times.

**Amphetamine** – A central nervous system stimulant drug affecting the central and peripheral nervous systems, and causing an efflux of neurotransmitters (dopamine, serotonin and noradrenaline) in the brain. The term includes three types of amphetamines: amphetamine, dexamphetamine and methamphetamine.

**Buprenorphine** – a partial opioid agonist medication.

**Benzodiazepine receptor agonists (BZRA)** – A class of drugs that act on the central nervous system, increasing GABA binding and chloride ion channel opening. They facilitate inhibitory activity and have hypnotic, anxiolytic, anticonvulsant and muscle relaxant properties.

**Cannabis** – The generic name given to the psychoactive substances found in the plant Cannabis *sativa* and *Cannabis indica*. Cannabis is made from the dried flowering heads and leaves of the plant. The main active constituents in cannabis are tetrahydrocannabinol (THC) and cannabidiol (CBD).

**Cocaine** – A powerful central nervous system stimulant derived from the coca plant, used non-medically to produce euphoria or wakefulness. Often sold as white, translucent, crystalline flakes or powder.

**Community settings** – Non-residential treatment provided without requiring overnight stays. It can be home-based (with clinicians visiting the patient's home) or ambulatory/outpatient (with the patient attending at a clinic or medical centre).

**Comorbidity / coexisting condition** – In the context of withdrawal management, refers to a person who has coexisting substance use and mental health or physical health problems.

**Continuing care** – In the context of withdrawal management, continuing care means managing the transition to post-withdrawal care. Continuing care includes referral to counselling, maintenance treatment, self-help groups and family services.

**Craving** – A very strong desire for a substance, or for the intoxicating effects of that substance.

**Delirium Tremens / Alcohol withdrawal delirium** – An acute confused state occurring during withdrawal from alcohol, characterised by rapid pulse, clouding of consciousness, dehydration, delirium, elevated body temperature, sweating, extreme fear, hypertension, tachycardia, tremor and hallucinations.

**Dependence** – A disorder of regulation of psychoactive substance use arising from repeated or continuous use. The characteristic feature is a strong internal drive to use the substance, which is manifested by impaired ability to control use, increasing priority given to use over other activities and persistence of use despite harm or negative consequences. These experiences are often accompanied by a subjective sensation of urge or craving to use the substance.

**Depressant** – Any substance that suppresses, inhibits or decreases some aspects of central nervous system activity. The main classes of central nervous system depressants are sedatives/hypnotics, opioids and neuroleptics.

**Gabapentinoids** – The gabapentinoids (pregabalin and gabapentin) are GABA analogues. Gabapentinoids are approved for the treatment of neuropathic pain in adults, and some seizure disorders. These medicines are also prescribed off label for anxiety. The desired effects of recreational use of gabapentinoids include sedation, euphoria, hallucinations, disinhibition and dissociation.

**Gamma hydroxybutyrate (GHB) / gamma butyrolactone (GBL)** – A central nervous system depressant, that acts on GABA-B and GHB receptors in the brain. Lower doses produce stimulant-like effects including euphoria, disinhibition and increased libido, however, supra-therapeutic doses can lead to profound CNS and respiratory depression. Gamma-butyrolactone (GBL) is known as a precursor to GHB as it converts to GHB once ingested. In NSW over the past 2 years, surveillance data indicates that use is mostly GBL and is almost never GHB.

**Inpatient** – Treatment provided to a patient admitted to a hospital bed, whether a specialised withdrawal unit or a general hospital ward.

**Intoxication** – The condition resulting from use of a psychoactive substance that produces behaviour and/or physical changes.

**Methadone** – A synthetic opioid drug.

**Methamphetamine** – The most common illicit amphetamine, available in powder, base or ice form.

**Methylenedioxy methamphetamine (MDMA)** – A synthetic psychostimulant drug that effects on the central nervous system. More commonly known as ecstasy.

**Naloxone** – An opioid-receptor antagonist that reverses the features of opioid intoxication. It is often used for the treatment of opioid overdose.

**Opioid** – The generic term applied to alkaloids from the opium poppy, as well as their synthetic analogues and compounds synthesised within the body.

**Outpatient** – Treatment provided to a patient in a clinic or medical centre setting. Patients are not admitted to hospital and do not stay overnight.

**Overdose** – Can occur when a person has taken more of a substance than the recommended therapeutic dose or an amount that exceeds their tolerance, whether intentionally or by accident. Overdose may result in a substantially reduced level of consciousness, seizure, coma or death.

