

Drug and Alcohol Withdrawal Clinical Practice Guidelines - NSW

Summary To provide the most up-to-date knowledge and current level of best practice for the treatment of withdrawal from alcohol and other drugs such as heroin, and other opioids, benzodiazepines, cannabis and psychostimulants.

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NSW Drug and Alcohol Withdrawal Clinical Practice Guidelines

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1 Introduction

1.1 Background

The *New South Wales drug and alcohol withdrawal clinical practice guidelines* provide the most up to date knowledge and current level of best practice for the treatment of withdrawal, also called detoxification, from alcohol and other drugs such as benzodiazepines, heroin and other opioids, cannabis, and psychostimulants. The specific problems of polydrug use are addressed.

Specialist withdrawal services, hospitals, psychiatric units, and community health services in the NSW public health system (including non-government agencies funded by the NSW Department of Health) are required to adopt these guidelines.

These clinical practice guidelines update and supersede:

- NSW Department of Health (1999). *NSW detoxification clinical practice guidelines*. Sydney: State Health Publication Number (DTPU) 990049.

The new guidelines have been cross-referenced with:

- NSW Department of Health (2007). *Clinical guidelines for nursing and midwifery practice in NSW: identifying and responding to drug and alcohol issues*. Sydney: State Health Publication Number (MHD AO) 060187.

Drug withdrawal may occur in a predictable way in a withdrawal unit or it may occur unexpectedly in an acute care setting following an unplanned admission. The aim of this document is to assist three broad groups of clinicians to manage drug-dependent people experiencing withdrawal:

- Specialist withdrawal services that treat individuals on an outpatient and inpatient basis for drug withdrawal (see **Appendix A**).
- Hospitals, nursing homes, and other acute facilities that admit patients for primary medical problems and then are faced with an unexpected withdrawal syndrome.
- Primary care clinicians such as general practitioners, non-government agencies and community and welfare services that deal with people who may experience drug problems including withdrawal.

This document includes developments since the previous *NSW detoxification clinical practice guidelines* were published in 1999. The main changes and additions are:

- The term “detoxification” is no longer scientifically acceptable and the term “withdrawal management” has been adopted.
- Buprenorphine has been approved in Australia for the treatment of opioid (heroin) withdrawal and maintenance and this is now included.
- Cannabis dependence and cannabis withdrawal have been documented in recent literature, and are discussed in these guidelines.
- The chapter on psychostimulant use and withdrawal is also expanded in these guidelines, in accordance with a recent National Drug Strategy publication (Jenner and Saunders 2004).

The key concept in the management of withdrawal is patient safety. These guidelines are designed to allow clinicians to offer safe withdrawal management to dependent individuals.

1.2 Dependence, tolerance and withdrawal

Withdrawal occurs in drug-dependent people who stop or considerably reduce their drug use. The diagnosis of dependence is generally required to understand and manage drug withdrawal.

1.2.1 ICD-10 definitions

The *International classification of diseases* (ICD-10) contains the following definitions:

Dependence syndrome

A cluster of behavioural, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.

The dependence syndrome may be present for a specific psychoactive substance (eg, tobacco, alcohol, or diazepam), for a class of substances (eg, opioid drugs), or for a wider range of pharmacologically different psychoactive substances.

Withdrawal state

A group of symptoms of variable clustering and severity occurring on absolute or relative withdrawal of a psychoactive substance after persistent use of that substance. The onset and course of the withdrawal state are time-limited and are related to the type of psychoactive substance and dose being used immediately before cessation or reduction of use.

1.2.2 DSM-IV definitions

The *Diagnostic and statistical manual of mental disorders, fourth edition* (DSM-IV) contains the following definitions:

Substance dependence

A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:

- (1) **tolerance**, as defined by either of the following:
 - (a) a need for markedly increased amounts of the substance to achieve intoxication or desired effect
 - (b) markedly diminished effect with continued use of the same amount of the substance
- (2) **withdrawal**, as manifested by either of the following:
 - (a) the characteristic withdrawal syndrome for the substance
 - (b) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
- (3) the substance is often taken in larger amounts or over a longer period than was intended
- (4) there is a persistent desire or unsuccessful efforts to cut down or control substance use
- (5) a great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects
- (6) important social, occupational, or recreational activities are given up or reduced because of substance use
- (7) the substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

2 General principles of withdrawal management

Chapter summary

- Withdrawal management provides an opportunity for engagement, planning and coordination of post-withdrawal care.
 - Patients may present for elective withdrawal, present when already in withdrawal (crisis presentation), or commence withdrawal incidentally when in treatment for another condition.
 - A comprehensive assessment is the first step in managing the withdrawal process. It will define the risks that will confront the patient by identifying drug use and health issues for the patient and it will also identify specific needs that may interfere with successfully completing withdrawal. See *section 2.3*.
 - 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.
 - Try to match the patient with the withdrawal treatment approach that maximises patient safety and provides the most effective and most economical options for their management.
 - If possible, formalise a treatment agreement with the patient. The agreement may be verbal or written, and should not be used against the patient in a punitive manner.
 - Frequent observations of the patient are the mainstay of management. Assessment of clinical features, explanation, reassurance and repeated encouragement are provided at these times.
 - Medication is used in withdrawal to provide symptomatic relief, to treat complications and coexisting conditions, and to reduce the intensity of withdrawal.
 - The aim of supportive care is to minimise environmental stimuli that may exacerbate withdrawal symptoms and to enhance the patient's ability to complete withdrawal successfully.
 - Develop strategies to help the patient cope with the period after withdrawal, particularly if the patient required withdrawal management in hospital. Strategies for discharge should encourage harm reduction and referral to appropriate agencies.
 - The withdrawal state from some drugs may be complicated by convulsions, which may be life threatening.
-

2.1 Rationale and underlying principles for withdrawal management

When a person is dependent on a drug, withdrawal of the drug carries risks of physical harm, psychological trauma and (rarely) death. The aim of withdrawal management is to minimise the risks associated with withdrawal.

The **rationale** of withdrawal management is to provide the appropriate level of support for withdrawal to be completed safely, which then allows the individual to determine his or her optimal ongoing management strategy. An understanding of the pharmacology and physiology of withdrawal allows the use of appropriate medications to modify the withdrawal process, making it more tolerable and safe.

Underlying principles:

- Withdrawal management may be an opportunity to initiate lasting abstinence, but the primary goal is patient safety, not long-term abstinence.
- Withdrawal management services should not be withheld from people because of doubts about their commitment to long-term abstinence.
- Supportive care and patient choice are crucial to success. Supportive care should include attention to the patient's environment, the transfer of information, reassurance, attention to anxiety and assistance with the development of coping skills.
- The syndrome of withdrawal is monitored clinically and appropriate care is provided, which may range from counselling and support to the use of specific medications to ameliorate symptoms of withdrawal.
- Planning and coordinating post-withdrawal care is an integral part of treatment.

2.2 Presentation for withdrawal management

Patients present for withdrawal management with a mixture of attitudes and emotions. Some present in crisis. They may be suspicious of people in positions of authority as a result of previous experiences in a variety of settings, including the healthcare system. The initial assessment is an important opportunity to begin building an effective therapeutic relationship with the patient.

- Be non-judgemental, empathic and respectful.
- Listen and clearly elucidate the patient's 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 assistance is being offered and the reasoning behind it.

It is common for drug-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.

See **Appendix B** for guidelines on assessment and management of intoxication and overdose.

2.2.1 Elective presentations

The objective in managing those seeking elective withdrawal management is to balance the need for safety with patient choice and desirable outcomes.

In order of priority, this requires:

- identifying withdrawal risks
- assessing psychosocial factors
- matching safety requirements and psychosocial factors to treatment setting.

2.2.2 Crisis presentations (presenting in withdrawal)

Crisis presentations generally involve people who are already in withdrawal. The patient may present to a variety of settings (eg, emergency department, drug and alcohol unit, psychiatric service, correctional service, emergency accommodation centre, general practitioner, hospital ward).

The critical issues are:

- prompt identification of the withdrawal
- minimising the risk of complications
- managing withdrawal symptoms
- stabilising medical and psychiatric conditions.

2.2.3 Unplanned withdrawal

Some people in the care of a clinician for reasons other than withdrawal management may begin to undergo withdrawal. These people may be receiving acute care in a hospital or being assisted with psychiatric, medical or surgical problems in other settings.

Assessment for unplanned withdrawal is similar to that for crisis presentations.

Early detection of withdrawal and preventing the risks associated with withdrawal are the key considerations.

The key to effective management is coordinating withdrawal and other clinical care. Withdrawal may increase the expected hospital length of stay of the patient or require transfer to a more suitable setting.

2.2.4 Referral to withdrawal services

Alcohol Drug Information Service (ADIS)

ADIS is a 24-hour, 7-day phone service for people seeking information or assistance with drug or alcohol related issues. The telephone line also provides assessment, referral and brief counselling.

Alcohol Drug Information Service (ADIS)

9361 8000

1800 422 599 (outside Sydney)

Centralised intake lines

Each Area Health Service in NSW has a centralised intake telephone number which acts as the first point of contact for people seeking assistance for drug or alcohol problems. Callers may be assessed by telephone and referred to relevant services within the Area. Centralised intake lines operate Monday to Friday during business hours. Individual Area Health Service centralised intake lines are listed in **Appendix C**.

2.3 Assessment for withdrawal management

2.3.1 Primary aims of assessment

Assessment is the first step in managing drug and alcohol withdrawal. The primary aims are to:

- predict the risks that will confront the patient because of withdrawal
- identify the specific needs of the patient to enhance the likelihood of completing withdrawal (ie, to match treatment to patient needs)
- begin building a therapeutic relationship with the patient.