**Psychostimulants** – A class of drug affecting the central and peripheral nervous systems, and causing an efflux of neurotransmitters (dopamine, serotonin and noradrenaline) in the brain. The psychostimulants most commonly used illicitly in Australia are methamphetamines, ecstasy and cocaine.

**Relapse** – A return to substance use after a period of abstinence.

**Residential** – Treatment provided at a residential facility, usually operated by a non-government organisation. Residential settings often do not have medical or nursing coverage.

**Stimulants** – Any agent that activates, enhances or increases neural activity of the central nervous system. Stimulants include the amphetamines, cocaine, caffeine and nicotine.

**Tolerance** – A decrease in response to a drug dose that occurs with continued use. Increased doses of the substances are required to achieve the effect originally produced by lower doses.

**Wernicke's encephalopathy** – An acute, life-threatening, neurological syndrome consisting of confusion, palsies of the ocular muscles and of gaze (nystagmus), peripheral neuropathy and ataxia. Its most common cause is thiamine (vitamin B1) deficiency, often associated with long-term excessive use of alcohol. If not treated immediately with thiamine, the patient is likely to progress to a permanent amnesic syndrome (Korsakoff's psychosis). In some cases, fatality can occur. NB: Always ensure thiamine is given before glucose if there is any suspicion of Wernicke's encephalopathy.

**Withdrawal** – Signs and symptoms associated with cessation of a substance on which a person is dependent.

**Withdrawal syndrome** – Withdrawal is a clinically significant cluster of symptoms, behaviours and/or physiological features, varying in degree of severity and duration, that occurs upon cessation or reduction of use of a substance in individuals who have developed dependence or have used the substance for a prolonged period or in large amounts.

# Appendix List

12

# Appendix 1. Implementation/Compliance Checklist

| Organisation / Facility: | |
|---|---|

| Assessed by: | Date of Assessment: | | |
|---|---|---|---|
| **Key Requirements** | **Not commenced** | **Partial compliance** | **Full compliance** |
| | ❑ | ❑ | ❑ |
| | Notes: | | |
| | ❑ | ❑ | ❑ |
| | Notes: | | |
| | ❑ | ❑ | ❑ |
| | Notes: | | |
| | ❑ | ❑ | ❑ |
| | Notes: | | |
| | ❑ | ❑ | ❑ |
| | Notes: | | |
| | ❑ | ❑ | ❑ |
| | Notes: | | |

# Appendix 2. Contributors

**Table 1: Expert Steering Committee membership**

| Name | Organisation |
|---|---|
| Dr Anthony (Tony) Gill (Chair) | NSW Chief Addiction Medicine Specialist, Ministry of Health;<br>Clinical Director, Alcohol and Other Drugs, Southern NSW Local Health District (LHD). |
| Professor Apo Demirkol | Senior Staff Specialist Addiction Medicine/ Medical Unit Manager, Drug and Alcohol Services, South East Sydney LHD. |
| Professor Paul Haber | Clinical Director, Drug Health Services, Sydney LHD<br>Head of Specialty of Addiction Medicine, University of Sydney |
| Dr Bronwyn Hudson | GP and Senior Medical Officer, Northern NSW Drug and Alcohol Service, Northern NSW LHD. |
| Dr Suzie Hudson | Clinical Director, Network of Alcohol and Drug Agencies. |
| Dr Johnathan Ho | GP Liaison Officer, Murrumbidgee Primary Health Network. |
| Louise Keane | CNC Drug and Alcohol Services, RNSH Drug and Alcohol Inpatient Unit and Involuntary Drug and Alcohol Treatment Program, Northern Sydney LHD. |
| Lee Lawrence | Service Manager, Kedesh Rehabilitation Services |
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| Associate Professor Bridin Murnion | Senior Staff Specialist, Drug & Alcohol Services, Western Sydney LHD; Senior Staff Specialist, Clinical Pharmacology and Toxicology, St Vincent's Hospital Sydney<br>Clinical Associate Professor, Faculty of Medicine and Health, University of Sydney |
| Dr Craig Sadler | Conjoint Senior Lecturer University of Newcastle<br>Senior Staff Specialist Addiction Medicine and Director, Alcohol and Drug Unit, Calvary Mater Newcastle Hospital, Hunter New England LHD |
| Carolyn Stubley | Nurse Manager, We Help Ourselves (WHOS) |
| Dr Kathryn Watson | Addiction Psychiatrist<br>NSW Director of Advanced Training (Addiction Psychiatry)<br>Faculty of Addiction Psychiatry, RANZCP |