Clinicians should:

- take care to ensure that personal values and stereotypes do not interfere with effective assessment of the patient
- explain the purpose of each element of the assessment process to the patient
- seek the active involvement of the patient in planning treatment.

2.3.2 Key elements in assessment

Components of a comprehensive assessment are:

- full drug consumption history
- identifying risks associated with polydrug use
- identifying past history of withdrawal and any associated complications
- medical and psychiatric history
- physical examination
- mental state examination
- appropriate laboratory investigations

- psychosocial assessment to identify expectations, supports, barriers and preferences that may influence withdrawal management
- formulating a management plan.

Psychosocial assessment may be deferred if the patient is unwell, but it will serve to assist in planning future care and in determining treatment options.

Note: In some circumstances the advice or assistance of a drug and alcohol specialist, or other specialist, may be required.

2.3.3 Full consumption history

Obtain a description of consumption over a typical week (or month). This may easily be recorded on a "consumption calendar" (see **Appendix D**). 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?"

Recording consumption history

An accurate consumption history should record, for each drug (whether prescribed or not prescribed):

- 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.

For prescribed medications, also record prescribed dose and prescribing doctor.

2.3.4 Brief consumption history

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.

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.

2.3.5 Street names and prices of drugs

Drugs, their street names and prices vary across the country. This table should be used as a rough guide only.

| Drug | Street names | Approximate street price |
|---|---|---|
| Alcohol | grog, piss, cans, six pack, long necks, slabs, casks | N/A |
| Benzodiazepines | benzos, pills, jack & jills, downers, seras, rowies | Depends on type and dose (mg) |
| Heroin | smack, hammer, h, gear | \$50 a cap \$300 gram/weight |
| Methadone syrup Physeptone tablets | 'done | 50 cents per mL |
| Morphine Oxycodone Oxycontin | oxy | \$25 per 100 mg \$10–\$40 |
| Buprenorphine | bupe | N/A |
| GHB (gamma-hydroxybutyrate) | fantasy, grievous bodily harm, liquid ecstasy, liquid e | \$5 for 1ml \$25 for a vial |
| Cannabis/marijuana <i>Bush: medium strength</i> <i>Hydro: high strength</i> | grass, pot, gunja, reefer, joint, yarndi <i>Implements: bong, cone</i> | Bush: \$20 gram, \$300 ounce Hydro: \$20 gram, \$200 ounce |
| Amphetamines | | |
| Amphetamine/methamphetamine powder | speed, gooey, uppers, whiz, velocity | \$50–\$90 gram |
| Methamphetamine base (stronger than powder) | base, paste, wax, pure, point, red liquid speed, liquid red, ox blood | \$50 a point (0.1gm) \$160 per gram |
| Methamphetamine ice (stronger than base) | crystal, crystal meth, shabu, yaabaa, point | \$50 a point (0.1gm) \$360 gram |
| Cocaine | coke, c, snow, nose candy, okey-doke crack, free base | \$50 a cap, \$280 a gram N/A |
| Ecstasy/MDMA (methylenedioxymethamphetamine) | xtc, eccy, E, pills | \$30 a tablet |
| LSD (lysergic acid diethylamide) | trips, acid | \$20 a tablet |
| Magic mushrooms | golden top mushrooms, magic mushies | |
| Ketamine | special k, k, vitamin k | \$100 a gram |
| PCP (phencyclidine) | angel dust, super weed, killer weed | N/A |

Sources:

Sunjic S, Mabbutt J. Street Drug Tables 1995-2005; NDARC Drug Fact sheets; NSW Department of Health Drug Fact Sheets; ADF Drug Fact Sheets; Psychostimulants information for health care workers (QLD Health 2006); NDARC NSW Drug Trends 2005; NSW Ecstasy and Related Drug Trends 2005; NUAA.

2.3.6 Consumption calculations

Alcohol

Record average daily consumption in grams of alcohol.

Amount of alcohol in common drink measures and containers

| | Container size | Type of container | Alcohol content |
|-------------------------------------|----------------|--|-----------------|
| Beer | 285 mL | Middy | 10 g |
| | 427 mL | Schooner | 15 g |
| | 375 mL | Can/stubby (6 = six pack) | 14 g |
| | 750 mL | Large bottles (long neck) | 28 g |
| | 1 carton | 24 cans/stubbies(slab) or 12 large bottles | 336 g |
| Table wine | 100 mL | Standard glass | 10 g |
| | 750 mL | Bottle | 60–80 g |
| | 1 L | Cask | 100 g |
| | 4 L | Cask | 400 g |
| Fortified wine (eg, port, sherry) | 60 mL | Standard glass | 10 g |
| | 750 mL | Bottle | 120 g |
| Spirits (eg, whisky, brandy, vodka) | 30 mL | Nip | 10 g |
| | 750 mL | Bottle | 240 g |

Note: Light beer usually has about half the alcohol content of normal beer.

Benzodiazepines

Note the dose (in milligrams) and the type of each benzodiazepine product used.

Absorption rates, half-life, and equivalent daily doses of common benzodiazepines*

| Generic name | Trade name | Time to peak concentration | Elimination half life† | Equivalent dose‡ |
|---------------|---|--|--|------------------|
| Diazepam | Antenex Ducene Valium Valpam | 30–90 min | Biphasic: rapid phase half-life, 3 hours; elimination half-life, 20–48 hours | 5 mg |
| Alprazolam | Alprax Xanax Kalma | 1 hour | 6–25 hours | 0.5–1.0 mg |
| Bromazepam | Lexotan | 0.5–4 hours | 20 hours | 3–6 mg |
| Clobazam | Frisium | 1 – 4 hours | 17–49 hours | 10 mg |
| Clonazepam | Paxam Rivotril | 2–3 hours | 22–54 hours | 0.5 mg |
| Flunitrazepam | Hypnodorm | 1–2 hours | 20–30 hours | 1–2 mg |
| Lorazepam | Ativan | 2 hours | 12–16 hours | 1 mg |
| Nitrazepam | Alodorm Mogadon | 2 hours | 16–48 hours | 2.5–5 mg |
| Oxazepam | Alepam Murelax Serepax | 2–3 hours | 4–15 hours | 15–30 mg |
| Temazepam | Euhypnos Normison Temaze Temtabs | 30–60 minutes after tablets, 2 hours after capsules | 5–15 hours | 10–20 mg |
| Triazolam | Halcion | 1–3 hours | Biphasic: rapid phase half-life, 2.5–3.5 hours; elimination half-life, 6–9 hours | 0.25 mg |
| Zolpidem | Stilnox | 0.5–3 hours | 2.5 hours | Not known |

*Based on manufacturer's product information.

†Elimination half-life: time for the plasma drug concentration to decrease by 50%.

‡Equivalent dose: approximate dose equivalent to diazepam 5 mg.

Opioids

There are a range of opioid drugs that may be used by intravenous, oral or inhalational routes.

Opioid drugs, with details of approximately equivalent doses

| Generic name | Trade name | Approximately equivalent doses (mg) | Duration of analgesia (hours) | Half life (hours) |
|-----------------------------|--|-------------------------------------|-------------------------------|-------------------|
| Buprenorphine hydrochloride | Subutex/ Suboxone | 0.3 | 4-8 | 20-73 |
| Codeine phosphate | Codeine, Panadeine forte | 30-60 | 3-4 | 2-4 |
| Diacetylmorphine | Heroin | (converts to morphine) | 3-4 | 2 |
| Fentanyl citrate | Fentanyl | 0.1 | 1-1.5 | 3-4 |
| Methadone 4-5hydrochloride | Biodone forte Methadone syrup Physeptone | 10 | 4-6 | 15-60 |
| Morphine sulfate | Morphine | 10 | 4-5 | 2 |
| | Kapanol MS Contin | 10 | 4-5 | 2-4 |
| Oxycodone hydrochloride | OxyContin Endone | 4.5 | 3-4 | 6.5 |

Sources: Katzung BG (2006) Basic and Clinical Pharmacology, 9th Edition, The McGraw-Hill Companies [CIAP]; MIMS on-line (2006) [CIAP].

Heroin

Heroin dosage estimates are difficult because of wide variations in the concentration and purity of (illicit) heroin. Consumption may be recorded as:

- the number of injections per day
- the number of grams ingested
- dollars spent.

Note that "street" usage patterns alter frequently.

Approximate guide to a patient's level of heroin use

Low end:

- one to two injections per day, or
- 0.5 g or less per day

High end:

- four or more injections per day, or
- 1-2 g or more per day.

Cannabis

Identify as accurately as possible:

- the way in which the drug is consumed
- the frequency of use
- the amount spent per day on cannabis.

Users will usually be able to report how many grams (10-15 cones/gram, more if "mulled" or "spun" with tobacco) they smoke per day. Smoking marijuana cigarettes (rolled with or without tobacco) commonly known as "joints" or "spliffs" is another common mode of use. Heavy users can smoke more than 1 ounce / 28 grams) a week.

Psychostimulants

Amphetamines are the most frequently used group of drugs in this category.

Define the route of administration, the specific agents used, and the frequency and pattern of use.

Many street products will not be pure, and urine drug screening is appropriate to document what has been consumed.

Consumption may be recorded as frequency of administration or as dollars spent.

Summary of different forms of psychostimulants available on the illicit market in Australia

| | Speed | Base | Ice | Cocaine | Ecstasy |
|---------------------------------|--|--|--|------------------------------|---|
| Drug | Methamphetamine or amphetamine | Methamphetamine | Methamphetamine | Cocaine hydrochloride | MDMA, or methamphetamine, often with other drugs added to mimic the effects of MDMA |
| Street names | Goey, whiz, velocity | Paste, point, pure, wax | Shabu, crystal, crystal meth, yaabaa | Coke, okey-doke | E, eckie, XTC, pills |
| Appearance | Fine or coarse powder | Sticky, gluggy, waxy or oily form of damp powder, paste or crystal | Crystal or coarse crystalline powder | Crystalline powder | Tablets, powder |
| Colour | White, pink, yellow, orange, brown | Often has a yellow or brown tinge | Translucent or white; may have green, blue or pink tinge | White | Various |
| Method of administration | Usually snorted or injected, sometimes swallowed | Swallowed, smoked, snorted, injected | Swallowed, smoked, snorted, injected | Swallowed, snorted, injected | Swallowed, sometimes injected |
| Place of origin | Most is produced in clandestine laboratories in Australia, some imported | Most is produced in clandestine laboratories in Australia. | Most imported from East and South-East Asia | Imported from South America | Mostly imported; some domestic manufacture in clandestine laboratories |
| Purchase quantity | Point (0.1 gram), half gram, gram | Point (0.1 gram); also gram, half gram | Point, gram | Gram | Pill |
| Availability | Most widely available form | Widely available (varies between states and territories) | Less available but availability is increasing | Not very available | Availability is increasing |

2.3.7 Identifying risks associated with polydrug use

The most frequent comorbid diagnosis among those with dependence on a substance is another substance use disorder (other than nicotine), commonly another dependence. Episodic use of alcohol, opioids and benzodiazepines is more common than consistent and heavy use of more than one drug (and less likely to lead to dependence).

Where polydrug use is likely, obtain advice from, or consider referral to, a specialist drug and alcohol service to assist with assessment.

Managing withdrawal in a person with multiple dependencies requires extra clinical vigilance and consideration of the order in which the withdrawals should be managed. Although many patients seeking treatment may wish to withdraw immediately from all drugs, in some instances a stepped approach is preferable, addressing 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.

2.3.8 Selective withdrawal

In some cases, selective withdrawal is required in people who have stable dependence on a prescribed treatment such as methadone, but who are using other substances in a harmful fashion (eg, amphetamine or alcohol). For further information on withdrawal from a specific drug or alcohol, see the relevant chapter in these guidelines.

Selective withdrawal while on an opioid treatment program

Patients in an opioid treatment program who are dependent upon other drugs, 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 prescriber should take responsibility for coordinating selective withdrawal.

The prescriber should:

- review the patient frequently
- monitor the patient 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 personally manage the withdrawal. If this is not practical (eg, heavy alcohol use and withdrawal), the prescriber will need to work with withdrawal management services in their area.

2.3.9 Identifying past history of withdrawal

The likely course of withdrawal may be anticipated from past experiences.

Determine whether there is any past history of withdrawal, including complications (seizures, delirium or psychosis), treatments used, and where and when previous withdrawals occurred. Obtain a medical history from the patient, previous medical records, relatives or friends.

2.3.10 Assessing current withdrawal status

In patients who are in withdrawal at the time of assessment, assess the type and severity of withdrawal symptoms.

Alcohol

Onset: As blood alcohol level falls; depends on rate of fall and hours after last drink.

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 may occur and may be life threatening.

Benzodiazepines

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 (these can be life threatening).

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 rhinorrhea, abdominal cramps, nausea, vomiting, diarrhoea, palpitations, elevated blood pressure and pulse, dilated pupils.

Cannabis

Onset: Within 24 hours.

Duration: 1–2 weeks.

Features: insomnia, shakiness; irritability, restlessness, anxiety; anger, aggression.

Psychostimulants

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. Withdrawal: fluctuating mood and energy levels, cravings, disturbed sleep, poor concentration. Extinction: persistence of withdrawal features, gradually subsiding.

Nicotine

Onset: within several hours of the last cigarette.

Duration: Peak within the first 24–72 hours and resolves in 2–4 weeks.

Features: craving; irritability, restlessness, mood swings; increased appetite and hunger; sleep disturbances with resulting insomnia and fatigue; anxiety and depression and difficulty concentrating.

2.3.11 Physical examination for withdrawal management

The extent of the physical examination will depend on the setting and the assessor.

- Assessment by a medical practitioner should include a full physical examination.
- A nursing examination in a medical setting should include assessment of respiration and evaluation of the general appearance of the patient. Record pulse, temperature and blood pressure on an appropriate chart or scale to allow monitoring over time.

- Examination by a non-medical professional should include observation of physical appearance — 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.

2.3.12 Mental health and suicide risk assessment

NSW Department of Health Policy Directive PD2005_121 (previously Circular 98/31), *Policy guidelines for the management of patients with possible suicidal behaviour for NSW Health staff and staff in private hospital facilities*, outlines the mandatory requirement that all patients with possible suicidal behaviour having contact with health services, require a psychosocial, suicide risk and psychiatric assessment. All patients must have a preliminary screening of suicide risk and be referred to specialist mental health services as appropriate.

The framework for suicide risk assessment and management for NSW Health staff (NSW Department of Health, 2004) links the Mental Health – Outcomes Assessment Tools (MH – OAT) to the above policy and provides more detailed information on suicide risk assessment.

The goal of suicide risk assessment is to determine the level of risk at a given time and to provide appropriate clinical care and management. Possible suicidal behaviour includes thinking about suicide, harming oneself or attempting suicide. There is no current rating scale that has a proven predictive value in clinical assessment of suicide. A comprehensive assessment of the person is the only valid method.

Drug and alcohol staff should at least conduct these steps in the assessment of suicide risk:

- Engagement
- Detection (of risk factors)
- Preliminary suicide risk assessment
- Immediate management

Detection

Intoxication with drugs or alcohol precludes a valid immediate assessment. If suicide risk is identified in an intoxicated person, he or she should be detained in an appropriate and safe setting until a full assessment is conducted. Enduring risk cannot be judged until the person is sober.

Preliminary suicide risk assessment

This assessment determines the severity and nature of an individual's problems, the risk of danger to self and others and whether a more detailed risk assessment is indicated.

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. A mental state assessment is required to determine:

- the need for other psychological therapies
- concomitant psychiatric conditions which place the patient or others at risk
- the patient's capacity for informed consent and active participation in treatment planning.

Screening questions of suicide risk:

- Have things been so bad lately that you have thought you would rather not be here?
- 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?
- Concern about the safety of the patient should lead to appropriate referrals with the local Area Health Service with the withdrawal management taking less of a priority.
- For further information see ***Appendix E***.

2.3.13 Screening for domestic violence

The domestic violence screening tool is to be used with women aged 16 and over in accordance with NSW Department of Health policy and procedures for identifying and responding to domestic violence (see ***Appendix F***).

2.3.14 Psychosocial assessment

Identify and consider the patient's social situation, support systems, preference for treatment, capacity to undertake withdrawal and the likely success of treatment.

This assessment helps in developing an agreed treatment plan with the patient. Discussing these issues and seeking the participation of patients in developing treatment plans will improve their compliance with treatment and increase the chances of successful withdrawal.

Psychosocial factors affecting withdrawal

Ask about expectations of withdrawal:

- reasons for presenting for withdrawal management at this time
- past experiences of withdrawal
- current knowledge and fears of withdrawal
- perceived ability to cope with withdrawal and its treatment.

Ask about supports for withdrawal treatment:

- stability of accommodation
- the extent and suitability of the patient's social network
- supportive family and friends
- the patient's links with local health professionals.

Ask about potential barriers to successful withdrawal:

- distance to nearest clinician
- access to transport
- relationship issues
- care of children
- drug use of cohabitants
- current legal issues
- financial problems
- work commitments.

2.3.15 Child protection

On initial assessment and at treatment and discharge review it is important to consider the safety, welfare and well-being of any children in the patient's care. This may include a patient's own children, children living at the same residence, or children to whom the patient has access.

Health care workers have a duty under the *NSW Children and Young Persons (Care and Protection) Act 1998* to notify the Department of Community Services (DOCS) whenever they suspect that a child or young person may be at risk of harm through abuse or neglect. This duty may be invoked when considering the potential risk of harm of a child yet to be born.

When necessary, the duty to report possible harm through abuse or neglect overrides the duty to maintain patient confidentiality.

Under Section 23 of the Act, a child or young person is at risk of harm if current concerns exist for the safety, welfare and well-being of the child or young person because of the presence of one or more of the following circumstances:

- the child or young person's basic physical or psychological needs are not being met or are at risk of not being met
- the parents or caregivers have not arranged and are unable or unwilling to arrange for the child or young person to receive necessary medical care
- the child or young person has been, or is at risk of being, physically or sexually abused or ill-treated
- the child or young person is living in a household where there have been incidents of domestic violence and, as a consequence, the child or young person is at risk of serious physical or psychological harm
- a parent or caregiver has behaved in such a way towards the child or young person that the child or young person has suffered or is at risk of suffering serious psychological harm.

NSW Department of Health Policy PD 2006_109 provides the form to be used for reporting a child or young person at risk of harm to the DOCS helpline.

A parent or carer of children wanting to withdraw from an alcohol or other drugs program is not itself a reason to make a report to the Department of Community Services.

In relation to newborn infants of mothers on methadone maintenance, NSW Department of Health Policy Directive PD2005_299 (previously Circular 2003/16), *Protecting children and young people*, recommends that a multidisciplinary case conference should be convened in accordance with NSW Department of Health Policy Directive PD2005_494 (previously circular 2002/101), *Neonatal abstinence syndrome guidelines* (2002), to formulate a discharge plan for mother and baby 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.

2.3.16 Formulating the management plan

Summarise the patient's overall assessment and identify:

- potential risks to the patient during withdrawal
- problems and barriers that may prevent the patient completing withdrawal
- interventions that have been indicated by the assessment.

Recording the main issues identified in the assessment helps continuity and quality of care when more than one clinician is involved.

Link the assessment to a treatment plan, which addresses:

- management of withdrawal
- setting for withdrawal
- follow-up and communication with other relevant service providers and agencies.