# Appendix 2. Contributors (cont.)

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**Table 2: Consultative group**

| Name | Organisation |
|---|---|
| Gerard Byrne | Operations Manager, Recovery Services, The Salvation Army |
| Michele Campbell | Group Manager Clinical (NSW), Lives Lived Well (Lyndon) |
| Dr Chris Davis | General Practitioner, East Sydney Doctors and Chief Medical Officer, Clean Slate Clinic |
| Judith Fraser | Clinical Nurse Consultant, D&A Service, Nepean Blue Mountains LHD |
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| Andrew Tracey | Clinical Nurse Specialist, Freeman House drug and alcohol treatment program, St Vincent de Paul |

# Appendix 2. Contributors (cont.)

**Table 3: Section authors**

| Name | Organisation |
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| Specific population: Aboriginal people | Bradley Freeburn, Dr Kate Conigrave, and Kylie Lee |
| Specific population: Adolescents and Young Adults | Dr Bronwyn Milne and Ms Gabriella Holmes |
| Alcohol | Professor Paul Haber |
| Cannabis | Professor Nick Lintzeris |
| Psychostimulants | Professor Nadine Ezard and Dr Anthony Gill |
| Opioids | Assoc Professor Bridin Murnion and Dr Craig Sadler |
| GHB | Dr Merissa Cappetta |
| Gabapentinoids | Dr Chris Tremonti |
| Benzodiazepine Receptor Agonists | Dr Apo Demirkol and Dr Bronwyn Hudson |
| Trauma-informed care | Dr Kathy Watson |

# Appendix 3. Options for continuing care post-withdrawal

### *Counselling and group programs*

These include free or fee-charging services provided by government, non-government and private organisations.

### *Peer based programs*

There are two main types of peer-based programs.

One is modelled on the 12 step program developed by **Alcoholics Anonymous** (AA) and includes **Narcotics Anonymous** (NA), **Crystal Meth Anonymous** (CMA), **Gamblers Anonymous** and so on. They are based on the belief that total abstinence is the only way to recovery. People interested in attending need to be motivated to attend meetings and become part of the program.

The SMART (**Self Management and Recovery Training**) program is another self help meeting-style program available in Sydney and other parts of NSW. It is an evidence-based program structured around the principles of cognitive behavioural therapy and motivational therapy. Groups are led by trained peers and/or professional counsellors and are not faith-based.

There is no formal referral process to peer-based programs and patients can be advised to make contact with a functioning group in their area.

### *Support for families*

Involving family and carers in treatment may improve outcomes. Support services for families and carers benefit both the patients and the families. Services include **Family Drug Support** (FDS) and **Al Anon** (for people affected by someone's alcohol use).

### *Rehabilitation programs*

Government and private rehabilitation programs include outpatient programs and live-in programs. The length, philosophy, cost, assessment procedures, target groups (exclusions) and support afterwards all vary. As with most service providers, the agencies will want to speak to the person being referred before offering them a place. Programs run for periods ranging from three weeks to more than a year. Patients should be advised of any waiting times and clinicians should work with patients to identify and minimise risks during this period.

Information on accessing rehabilitation programs can be found on the NSW Health website: **www.health.nsw.gov.au/aod**

### *Other programs*

Individuals with moderate to severe substance use disorders who have complex needs can be referred to other NSW Health-funded programs.

The **Continuing Coordinated Care Program** (CCCP) aims to help people stay in alcohol and other drug treatment by providing intensive support. Participants are provided with living skills support and clinical care linkages as well as family and community connections. Referrals can be made by AOD clinicians directly to the organisations providing the treatment **https://www.health.nsw.gov.au/aod/resources/Pages/ccc-program-factsheet.aspx**

**Assertive Community Management** is a multi-disciplinary program providing care-coordination and support for people who have chronic drug or alcohol problems plus a chronic physical health issue with significant social issues (e.g. accommodation and housing, social isolation, vocational re-training). Access to the program is via the **Local Health District's drug and alcohol intake line**.

# Appendix 4. Providing culturally competent care for Aboriginal patients

## How to improve the skills and capacity of mainstream services to provide culturally competent care

Cultural awareness training can help refine cross-cultural skills of staff and help them become aware of their own assumptions and beliefs. Ongoing openness to continued learning about Aboriginal culture is needed.

Mainstream drug and alcohol treatment services can enhance their ability to meet the needs of Aboriginal clients by:

- Drawing on the expertise of local Aboriginal community-controlled services to inform appropriate care, including withdrawal screening, assessment, planning, engagement and follow-up.
- Forming relationships with Aboriginal services, including regular communication. Consider formalising these through a Memorandum of Understanding.
- Increasing the employment of Aboriginal staff at all levels (ranging from cleaners and specialist Aboriginal drug and alcohol workers, to nurses, doctors and/or managers).
- Considering the use of culturally specific tools where available.