An example of an assessment summary for withdrawal management services is provided in **Appendix G**.

2.4 Treatment matching for withdrawal management

The overriding priorities for managing withdrawal are:

- Safety: no treatment can be recommended that is not safe for that patient.
- Outcome: treatments should only be recommended if they are likely to succeed.
- Choice: patients have the right to choose from the treatment options that are available and considered appropriate by the clinician. They should be advised as to the suitability and availability of services.

Try to match the patient with the treatment intervention that maximises patient safety and provides the most effective and most economical options for withdrawal management.

Always consider *ambulatory withdrawal management* (patient at home, supported by visits to the clinic or visits from the clinician and telephone) as the first option.

Ambulatory management is contraindicated if:

- the safety of the person or others in the household would be at risk (see section 2.3.15)
- the likelihood of a successful outcome is poor
- the person will not agree.

The original setting for withdrawal management may become inappropriate for the needs of the patient. Re-evaluate the setting as part of the ongoing assessment of patients in withdrawal. When indicated, transfer patients to a more suitable treatment setting (either more or less intensive) as soon as possible.

Only refer the patient to hospital when withdrawal may be complicated by its severity or other medical or psychiatric problems, or when no more suitable option is available.

2.4.1 Special groups

Culturally and linguistically diverse populations, young people, Aboriginal and Torres Strait Islander people, women (especially in pregnancy), mentally ill people, elderly people who present to health services involuntarily, people residing in rural and remote locations, people living with HIV/AIDS, people belonging to particular religious groups, and people in custody may have special needs. Withdrawal services must consider the needs of these specific groups of patients and seek further information from relevant NSW Department of Health documents or services.

Consider the following:

Pregnancy

- specialist antenatal and obstetric care
- specialist drug and alcohol services.

Psychiatric illness

- available information on the patient's mental health before withdrawal
- the possibility of emergence or exacerbation of psychological symptoms
- availability of community psychiatry or consultation liaison services
- possible need for withdrawal management in a psychiatric hospital.

Elderly

- concomitant illnesses
- potentially longer period of use/dependence
- vulnerability if admitted to a unit with predominantly younger people
- difficulties with mobility, increased risk of falls
- communication issues (eg, decreased hearing)
- increased risk of delirium.

Youth

- need to use the least restrictive setting
- risk of exposure to other forms of drug use (information and other patients) in particular settings
- availability of appropriate liaison staff
- vulnerability in residential settings.

Cultural issues

- availability of appropriate liaison staff
- availability and use of interpreters when necessary
- cultural aspects that may affect setting, expectations, importance of family, follow-up and other issues.

2.5 Treatment agreements

Encouraging patients to participate in treatment choice enables their views to be considered and increases the awareness of both the patient's and the clinician's responsibilities.

If possible, formalise a treatment agreement with the patient. The agreement may be verbal or written. The acknowledgement of a verbal agreement should be recorded in the notes.

Make the patient aware of his or her responsibilities and those of the service provider. Be specific about expectations for feedback and how complaints will be managed.

Address any failure to follow the agreement by re-evaluating the management 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.

Recommended points in a treatment agreement

- Identify the patient and clinic/medical practitioner.
- Specify the date/period of treatment, nature of the treatment (eg, ambulatory alcohol withdrawal management), special requirements (eg, daily attendance at outpatient clinic), any prescribed medications, and the role of the patient and/or carer (eg, completion of withdrawal chart).
- List identified risks to the patient.
- Identify special steps intended to enhance the likelihood of completing withdrawal, including transportation arrangements and supportive care protocol.
- Detail conditions under which urgent contact should be made with the medical practitioner, contact numbers and emergency procedures.
- Indicate agreed strategies for managing the period after withdrawal.

2.6 Treating withdrawal

This section outlines the principles of treating withdrawal. Details of managing withdrawal from specific drug types are given in later chapters.

2.6.1 Monitoring

Frequent observations of the patient are the mainstay of management. Assessment of clinical features, explanation, reassurance and repeated encouragement are provided at these times.

The frequency of observations and evaluation of progress will depend on the severity of withdrawal and the setting.

2.6.2 Pharmacological treatment

Medication is used in withdrawal to provide symptomatic relief, to treat complications and coexisting conditions, and to reduce the intensity of withdrawal symptoms.

The choice of pharmacological treatment in withdrawal is guided by the severity of withdrawal and the drug from which the patient is withdrawing. Certain regimens should only be prescribed when appropriately trained staff are available to supervise and monitor the outcome.

2.6.3 Routine supportive care

The aim of supportive care is to minimise environmental stimuli that may exacerbate withdrawal symptoms and to enhance the patient's ability to complete withdrawal successfully.

Use a protocol for supportive care (*Appendix H*), particularly for managing withdrawal in hospital and residential settings. The supportive care routine should go hand in hand with monitoring of physical signs.

Anxiety and depression are commonly associated with drug 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, homely, not overly bright, without striking colours or patterns, 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, hot spa bath and massage can also relieve aches and increase comfort.

Reassurance is probably the most 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. The reassurance of family members will help them provide support to the person during withdrawal (active participation and support of family is likely to be a significant factor in the completion of withdrawal).

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

2.6.4 Managing difficult behaviour

Difficult behaviour is a significant barrier to successful withdrawal. Adherence to appropriate protocols will minimise the risk. This is more of a problem in general hospital settings where close links between general staff and drug and alcohol staff will be required to prevent escalation of difficult behaviour.

Key elements of managing difficult behaviour

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 from self-harm.

Confusion/disorientation/hallucinations

- Provide frequent reality orientation.
- Ensure frequent supervision.
- Explain perceptual errors.
- Ensure environment is simple and 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.

2.6.5 Driving

Most withdrawal involves some psychomotor impairment, psychological disorder or fatigue. Clinicians responsible for withdrawal management are responsible for ensuring that 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. There is the potential for civil liability if, as a result of impaired driving while medically unfit, a person causes a road accident. Withdrawal could be considered a condition that renders an individual "medically unfit".

Special warning: fitness to drive

It is recommended that patients in an ambulatory or home-based withdrawal setting or who are leaving an inpatient setting receive an information card regarding fitness to drive.

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.

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.

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.

Assessing fitness to drive

Assessing fitness to drive for commercial and private vehicle drivers. Medical standards for licensing and clinical management guidelines. Approved by the Australian Transport Council and endorsed by all Australian Driver Licensing Authorities (2003).
<<http://www.austroads.com.au/aftd/index.html>>

2.7 HIV, hepatitis B and hepatitis C screening

The NSW Department of Health now expects all drug and alcohol services to take responsibility for discussing blood-borne viruses and the risk of acquisition with their patients. Either at the assessment interview or after treatment has commenced, offer all patients screening for HIV, hepatitis B and hepatitis C and advise on the availability of hepatitis B vaccination.

- Tests should only be undertaken when patients have voluntarily agreed to such testing and at an appropriate time in the withdrawal process (not in the acute phase).
- To assist patients to make a decision regarding testing, provide sufficient information to allow them to give informed consent, and assure them that confidentiality will be maintained.
- If patients elect to undergo these tests, pre-test and post-test counselling must be provided as outlined in NSW Department of Health Policy Directive PD2005_048: *Counselling associated with HIV antibody testing — guidelines*.

2.8 Continuing care

2.8.1 Discharge planning

Develop strategies to help the patient cope with the period after withdrawal, particularly if the patient required withdrawal management in hospital. Discharge planning begins with the initial assessment for withdrawal management.

Involve patients in discharge planning, and make them fully aware of their options. Part of this participation is identifying support that can be called upon by the patient after withdrawal. It should be the clinician's responsibility to ensure that patients are aware of options to seek further assistance in the future. Where a follow-up option is agreed to, make professional contact with that service to facilitate 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.

Document discharge planning in the patient record.

When planning discharge, consider:

- stability of accommodation — whether the person lives alone or with others who use drugs.
- the extent of their social network — their existing links with health professionals in their local community.

Key requirements of planning discharge from withdrawal management

- Organise/facilitate follow-up appointments.
- Link up with further treatment (including rehabilitation, outpatient treatment, self-help).
- Communicate with other relevant service providers.
- Provide emergency assistance numbers.

When people complete withdrawal from drugs or alcohol it can be frustrating for them, their health care workers, partners, family and friends if follow-up help is delayed. There is no easy answer to this difficult issue, but good information about what to expect can help people prepare for the procedures and delays ahead. Effective networking between withdrawal management units and other services can reduce these delays. Sending people to services without informing the service first can be a waste of time.

Aftercare

Aftercare services might include skills training (eg, relapse prevention, problem solving skills or vocational skills training), social support services (eg, self-help groups such as Narcotics Anonymous), or booster motivational counselling sessions. Supportive care should be offered after finishing withdrawal treatment.

Counselling and group programs

Counselling is an important option to consider in continuing care for someone who has completed withdrawal. A range of free or fee-charging services are provided by government, non-government and private organisations.

Self help programs

There are several self help programs modelled on the 12 step program developed originally by Alcoholics Anonymous (AA), such as Narcotic Anonymous (NA), Al Anon (for people affected by someone's use), Gamblers Anonymous and so on. They are based on the belief that total abstinence is the only way to recovery. People interested need to be motivated to attend meetings and become part of the program. There is no formal referral process to specific AA or NA programs but patients can be advised to make contact with a functioning group in their area. This free resource to the community should be discussed with patients who want to maintain abstinence.

The SMART recovery program is a new self help meeting-style program available in Sydney and in other parts of NSW. Family Drug Support (FDS) is a self help support service for people affected by someone's drug or alcohol use. NSW Users and AIDS Association (NUAA) is a peer based organisation which provides support and information for "users".