In addition, strong links between Aboriginal and mainstream services can help ensure greater access to withdrawal management services for Aboriginal Australians. These can also ensure good aftercare. Some withdrawal management services offer streamlined intake systems for patients referred from Aboriginal community-controlled health services so as to reduce barriers to service entry.

There are several Aboriginal residential rehabilitation units in NSW. These are listed below, together with the Aboriginal land on which they are located:

- Orana Haven Drug and Alcohol Rehabilitation Centre, Gongolgon (Ngemba).
- The Glen Centre, Chittaway Point (Darkinjung).
- Weigelli Centre, Cowra (Wiradjuri).
- Maayu Mali, Moree (Kamilaroi).
- Oolong House, Nowra (Dharrawal).
- Namitjira Haven, Alstonville (Bundjalung).

Try to strengthen relationships with these Aboriginal-specific services, including through regular communication.

## Aboriginal communities: Useful resources and contacts

**ADAN:** The Aboriginal Drug and Alcohol Network, NSW Inc: based at the Aboriginal Health and Medical Research Council of NSW (AH&MRC). This group represents Aboriginal health professionals working in the drug and alcohol field from across NSW. Its leadership group represents Aboriginal professionals from each geographic region of NSW.

**ADIS** (Alcohol and Drug Information Service): phone 1800 422 599; 02 9361 8000.

**ARRHDAN:** Aboriginal Residential Rehabilitation Healing Drug and Alcohol Network, the peak group formed by the Aboriginal residential rehabilitation services in NSW. Contact via ADAN or AH&MRC.

**Alcohol Awareness Kit:** a visual alcohol brief intervention resource. Available for download from the University of Sydney at **https://ses.library.usyd.edu.au/bitstream/handle/2123/8779/66933%20Alcohol%20A4%20Booklet%20V20%202017%20edits_no%20printers%20marks.pdf?sequence=7&isAllowed=y**

**Handbook for Aboriginal Alcohol and other Drug Work:** Lee et al, University of Sydney, 2012. Available at: **http://hdl.handle.net/2123/8339**

Aboriginal and Torres Strait Islander Australians, in Haber PS, Riordan BC. **Guidelines for the Treatment of Alcohol Problems** (4th edition). Sydney: Specialty of Addiction Medicine, Faculty of Medicine and Health, The University of Sydney. [Internet]. 2021. Available from: https://alcoholtreatmentguidelines.com.au/pdf/guidelines-for-the-treatment-of-alcohol-problems.pdf.

**Alcohol and other drug treatment for Aboriginal and Torres Strait Islander peoples:** National Indigenous Drug and Alcohol Committee (NIDAC; 2014) Available at: **https://healthinfonet.ecu.edu.au/healthinfonet/getContent php?linkid=592238&title=Alcohol+and+other+drug+treatment+for+Aboriginal+and+Torres+Strait+Islander+peoples**.

# Appendix 5. Screening

Ask the patient the questions about the quantity and frequency of substance use as follows:

In the last month have you:

- Smoked tobacco or vaped?
- Consumed alcohol on 4 days or more in a week or had 6 or more standard drinks on one occasion?
- Used any recreational drugs?
- Taken medication for pain, anxiety/stress or sleeping problems?
- Used any other substances?

If 'yes' to any of the above, then clarify:

- How frequently have you used the substances you have identified?
- When did you last use this drug, smoke tobacco/vape or drink alcohol?
- How do you take the drug or alcohol? (e.g. drink, inject, snort, smoke, vape)
- Have you ever overdosed or experienced withdrawal symptoms?
- Have you ever attended a drug or alcohol service for treatment for your alcohol or drug use?

The clinician should:

- Document the results of the screen, including the quantities of substances a person is using, or has used.
- Ask the patient if they are using more than one drug at a time, as polysubstance use can significantly increase the risk involved.
- Use the results of the screening to take action as required.
- Avoid duplicating the screening undertaken by other clinicians during the admission.

Some screening tools commonly used include:

- Alcohol Use Disorders Identification Test (**AUDIT**) (**AUDIT-C**).
- **Indigenous Risk Impact Screen** (IRIS).
- **Substance and Choices Scale** (for ages 13-18).
- Alcohol, Smoking and Substance Involvement Screening Test (**ASSIST**) (short and long version).
- **Severity of Dependence Scale** (SDS)

# Appendix 6. Community-based alcohol withdrawal regimen

### *Prior to commencing withdrawal*

Undertake an initial consultation that includes a comprehensive drug and alcohol assessment including risk assessment.