Pharmacotherapies

There are a range of pharmacotherapies available for people completing drug and alcohol withdrawal. Opioid treatment pharmacotherapies, including methadone, buprenorphine (Subutex), buprenorphine and naloxone (Suboxone) and naltrexone, are discussed in *New South Wales Opioid Treatment Program: clinical guidelines for methadone and buprenorphine treatment* (NSW Department of Health GL2006_019, 2006).

Alcohol pharmacotherapies include naltrexone, acamprosate and disulfiram. The pharmacology of these agents needs to be understood before they are recommended.

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 a place. Programs run for periods ranging from 3 weeks to over a year and there are waiting lists (sometimes long) for most services.

3 Alcohol

Chapter summary

- 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 in excess of NHMRC recommended levels should be considered at risk of withdrawal. They should be asked about features of dependence, particularly previous withdrawal, and they should be monitored in hospital with an alcohol withdrawal rating scale.
 - About 95% of alcohol-dependent people can stop drinking without major withdrawal (delirium, seizures).
 - The risk of major withdrawal is greater in people with acute medical conditions (eg, trauma or sepsis).
 - Onset of alcohol withdrawal is usually 6–24 hours after the last drink. Usually, withdrawal resolves after 2–3 days without treatment; occasionally, withdrawal may continue for up to 10 days.
 - Seizures affect about 5% of patients, occurring early (usually 7–24 hours after the last drink). They are grand mal in type (ie, generalised, not focal) and usually (though not always) occur as a single episode.
 - 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 3 days, but can be up to 14 days.
 - The *Clinical Institute withdrawal assessment for alcohol – revised version* (CIWA-AR) is a valid, reliable and a sensitive instrument for assessing the clinical course of simple alcohol withdrawal. The *Alcohol withdrawal scale* (AWS) is another useful scale. The use of either scale is supported.
 - Supportive care alone is often effective in minor alcohol withdrawal.
 - Diazepam is the pharmacotherapy of choice for alcohol withdrawal. Diazepam treatment is best initiated early in the course of alcohol withdrawal, to prevent progression to more severe withdrawal. Diazepam loading is recommended for inpatient settings, and tapering diazepam for outpatient settings.
 - All people being treated for alcohol withdrawal should routinely receive thiamine for prophylaxis against Wernicke’s encephalopathy. Thiamine should initially be given intramuscularly or intravenously.
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3.1 Use and effects of alcohol

At low doses, alcohol causes 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.

3.2 Assessment issues specific to alcohol-dependent patients

Note: general assessment for withdrawal is detailed in section 2.3.

Record average daily consumption in grams of alcohol (see table below).

The patient may be intoxicated on presentation, and this may affect his or her ability to provide and receive information.

See **Appendix B** for a guide to managing intoxication and overdose.

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.

Intoxication may be a contraindication for admission for withdrawal management. Some dependent people may present for withdrawal management with a high blood alcohol level, but without intoxication. This is not a contraindication to admission.

3.2.1 Unplanned withdrawal

Patients admitted to hospitals or presenting to the emergency department should undergo screening at admission to identify those at risk of alcohol withdrawal.

The standard method of screening is to take a drinking history. Anyone who reports alcohol consumption in excess of NHMRC recommended levels should be considered at risk of withdrawal. They should be asked about features of dependence, particularly prior withdrawal, and they should be monitored in hospital with an alcohol withdrawal rating scale.

Amount of alcohol in common drink measures and containers

| | Container size | Type of container | Alcohol content |
|-------------------------------------|----------------|--|-----------------|
| Beer | 285 mL | Middy | 10 g |
| | 427 mL | Schooner | 15 g |
| | 375 mL | Can/stubby (6 = six pack) | 14 g |
| | 750 mL | Large bottles (long neck) | 28 g |
| | 1 carton | 24 cans/stubbies(slab) or 12 large bottles | 336 g |
| Table wine | 100 mL | Standard glass | 10 g |
| | 750 mL | Bottle | 60–80 g |
| | 1 L | Cask | 100 g |
| | 4 L | Cask | 400 g |
| Fortified wine (eg, port, sherry) | 60 mL | Standard glass | 10 g |
| | 750 mL | Bottle | 120 g |
| Spirits (eg, whisky, brandy, vodka) | 30 mL | Nip | 10 g |
| | 750 mL | Bottle | 240 g |

Note: Light beer usually has about half the alcohol content of normal beer.

Heavy drinkers are often reluctant to disclose their drinking, and will seriously under-report their level of consumption. General hospital staff need to maintain an index of suspicion, and be alert to the possibility that someone who reports only modest or no drinking is in fact alcohol dependent.

Particular issues that should raise the possibility that someone is a dependent drinker are:

- a presenting condition or previous diagnosis of an alcohol-related disease (eg, alcoholic hepatitis, alcoholic cardiomyopathy, and pancreatitis)
- stigmata of 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
- symptoms such as anxiety, agitation or confusion, or other clinical features that might be due to an alcohol withdrawal syndrome.

In hospitalised patients, early detection and treatment to prevent the development of withdrawal is the optimal approach.

3.3 Alcohol withdrawal

3.3.1 Onset and duration

Onset of alcohol withdrawal is usually 6–24 hours after the last drink. Consuming benzodiazepines or other sedatives may delay the onset of withdrawal. In some severely dependent drinkers, simply reducing the level of consumption may precipitate withdrawal, even if they have consumed alcohol recently. Usually, withdrawal is brief, and resolves after 2–3 days without treatment; occasionally, withdrawal may continue for up to 10 days.

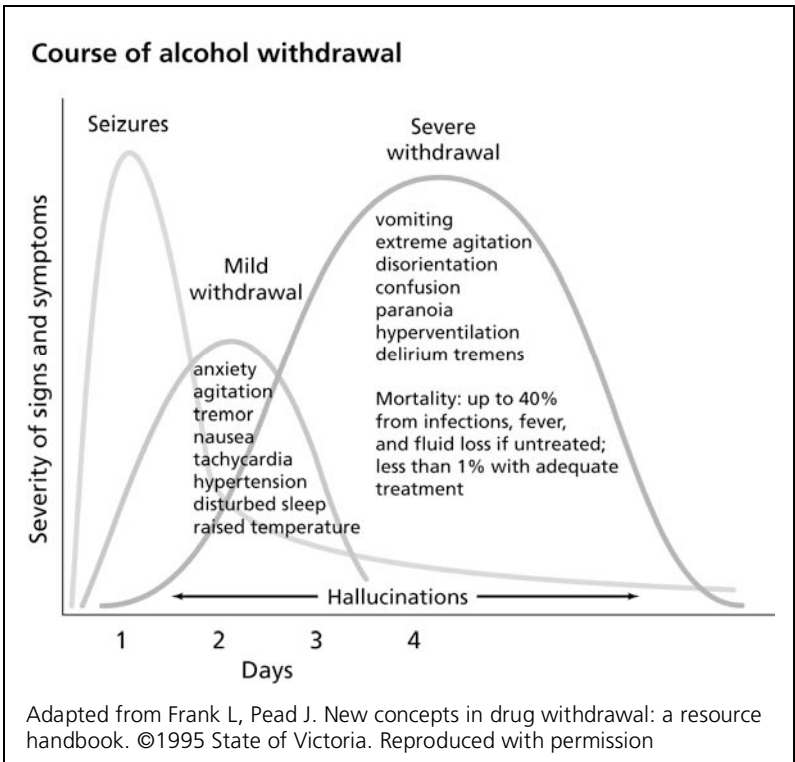
Withdrawal can occur when the blood alcohol level is decreasing, even if the patient is still intoxicated.

3.3.2 Signs and symptoms

The signs and symptoms of alcohol withdrawal may be grouped into three major classes.

Main signs and symptoms of alcohol withdrawal

| Autonomic overactivity | Gastrointestinal | Cognitive and perceptual changes |
|------------------------|------------------|----------------------------------|
| Sweating | Anorexia | Anxiety |
| Tachycardia | Nausea | Vivid dreams |
| Hypertension | Vomiting | Illusions |
| Insomnia | Dyspepsia | Hallucinations |
| Tremor | | Delirium |
| Fever | | |



Seizures occur in about 5% of people withdrawing from alcohol. They occur early (usually 7–24 hours after the last drink), are grand mal in type (ie, generalised, not focal) and usually (though not always) occur as a single episode.

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 3 days, but can be up to 14 days. Its clinical features are:

- confusion and disorientation
- extreme agitation or restlessness—the patient often requires restraining
- gross tremor
- autonomic instability (eg, fluctuations in blood pressure or pulse), disturbance of fluid balance and electrolytes, hyperthermia
- paranoid ideation, typically of delusional intensity
- distractibility and accentuated response to external stimuli
- hallucinations affecting any of the senses, but typically visual (highly coloured, animal form).

3.4 Monitoring

Withdrawal scales provide a systematic measure of the severity of uncomplicated withdrawal by recording changes in the severity of clinical features over time.

The *Clinical Institute withdrawal assessment for alcohol — revised version* (CIWA-AR) has been shown to be a valid, reliable and a sensitive instrument for assessing the clinical course of simple alcohol withdrawal (see **Appendix J**). The *Alcohol withdrawal scale* (AWS) is a useful scale (see **Appendix K**), widely used in New South Wales. The use of either scale is supported.

Withdrawal scales do not diagnose withdrawal. They are merely guides to the severity of an already diagnosed withdrawal syndrome.

Re-evaluate the patient regularly to ensure that it is alcohol withdrawal and not another underlying medical condition that is being monitored, particularly if the patient is not responding well to treatment.

3.4.1 Routine observations during withdrawal

If possible, regular and frequent observations are recommended, including:

- temperature, pulse rate and blood pressure
- CIWA-AR or AWS withdrawal scale
- level of hydration.

3.5 Treatment

3.5.1 Supportive care

Supportive care alone is often effective in minor alcohol withdrawal.

See section 2.6.3 and **Appendix H** for more specific detail.

3.5.2 Medication

A long-acting benzodiazepine (diazepam) is the treatment of choice for alcohol withdrawal (Mayo-Smith 1997).

Contraindications to diazepam include respiratory failure, significant liver impairment, possible head injury or cerebrovascular accident. In these situations, specialist consultation is essential.

Diazepam treatment is best used early in the course of alcohol withdrawal, to prevent progression to more severe withdrawal. The three most commonly used approaches are:

- Diazepam loading, which involves giving a large dose on day 1, then no further diazepam (recommended for inpatient withdrawal)
- Tapering dose regimens, where a predetermined dose of diazepam is administered in tapering doses over 2–6 days (recommended for outpatient withdrawal)
- Symptom-triggered sedation, where doses of diazepam are administered according to the severity of withdrawal symptoms.

Other symptomatic treatments

For headache, consider paracetamol.

For nausea or vomiting, consider metoclopramide (Maxolon) 10 mg every 4–6 hours or prochlorperazine (Stemetil) 5 mg every 4–6 hours orally or intramuscularly. Reduce the dose rate to 8 hourly as symptoms abate.

For diarrhoea consider loperamide or Kaomagma.

Never give alcohol to relieve withdrawal symptoms. It is not a safe medication and its use falsely suggests that alcohol has clinical benefit for the patient.

Control of medication in the outpatient setting

It is optimal to 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 (eg, overdose, undiagnosed complications, failure to complete withdrawal).

3.5.3 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.

In severe withdrawal:

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

3.5.4 Routine prevention of Wernicke's encephalopathy

This acute neurological syndrome due to thiamine deficiency can complicate withdrawal or present in the continuing drinker. It is characterised by ataxia, ophthalmoplegia, nystagmus and global memory impairment. Untreated, it can progress to Korsakoff's psychosis, which may result in permanent cognitive damage. It 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 drug and alcohol clinical services.

All people being treated for alcohol withdrawal should routinely receive prophylactic thiamine, 100 mg intravenously or intramuscularly on day 1 and then (unless contraindicated) a minimum of 100 mg orally daily. In suspected Wernicke's, give 100 mg thiamine daily, intramuscularly or intravenously for three days and then switch to oral doses.

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

3.5.5 Ambulatory withdrawal treatment

Explain to the patient and the carer:

- 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 (mainly sedation) and the risks of combining it with alcohol (ie, incoordination, disinhibition, respiratory depression, impaired driving capacity).

The standard therapeutic regimen involves regular and reducing doses of diazepam over 2–6 days. Diazepam should not normally continue past the sixth day.

On the first morning, assess the patient for early withdrawal symptoms, intoxication, or alcohol consumption in the past 8 hours. Intoxication or alcohol consumption within the past 8 hours are contraindications to commencing treatment. Prescribe diazepam, to begin after the patient arrives home from attending the consultation.

A medical practitioner or drug and alcohol nurse should see the patient each day for the first 3 or 4 days. Additional telephone contact in the first 1 or 2 days may be helpful. Tailor the diazepam dose to the patient's needs — the aim is to control withdrawal symptoms without oversedation.

The medical practitioner or drug and alcohol nurse should continue daily or second daily contact with the patient until withdrawal is completed.

An example of a diazepam regimen for alcohol withdrawal in an ambulatory setting

Days 1 diazepam 10 mg six hourly

Day 2–3 diazepam 5–10 mg eight hourly

Day 4 diazepam 5 mg morning and night

Tapering doses may be required over the next 2 days.

3.5.6 Treatment in a hospital or specialist residential setting

Specialist residential settings are indicated when moderate or severe withdrawal is predicted, the patient has a past history of seizures, or the patient has multiple drug dependencies or other significant medical problems.

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.

Overview of alcohol withdrawal treatment for a specialist residential or hospital setting

Diazepam loading regimen

On development of withdrawal symptoms, initiate the diazepam loading: 20 mg initially, increasing to 80 mg over 4–6 hours, or until patient is sedated (medical review required if dose required exceeds 80 mg).

Symptom-triggered sedation

Mild withdrawal (CIWA-AR score < 10; AWS score < 4):

- Supportive care, observations 4-hourly.
- If sedation necessary: 5–10 mg oral diazepam every 6–8 hours for first 48 hours.

Moderate withdrawal (CIWA-AR score 10–20; AWS score 5–14):

- Medical officer to assess.
- If alcohol withdrawal confirmed: hourly observations; give 10–20 mg oral diazepam immediately; repeat 10 mg diazepam hourly or 10–20 mg every two hours until the patient achieves good symptom control (up to a total dose of 80 mg).
- Repeat medical review after 80 mg of diazepam and if patient is not settling, consider olanzapine 5–10 mg.

Severe withdrawal (CIWA-AR score > 20; AWS score > 14):

- Urgent management. Give a loading dose.
- Review more frequently until score falls.

A rising score indicates a need for more aggressive management.

3.6 Special issues

3.6.1 Seizures

When there is a history of withdrawal seizures, early treatment with diazepam is indicated (either diazepam loading or 40 mg on day 1).

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

If a seizure occurs, medical assessment is required to exclude other contributing factors (eg, head injury, electrolyte disturbances or other medical conditions).

3.6.2 Delirium tremens

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

Delirium tremens is rare and 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 delirium tremens

Patients in delirium tremens are mentally disordered, and it is not acceptable to allow them to sign themselves out of hospital.

Sedation

Sedation with benzodiazepines should be initiated, but is often insufficient to reverse delirium tremens.

If patients will not or cannot take diazepam orally (20 mg hourly up to 80 mg total dose), use an intravenous midazolam infusion (5 mg bolus, then commence infusion at 2 mg/h, titrating rate of infusion against response). Midazolam infusion must be monitored either by a special nurse or in a high dependency unit. Intramuscular lorazepam 2 mg is an alternative to midazolam 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.

Once loaded with benzodiazepines (either by intravenous infusion or oral diazepam), olanzapine 10 mg sublingually (wafer) is indicated if patient is not settled.

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.

Thiamine

Intravenous thiamine (100 mg) should be administered.

Supportive management

Supportive management includes:

- intravenous fluid and electrolyte replacement, if required
- restraints, if required (in line with local policy)
- monitoring for infection or other medical problem.

One-on-one nursing care may be required for a period to re-orient the patient.

Hallucinations

If treatment is required for hallucinations, the drug of first choice is diazepam. If hallucinations do not respond to diazepam alone, add olanzapine.

If olanzapine is required:

- The patient should already be receiving diazepam (which will reduce risks of seizures or dystonic reactions).

- The starting dose may be between 5 mg and 10 mg, orally or buccally (wafer).
- If there is no response and no undue side effects, an additional dose may be administered.
- Doses are ordered as required and should be under constant review.

3.6.3 Management of withdrawal with intercurrent illness

Alcohol withdrawal is more difficult to manage in the presence of intercurrent illness. In particular, decompensated liver disease and respiratory disease can make management of withdrawal very difficult.

Loading doses should not be used in patients with severe chronic airflow limitation. Benzodiazepines need to be used with caution, and with close monitoring, and if a high dependency unit is available, an intravenous midazolam infusion is 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.

Drug withdrawal regimens have to be modified when the patient has severe liver disease. Long-acting benzodiazepines should not be administered to patients who have jaundice, ascites or hepatic encephalopathy. In these instances, oxazepam (which is renally excreted) may be used with caution.

3.7 Continuing care

Successful withdrawal management should not be seen as an end in itself. All individuals should be encouraged to consider the range of relevant options that exist to assist them in maintaining their abstinence or a more controlled drinking pattern.

For general information on continuing care, see section 2.8.

4 Benzodiazepines

Chapter summary

- Benzodiazepine users, in general, may be classified either as having “therapeutic dependence” or as being “polydrug users”.
 - Therapeutic dependence is best managed by very slow withdrawal supervised by the patient’s general practitioner.
 - Polydrug dependence should not generally be managed by general practitioners, but should be referred to specialist services for assessment.
 - Benzodiazepine withdrawal is usually mild.
 - Withdrawal onset occurs 2–5 days after stopping, reaching a maximum on days 7–10, and usually abating by the end of the second or third week. The half-life of the benzodiazepine involved determines onset of symptoms.
 - Abrupt withdrawal after benzodiazepine treatment may result in 2 or 3 days of “rebound” anxiety and insomnia. The symptoms are generally the same as those for which benzodiazepines were initially prescribed.
 - The major complications are the development of delirium and seizures. The aim of withdrawal management is safety — ceasing benzodiazepines without delirium or seizures, rather than providing patients with asymptomatic withdrawal.
 - Withdrawal is best managed by having clear program rules, effective patient communication, stabilisation and progressive withdrawal with a long-acting benzodiazepine, dispensed daily with supervision to minimise diversion.
-

4.1 Use and effects of benzodiazepines

Benzodiazepines are effective anxiolytic medications. They are also effective amnesic agents, especially in high doses. People using high doses may be seeking a combination of these effects to provide “emotional blockade” against previous psychological trauma.

Benzodiazepines, especially at high doses, may have a disinhibitory effect. “Benzo binges” are a common antecedent of shoplifting and other crime and may have devastating effects for the individual. Episodes of rage and violence are rare.

Tolerance of the different effects of benzodiazepines develops at different rates. For example, rapidly developing tolerance of the anticonvulsant effects explains why these drugs are not used for prophylactic treatment. Tolerance of the sedative effects begins after 2 or 3 days and is significant by 2–3 weeks.

Isolated intoxication with benzodiazepines presents with:

- sedation from which the individual may be roused in response to stimulation, but with rapid relapse when not stimulated
- slurred speech and drooling
- loss of balance and coordination (ataxia) often associated with stumbling (gait disturbance)
- disinhibition.