Give the patient, and where possible the carer, information and advice on:

- Expected symptoms and course of withdrawal.
- Possible complications, and measures that should be taken if complications do arise.
- The medication (diazepam) to be used, its side effects (ie sedation, incoordination, disinhibition, respiratory depression, impaired driving capacity) and the added risks if combined with alcohol.

### *Medication*

The standard therapeutic regimen involves regular and reducing doses of diazepam over 2-6 days and thiamine for 1-2 weeks.

An example of a medication regimen for alcohol withdrawal in a community setting is in Table 1 below. Tailor the diazepam dose to the patient's needs – the aim is to control withdrawal symptoms without over-sedation. Milder cases may respond to lower doses (half of the example regimen).

Supply only 24 hours of medication at a time, as self-medication presents a risk during alcohol withdrawal, particularly when there is minimal supervision. Inform patients of the risks of self-medication (e.g. overdose, undiagnosed complications, failure to complete withdrawal).

Thiamine is to be provided to prevent Wernicke's encephalopathy. For an otherwise healthy person with good dietary intake, administer oral thiamine 100 mg three times daily for 3 to 5 days, followed by 100 mg oral thiamine for a further 4 to 9 days (for a total of 1 to 2 weeks of oral thiamine).

### *Initiating withdrawal treatment*

On the morning that withdrawal commences, assess the patient for early withdrawal symptoms, intoxication, or alcohol consumption in the past eight hours. Intoxication or alcohol consumption within the past eight hours are contraindications to commencing treatment. Take baseline vital signs.

### *Monitoring and review*

A medical practitioner or nurse is to review the patient each day for the first three or four days. Additional telephone contact in the first one or two days may be helpful. The medical practitioner or nurse should continue daily or second-daily contact with the patient until withdrawal is completed.

If a patient deteriorates, they should return to the outpatient clinic for review and consideration of the need for inpatient care. If outside of clinic hours, the patient should present to the Emergency Department or call an ambulance if severely unwell.

### Table 1: Ambulatory alcohol withdrawal regimen

| Day | Intervention |
|---|---|
| Day 1 | Assess the patient: Baseline temperature, blood pressure, heart rate.<br>Prescribe 10 mg diazepam six hourly. Provide 24 hours supply to commence after the patient arrives home from attending the consultation. Supply 300 mg oral thiamine |
| Day 2 | Review by medical practitioner or nurse: temperature, blood pressure, heart rate.<br>Prescribe 10 mg diazepam to be taken eight hourly, with 24 hours supply provided.<br>Supply 300 mg oral thiamine. |
| Day 3 | Review by medical practitioner or nurse: temperature, blood pressure, heart rate.<br>Prescribe 10 mg diazepam to be taken morning and night, with 24 hours supply provided.<br>Supply 300 mg oral thiamine |
| Day 4 | Review patient by phone or in person. Prescribe 5 mg diazepam morning and night, provide 24 hours supply. |
| Days 5 | 5 mg diazepam at night. Diazepam should not normally be continued beyond 6 days. |

# Appendix 7. Withdrawal scales

Withdrawal scales provide a systematic measure of the severity of uncomplicated withdrawal by recording changes over time. Withdrawal scales do not override clinical judgement.

Some withdrawal scales commonly used include:

## Clinical Institute Withdrawal Assessment of Alcohol Scale - Revised (CIWA-Ar)

https://insight.qld.edu.au/shop/clinical-institute-withdrawal-assessment-of-alcohol-scale-revised-ciwa-ar-insight-2019

## Alcohol Withdrawal Scale

https://www.health.nsw.gov.au/aod/professionals/Documents/appendices.pdf

https://adis.health.qld.gov.au/sites/default/files/resource/file/Withdrawal%20Scale%20-Alcohol.pdf

## COWS (opioids)

https://www.health.nsw.gov.au/aod/professionals/Documents/appendices.pdf

https://insight.qld.edu.au/shop/clinical-opiate-withdrawal-scale-cows-insight-2019

## SOWS (opioids)

https://insight.qld.edu.au/shop/subjective-opiate-withdrawal-scale-sows-insight-2019

## Cannabis Withdrawal Assessment Scale

https://www.health.nsw.gov.au/aod/professionals/Documents/appendices.pdf

https://insight.qld.edu.au/shop/cannabis-withdrawal-scale-cws-insight-2019

## Amphetamine Withdrawal Questionnaire

https://insight.qld.edu.au/shop/amphetamine-withdrawal-scale-aws-2019

https://www.smartcjs.org.uk/wp-content/uploads/2015/07/AmphetamineWithdrawalScale.pdf