Absorption rates, half-life, and equivalent daily doses of common benzodiazepines*

| Generic name | Trade name | Time to peak concentration | Elimination half life† | Equivalent dose‡ |
|---------------|---|--|--|------------------|
| Diazepam | Antenex Ducene Valium Valpam | 30–90 min | Biphasic: rapid phase half-life, 3 hours; elimination half-life, 20–48 hours | 5 mg |
| Alprazolam | Alprax Xanax Kalma | 1 hour | 6–25 hours | 0.5–1.0 mg |
| Bromazepam | Lexotan | 0.5–4 hours | 20 hours | 3–6 mg |
| Clobazam | Frisium | 1 – 4 hours | 17–49 hours | 10 mg |
| Clonazepam | Paxam Rivotril | 2–3 hours | 22–54 hours | 0.5 mg |
| Flunitrazepam | Hypnodorm | 1–2 hours | 20–30 hours | 1–2 mg |
| Lorazepam | Ativan | 2 hours | 12–16 hours | 1 mg |
| Nitrazepam | Alodorm Mogadon | 2 hours | 16–48 hours | 2.5–5 mg |
| Oxazepam | Alepam Murelax Serepax | 2–3 hours | 4–15 hours | 15–30 mg |
| Temazepam | Euhypnos Normison Temaze Temtabs | 30–60 minutes after tablets, 2 hours after capsules | 5–15 hours | 10–20 mg |
| Triazolam | Halcion | 1–3 hours | Biphasic: rapid phase half-life, 2.5–3.5 hours; elimination half-life, 6–9 hours | 0.25 mg |
| Zolpidem | Stilnox | 0.5–3 hours | 2.5 hours | Not known |

*Based on manufacturer’s product information.

†Elimination half-life: time for the plasma drug concentration to decrease by 50%.

‡Equivalent dose: approximate dose equivalent to diazepam 5 mg.

4.2 Assessment issues specific to benzodiazepine-dependent patients

Note: general assessment for withdrawal is detailed in section 2.3.

4.2.1 Patterns of use

The critical issue at assessment is to attempt to classify patients according to whether they are dependent on therapeutic doses of benzodiazepines, or are intermittent or regular high-dose benzodiazepine users (usually in the context of dependence on, or use of, multiple drugs).

Therapeutic dependence

Many people take prescribed benzodiazepines for many years, without dose escalation, prescribed from a single doctor or practice, usually for management of anxiety or insomnia. Although they do not appear to have marked problems in relation to benzodiazepine use, such patients often have great difficulty stopping. Withdrawal avoidance, and the return of the initial presenting symptoms (eg, insomnia) are the major reinforcers of continued use in this group.

The risks associated with therapeutic dependence are poorly defined, although there have been suggestions that long-term use of benzodiazepines in the elderly is associated with an increased rate of cognitive decline that may mimic dementia, and an increased risk of falls and fractures.

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. If doctor and patient agree that an attempt to withdraw should be made, it should be undertaken very slowly. During this time, support is essential, with regular monitoring and review, advice on strategies for optimising sleep, and ways of controlling anxiety.

Problems with multiple drug use and multiple prescribers

Benzodiazepines are sought-after drugs among a group of mainly young people who use multiple drugs. There is a brisk black market for benzodiazepines in this group, and people often obtain prescriptions from multiple doctors. Up to 35% of people in the NSW Opioid Treatment Program take benzodiazepines regularly or intermittently.

The patient may be intoxicated on presentation, and this may affect his/her ability to provide and receive information.

See **Appendix B** for a guide to managing intoxication and overdose.

Assessment of intoxicated individuals should be restricted to ensuring safety. It is never appropriate to provide prescriptions or medications to people while they are intoxicated.

Prescribing benzodiazepines to polydrug users poses serious risks. Patients are often highly skilled at obtaining prescriptions, and present a range of plausible and compelling reasons why they should receive benzodiazepines — of which the most common is that they are benzodiazepine-dependent, and at risk of seizures if not prescribed benzodiazepines.

Prescription Shopping Information Service

Doctors who are registered with the Health Insurance Commission's Prescription Shopping Information Service can phone the service (http://www.medicareaustralia.gov.au/providers/programs_services/pbs/prescription_shop.htm; **1800 631 181**) to find out if a patient has been identified under the prescription shopping project's criteria, and obtain information on the amount and type of PBS medicine recently supplied to that patient. This can help to identify polydrug users.

In seeking to manage these patients, there is an invidious trade-off between the risks of trying to stabilise the patient by prescribing benzodiazepines (thereby placing patients at risk of overdose, prolonging the problem, and adding to the pool of black market drugs), or not intervening and placing the patient at risk of major withdrawal. There are no easy answers to the problem; clinical judgement must prevail. Clinical reasoning should be documented clearly.

Other paths to benzodiazepine dependence

Some people, not polydrug users, are prescribed benzodiazepines but rapidly escalate their use of these drugs, often obtaining scripts from multiple doctors, and taking doses equivalent to more than 40 mg diazepam per day. In general, these patients, although they may use only benzodiazepines, should be managed in the same way as polydrug users.

Some patients, often older people with alcohol dependence, become dependent on benzodiazepines, sometimes prescribed initially for withdrawal management, but then continued indefinitely, usually at therapeutic doses, from a single prescriber or practice. Such patients require careful assessment over time to determine whether prescribing benzodiazepines is more beneficial or harmful. Prescribing benzodiazepines does not consistently protect against relapse to alcohol dependence, and should be stopped if the patient regularly relapses while taking benzodiazepines.

Some people with past histories of multiple drug dependence appear to “evolve” into therapeutic benzodiazepine dependence, taking a stable, therapeutic dose from a single prescriber.

A good principle in prescribing long-term benzodiazepines, when there is a history of other drug dependence, is that patients should be reviewed periodically by a medical practitioner to provide a second opinion (specialist if possible). This is important because patients often form close, dependent relationships with their doctors, making it harder for doctors to review and change treatment.

4.3 Withdrawal

4.3.1 Incidence of benzodiazepine withdrawal

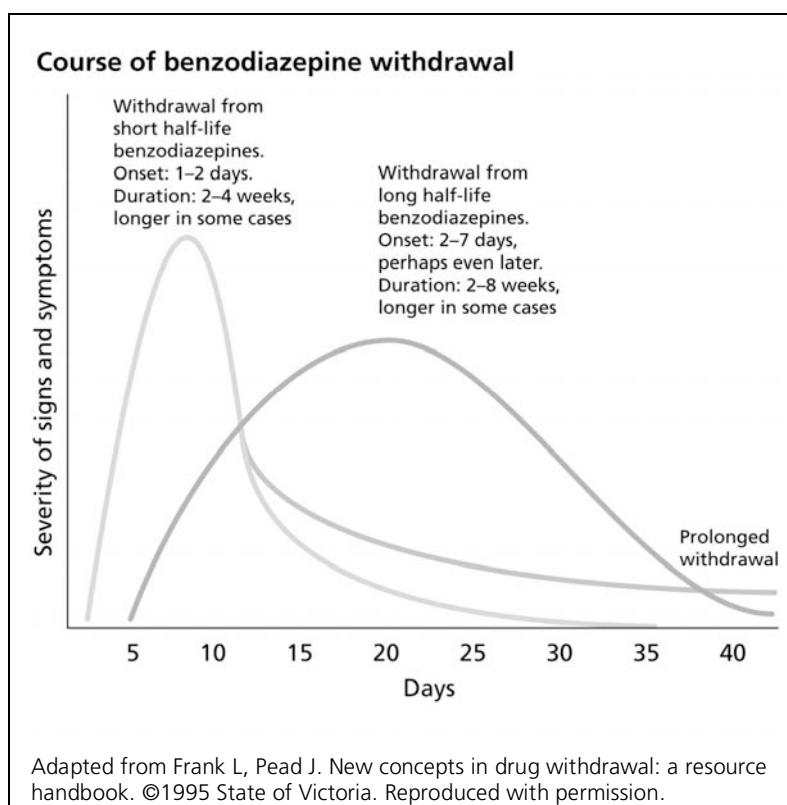
Patients vary in the rate of developing dependence. Few users of prescribed benzodiazepines become dependent with less than 3 months of use. With between 3 and 12 months of use, 10%–20% of patients become dependent, rising to 20%–45% after more than a year of use.

If low-dose therapy is continued longer than 6 weeks, tolerance and symptoms of withdrawal will affect 15%–50% of patients.

Abrupt withdrawal from high dose use (> 50 mg diazepam or equivalent per day) without withdrawal symptoms has been observed, but the incidence is unknown. High-dose use is more likely to produce withdrawal with more severe symptoms.

4.3.2 Onset and duration of benzodiazepine withdrawal

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 benzodiazepine involved.



4.3.3 Signs and symptoms of benzodiazepine withdrawal

Most patients discontinuing benzodiazepines experience a degree of “rebound” anxiety and insomnia. Specific withdrawal symptoms are subjective, with few observable signs (see table below). In diagnosing withdrawal, the sequence of the emergence of symptoms, and the presence of symptoms such as perceptual abnormalities (visual, auditory, tactile) helps to diagnose benzodiazepine withdrawal.

4.4 Monitoring

Benzodiazepine withdrawal scales offer a systematic measure of the severity of withdrawal, but there is little research on their validity, reliability and predictive value. If used, they should only be a guide to complement clinical assessment.

Good assessment and clinical judgement remain the gold standard for guiding management and clinicians should not rely on withdrawal scale scores alone.

4.5 Treatment

Generally, therapeutic dependence should be managed by the patient’s general practitioner.

However, it is not recommended that general practitioners attempt to manage benzodiazepine withdrawal in polydrug users, or prescribe benzodiazepines for this group, even as a temporary measure.