## Clinical Institute Withdrawal Assessment – Benzodiazepine

https://insight.qld.edu.au/shop/clinical-institute-withdrawal-assessment-scale-benzodiazepines-ciwa-b-insight-2019

https://www.smartcjs.org.uk/wp-content/uploads/2015/07/CIWA-B.pdf

NSW GOVERNMENT Health

**Location:**

# DRUG AND ALCOHOL SERVICE WITHDRAWAL MODULE

| | |
|---|---|
| FAMILY NAME | MRN |
| GIVEN NAME | ☐ MALE ☐ FEMALE |
| D.O.B. _____ / _____ / _____ | M.O. |
| ADDRESS | |
| LOCATION | |

COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE

SMR060494

Holes Punched as per AS2828.1: 2012

BINDING MARGIN - NO WRITING

## Withdrawal Assessment

Identify current substance use and the proposed treatment plan in this impending withdrawal episode (include pharmaceutical drugs)

| Substances withdrawing from | Details |
|---|---|
| ☐ Alcohol | |
| ☐ Cannabis | |
| ☐ Heroin | |
| ☐ Pharmaceutical opioids | |
| ☐ Methadone | |
| ☐ Buprenorphine | |
| ☐ Cocaine | |
| ☐ Amphetamine type substance | |
| ☐ Benzodiazepines | |
| ☐ Nicotine | |
| ☐ Other | |

| Medications stabilising on | Details |
|---|---|
| ☐ Benzodiazepines | |
| ☐ Methadone | |
| ☐ Buprenorphine | |
| ☐ Pharmaceutical opioids | |
| ☐ Dexamphetamine | |
| ☐ NRT | |
| ☐ Other | |

**Substances recently used**



## Withdrawal management history

**Previous withdrawal attempts**
(for clients with multiple prior attempts, focus on most recent attempts first)

| Date | Substance | Setting (ambulatory, inpatient, residential, custody) | Completed Yes/No | Post treatment and outcomes (e.g. periods of abstinence) |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

DRUG AND ALCOHOL SERVICE WITHDRAWAL MODULE

SMR060.494

NH700267 150517

MARGIN - NO WRITING

NSW GOVERNMENT Health

**Facility:**

# DRUG AND ALCOHOL SERVICE WITHDRAWAL MODULE

| | |
|---|---|
| FAMILY NAME | MRN |
| GIVEN NAME | ☐ MALE ☐ FEMALE |
| D.O.B. _____ / _____ / _____ | M.O. |
| ADDRESS | |
| | |
| LOCATION / WARD | |

COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE

## Withdrawal complications

Describe any of the following conditions during previous withdrawal attempts. Identify when, which substance(s) withdrawing from and management/treatment received

| | |
|---|---|
| Seizures ☐ Yes ☐ No | **Comments** |
| Hallucinations/perceptual disturbances ☐ Yes ☐ No | |
| Delirium/confusion ☐ Yes ☐ No | |
| Severe agitation ☐ Yes ☐ No | |
| Harm to self or others ☐ Yes ☐ No | |

Other complications

## Circumstances that impact on withdrawal management

Describe impact of any of the following conditions upon withdrawal and post-withdrawal management

| Health | Details |
|---|---|
| Medical conditions ☐ Yes ☐ No | |
| Mental health conditions ☐ Yes ☐ No | |
| Pain conditions ☐ Yes ☐ No | |
| Pregnancy ☐ Yes ☐ No | |
| Harm to self or others ☐ Yes ☐ No | |





NO WRITING

NSW GOVERNMENT Health

**Location:**

# DRUG AND ALCOHOL SERVICE WITHDRAWAL MODULE

| | |
|---|---|
| FAMILY NAME | MRN |
| GIVEN NAME | ☐ MALE ☐ FEMALE |
| D.O.B. _____ / _____ / _____ | M.O. |
| ADDRESS | |
| | |
| LOCATION | |

COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE

SMR060494

| **Social** | **Details** |
|---|---|
| Suitable accommodation<br>☐ Yes ☐ No | |
| Substance use in home environment<br>☐ Yes ☐ No | |
| Responsible adult for support during withdrawal identified<br>☐ Yes ☐ No | |
| Transport issues<br>☐ Yes ☐ No | |
| Child care issues<br>☐ Yes ☐ No | |
| Carer responsibilities<br>☐ Yes ☐ No | |

**Treatment plan**

| **Client preferred setting** | **Reason for choice** |
|---|---|
| ☐ Ambulatory ☐ Residential | |

**Describe plans for services following withdrawal and identify if none are in place**

| **Recommended plan** | **Withdrawal episode setting** |
|---|---|
| ☐ Requires further assessment/planning<br>☐ Requires post withdrawal treatment plan/co-ordination before determining withdrawal management<br>☐ Hospital referral for admission<br>☐ Suitable to commence withdrawal episode | ☐ Ambulatory<br>☐ Residential<br>☐ Inpatient |

**Patient advised of commencement date**

☐ Yes ☐ No ☐ Date yet to be determined

Additional details





NH700267 150517

NSW GOVERNMENT Health

**Facility:**

## DRUG AND ALCOHOL SERVICE WITHDRAWAL MODULE

| | |
|---|---|
| FAMILY NAME | MRN |
| GIVEN NAME | ☐ MALE ☐ FEMALE |
| D.O.B. _____ / _____ / _____ | M.O. |
| ADDRESS | |
| | |
| LOCATION / WARD | |
| COMPLETE ALL DETAILS OR AFFIX PATIENT LABEL HERE | |

**Withdrawal Episode Setting Guide**

| | **Ambulatory** | **Community Residential** | **Inpatient Hospital** |
|---|---|---|---|
| **Predicted withdrawal severity** | Mild – Moderate | Mild – severe | Moderate – severe |
| **Likelihood of severe withdrawal complications** | Minor | Minor-High (Prior withdrawal seizures, hallucinations, DTs) | Mod-High (Prior/current withdrawal delirium, seizures of unclear cause) |
| **Medical or psychiatric comorbidity** | Minor comorbidity | Minor comorbidity | Significant comorbidity |
| **Other substance use** | No heavy/regular other drug use | Heavy or unstable use of other drugs | |
| **Social environment** | Alcohol/drug free 'home' Regular monitoring by reliable support people Emergency plans in place | Unsupportive home environment or not conducive to ambulatory withdrawal | |
| **Previous attempts** | | Repeated failure at ambulatory withdrawal | |

| | |
|---|---|
| Clinician Name: | Date __ __ / __ __ / __ __ Time _____ : _____ |
| Signature: | Designation |





NO WRITING

# Appendix 8. Consumption history

One way to increase accuracy is to obtain a retrospective substance use or consumption history. This involves asking about consumption over a typical week (or month) starting from today and working backwards. This may easily be recorded on a "consumption calendar". There is a degree of correlation between quantity consumed and the severity of withdrawal.

Obtain a general history of alcohol and drug use first, then attempt to identify daily patterns of alcohol and drug consumption from a retrospective consumption history.

Most people, with or without drug problems, are likely to underestimate or estimate inaccurately how much they use if asked the question: "On average how much do you use a day or a week?"

An accurate consumption history should record for each drug (whether prescribed or not):

- the quantity, frequency, duration and pattern of use;
- time and amount of last use;
- route of administration;
- recent pattern leading up to this presentation; and
- average daily consumption.

For prescribed medications, also record prescribed dose and prescribing doctor.

*How to take a retrospective consumption history:*

- Always ask about each drug group (eg, tobacco, alcohol, opioids, benzodiazepines, cannabis, amphetamines, cocaine, "club drugs").
- Start with most recent use. Ask "When did you last have anything to drink/use?"
- Ascertain how much was consumed at that time.
- Inquire back through that day: "What about during the day?"
- Link consumption to activities. "What were you doing during the day?" Then, for example, "How much did you drink/use when you went to your friends' house?"
- Examine consumption through each day for the past week.
- Then ask if that was a typical week's pattern. If not, ask specifically how it differed (ie, how much more or less of each drug than usual).
- Recording a complete consumption history is not always practical because of the context of the presentation, including the physical and mental state of the person in withdrawal.
- A common drug combination that should be noted is alcohol and benzodiazepines. These drugs produce cross-tolerance, and regular use of both can make withdrawal more severe and/or protracted.

The Australian Treatment Outcomes Profile (ATOP) is a drug and alcohol specific instrument that includes a 4 week retrospective substance use calendar. The ATOP tool can be found here: **https://www.seslhd.health.nsw.gov.au/australian-treatment-outcomes-profile**.

# ATOP

V7.2 March 2020

Surname: _____ MRN: _____
Given Names: _____
Date of Birth: ____/____/____ Sex: _____
*Affix Patient Label here*

**ATOP DATE** ___ /___ /_____ **MAIN SERVICE PROVIDED** _____ **CLINICIAN** _____

**Treatment stage:** ☐ Start of treatment ☐ Progress review ☐ Discharge ☐ Post Discharge
☐ N/A Client refused ☐ N/A Not clinically appropriate

## Section 1: Substance use

**Record number of days used in each of the past four weeks**

| | | *Typical qty on day used* | *Units* | **Week 4 (most recent)** | **Week 3** | **Week 2** | **Week 1** | **TOTAL** | **Not answered** |
|---|---|---|---|---|---|---|---|---|---|
| a | Alcohol | | Std drks | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |
| b | Cannabis | | | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |
| c | Amphetamine type substances (ice, MDMA etc.) | | | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |
| d | Benzodiazepines (prescribed & illicit) | | | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |
| e | Heroin | | | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |
| f | Other opioids (not prescribed methadone/buprenorphine) | | | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |
| g | Cocaine | | | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |
| h | (i)Other substance ..... | | | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |
| | (ii)Other substance ..... | | | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |
| e | Tobacco | | | 0-7 | 0-7 | 0-7 | 0-7 | 0-28 | ☐ |

**Record number of days client injected drugs in the past four weeks** (if no, enter zero and go to section 2)

| | | **TOTAL** | **Not answered** |
|---|---|---|---|
| j | Injected | 0-7 0-7 0-7 0-7 | 0-28 ☐ |
| k | Inject with equipment used by someone else? | Yes ☐ No ☐ Not answered ☐ | |

*Source: Lintzeris, N., Mammen, K., Holmes, J., Deacon, R., Mills, L., Black, E., Gardner, L., and Dunlop, A. (2020). Australian Treatment Outcomes Profile (ATOP) Manual 1: Using the ATOP with Individual clients. Retrieved from URL:www.seslhd.health.nsw.gov.au/australian-treatment-outcomes-profile*

### *If documenting a full consumption history is not practical:*

- obtain whatever substance use history is available from the patient, family, friends, or other sources, especially details of the last episode of use
- consider the possibility of polydrug use and record this possibility if concerned
- identify any signs of drug consumption and effects during physical examination
- consider urine or blood testing in most patients
- take a further consumption history when the patient is stable or when others are able to provide information

# Appendix 9. BBV testing follow up protocol

### Table 2.9: STI and BBV tests, results and actions

| Test | Results | Action |
|---|---|---|
| Hepatitis B | See table 2 | |
| Hepatitis C antibody | Positive | Request HCV RNA &, if positive, liver clinic review |
| HIV antigen/antibody | Positive | If you haven't already received a call from the **NSW HIV Support Program** request urgent local Sexual Health Service review or call NSW Sexual Health InfoLink 1800 451 624 |
| Gonorrhoea PCR | Positive | Collect specimen for culture & sensitivity; treatment per the **STI management guidelines** |
| Chlamydia PCR | Positive | Commence treatment per STI management guidelines |
| Syphilis | Positive RPR & positive TPPA or other treponemal test | Call NSW Sexual Health InfoLink 1800 451 624 and request urgent local **Sexual Health Service** review |

### Table 2.10 Hepatitis B results and actions

| | Susceptible | Immune – prior infection | Immune – prior vaccination | Chronic infection | Indeterminate |
|---|---|---|---|---|---|
| Action | Recommend vaccination | Advise past infection cleared | Advise HBV immune | Request GP or liver clinic review | Request GP or liver clinic review |

Information and advice on interpreting Hepatitis B Serology is available at the Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine (ASHM) portal: **http://testingportal.ashm.org.au/national-hbv-testing-policy/conveying-hepatitis-b-test-results/**

# Appendix 10. Intake lines for local health district drug and alcohol services

**Albury Wodonga Health Network:** (02) 6058 1800

**Central Coast:** (02) 4394 4880

**Far West:** 08 8080 1554

**Hunter New England:** 1300 660 059

**Illawarra Shoalhaven:** 1300 652 226

**Mid North Coast:** 1300 662 263

**Murrumbidgee:** 1800 800 944

**Nepean Blue Mountains:** 1300 661 050

**Northern NSW:** (02) 6620 7608 (Lismore) (02) 5506 7010 (Tweed Heads)

**Northern Sydney:** 1300 889 788

**South Eastern Sydney:** (02) 9332 8777 (Northern) (02) 9113 2944 (Central)

**South Western Sydney:** (02) 9616 8586

**Southern NSW:** 1800 809 423

**Sydney:** 1800 793 466

**Western NSW:** 1300 887 000

**Western Sydney:** (02) 9840 3355


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