The general principles governing benzodiazepine prescribing in primary care settings are:

- Do not prescribe for patients not known to you.
- Do not prescribe benzodiazepines for polydrug users (if concerned, these patients can be referred for specialist assessment).
- Do not prescribe benzodiazepines for patients on methadone or buprenorphine (refer to their prescriber).
- If in any doubt about patients thought to have therapeutic dependence, register with the Doctor Shopping Information Service (http://www.medicareaustralia.gov.au/providers/programs_services/pbs/prescription_shop.htm) and check whether they are obtaining prescriptions from other doctors.

It is not a matter of urgency to prescribe benzodiazepines to manage withdrawal, as the onset of withdrawal symptoms tends to be delayed. The onset of benzodiazepine withdrawal is earlier, and symptoms are more severe, in people taking short half-life benzodiazepines. With longer acting drugs, withdrawal symptoms may begin as late as 7–10 days after discontinuing use.

Signs and symptoms of benzodiazepine withdrawal

| Common | Less common | Uncommon |
|-------------------------------------|--|---------------------|
| Anxiety | Nightmares, agoraphobia | Delusions |
| Insomnia | Feelings of unreality | Paranoia |
| Restlessness | Depersonalisation | Hallucinations |
| Agitation | Panic attacks | Seizures |
| Irritability | Nausea, dry retching, decreased appetite, weight loss, sweating, lethargy | Persistent tinnitus |
| Poor concentration | Increased sensory perception, aches and pains, headaches, palpitations, tremor, blurred vision | Confusion |
| Poor memory | Increased temperature, ataxia | |
| Depression | Gastrointestinal unrest | |
| Muscle tension, aches and twitching | Menstrual changes | |

4.5.1 Treatment setting for benzodiazepine withdrawal

An *ambulatory setting* is preferred except when:

- the safety of the patient would be at risk (eg, documented history of seizures, alcohol dependence, or significant mental illness)
- the patient reports very high doses of benzodiazepine use
- the likelihood of a successful outcome is poor in an ambulatory setting (repeated inability to complete outpatient reductions, other drug use, unstable social environment)
- the patient will not consider withdrawal in an ambulatory setting.

Ambulatory withdrawal is most suitable for low-dose users, except when repeated attempts at withdrawal have failed. Ambulatory withdrawal is also suitable for high-dose users who have been stabilised on a reduction regimen.

Specialist residential withdrawal should be considered for stabilising high-dose users on a reduction regimen, and for patients who use benzodiazepines in combination with alcohol, elderly people and patients with other illnesses (especially psychiatric disorders).

General hospital withdrawal is rarely necessary, unless specialist withdrawal facilities are unavailable (eg, in a rural setting).

4.5.2 Withdrawal management

Withdrawal is best managed by:

- establishing a good therapeutic relationship with the patient
- initial stabilisation of dose (preferably with a long-acting benzodiazepine)
- gradual dose reduction.

Flexibility is essential. The risks associated with trying various approaches and being adaptable to the patient's withdrawal needs are low, and the advantages of developing an individualised treatment regimen are great.

Withdrawal attenuation is usually achieved by the careful, flexible, tapered withdrawal of the drug.

Generally there is a trade off between rapid withdrawal, with intense, relatively short-duration symptoms and slower withdrawal, with protracted, less intense symptoms.

4.5.3 Unplanned withdrawal

Patients in hospital for other reasons may undergo benzodiazepine withdrawal from even low doses of regular, long-term benzodiazepine use. This can be a particular problem in elderly patients, who may develop delirium due to benzodiazepine withdrawal. For hospitalised patients:

- Take a history of benzodiazepine use.
- Do not abruptly discontinue benzodiazepines, 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, or polydrug users, should be stabilised on a long-acting benzodiazepine (preferably, diazepam), at a dose about 40% of their regular intake before admission (or 80 mg/day, whichever is lower). Reduction and withdrawal should follow once their other medical condition has been dealt with.

4.5.4 Managing benzodiazepine withdrawal in polydrug dependent patients

It is important at assessment to obtain a detailed history of benzodiazepine use, accepting that it may not be accurate. Overestimation is common. In assessing tolerance, many users will report levels of use associated with intoxication and sedation. This is far in excess of what is required to avoid withdrawal.

Endeavour to find corroborative evidence (eg, hospital admissions with seizures) rather than accepting the history, and maintain awareness that in managing benzodiazepine dependence in the setting of polydrug use, safety (not symptoms) is the key. For every polydrug-using patient requesting benzodiazepines, the clinician must judge whether it is safer to prescribe or not prescribe. The important issue is not to add to the pool of benzodiazepine use.

If withdrawal management is to be offered, it should be on an ambulatory basis. Sometimes, a brief period of admission for stabilisation may be helpful.

It is important to provide clear information that the aim of treatment is to produce stabilisation and progressive dose reduction *safely*; this does not mean patients will feel comfortable or asymptomatic. Switching to a long-acting benzodiazepine (usually diazepam) and using only one benzodiazepine are important steps to minimise risks during withdrawal. Patients may be adamant that shorter-acting preparations are the only ones acceptable or efficacious. Clinicians should not support the ongoing prescription of these drugs, which contribute to more severe withdrawal, and are more likely to be misused and diverted.

The medication should be supplied as tablets to be taken under supervision daily, not to be taken away.

If patients stabilise on a dose in the range 40–80 mg of diazepam daily, withdrawal should be at the rate of at least 5 mg per week until the dose reaches 40 mg, then 2.5 mg/week. At this rate, reducing from 80 mg diazepam will take nearly 6 months. A maximal rate of withdrawal would be to reduce the dose by 10 mg at weekly intervals until 40 mg, then by 5 mg at weekly intervals. This will take 12 weeks.

During withdrawal, patients should be monitored with clinical reviews and by checking the Doctor Shopping Information Service.

The experience of most clinicians is that few patients comply with treatment, and most continue to seek and obtain additional benzodiazepines. In this situation, there is no point continuing with “withdrawal” treatment; the treatment simply becomes part of the source of benzodiazepines.

4.6 Continuing care

See section 2.8 for general advice on continuing care after withdrawal.

5 Opioids

Chapter summary

- 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, but withdrawal is more prolonged, with a debilitating low-grade withdrawal lasting 3–6 weeks.
 - Daily review may include 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 preferable to commence buprenorphine dosing after the onset of withdrawal symptoms.
 - Many services using buprenorphine blur the distinction between withdrawal and maintenance, initiating buprenorphine for management of withdrawal, but allowing patients to continue with buprenorphine maintenance treatment. This effectively engages them in maintenance treatment.
 - Planned naltrexone-assisted opioid withdrawal is a validated and valuable treatment option for some patients. It should be conducted only in highly supervised specialist environments.
 - During the first week of treatment, treatment options after withdrawal should be discussed with the patient. These include abstinence with or without naltrexone assistance or residential support, or continuing with buprenorphine treatment.
-

5.1 Use and effects of opioid drugs

Opioids that bind to receptors and activate them are referred to as “agonist” drugs (such as morphine and methadone), and those that bind to receptors but do not activate them are called “antagonists” (such as naloxone and naltrexone). Partial agonists (buprenorphine) bind to the same receptors but have less of an activation effect.

Opioid agonist drugs have a range of pharmacological actions:

- analgesia (particularly for relieving the affective component of pain)
- a sense of well being (euphoria)
- sedation

- central nervous system depression, particularly respiratory depression (in high doses)
- pupil constriction
- reduced pulse and blood pressure.

Administering opioids may produce side effects:

- nausea and vomiting
- constipation
- increased sweating
- decreased sexual function (impotence).

Opioid drugs, with details of approximately equivalent doses

| Generic name | Trade name | Approximate dose (mg) | Duration of analgesia (hours) | Half life (hours) |
|-----------------------------|--|------------------------|-------------------------------|-------------------|
| Buprenorphine hydrochloride | Subutex/ Suboxone | 0.3 | 4-8 | 20-73 |
| Codeine phosphate | Codeine, Panadeine forte | 30-60 | 3-4 | 2-4 |
| Diacetylmorphine | Heroin | (converts to morphine) | 4-5 | 2 |
| Fentanyl citrate | Fentanyl | 0.1 | 1-1.5 | 3-4 |
| Methadone 4-5hydrochloride | Biodone forte Methadone syrup Physeptone | 10 | 4-6 | 15-60 |
| Morphine sulfate | Morphine | 10 | 4-5 | 2 |
| | Kapanol MS Contin | 10 | 4-5 | 2-4 |
| Oxycodone hydrochloride | OxyContin Endone | 4.5 | 3-4 | 6.5 |

Sources: Katzung BG (2006) Basic and Clinical Pharmacology, 9th Edition, The McGraw-Hill Companies [CIAP]; MIMS on-line (2006) [CIAP].

5.2 Assessment issues specific to opioid-dependent patients

Note: general assessment for withdrawal is detailed in section 2.3.

5.2.1 Assessing opioid dependence

The presence of opioid dependence as defined by DSM-IV indicates the likelihood of opioid withdrawal developing.

The patient's prior experience of withdrawal can indicate how severe withdrawal is likely to be. Heroin users may exaggerate their drug use or withdrawal severity out of anxiety and in the hope of receiving sufficient medication to alleviate expected symptoms. Therefore, history should be supplemented with physical examination, and with regular monitoring and review during withdrawal management.

Heroin dosage estimates are difficult because of wide variations in the concentration and purity of illicit heroin. Consumption may be recorded as:

- the number of injections per day
- the number of grams ingested
- dollars spent.

Note that "street" usage patterns alter frequently.

Approximate guide to a patient's level of heroin use

Low end

- one to two injections per day, or
- 0.5 g or less per day

High end

- four or more injections per day, or
- 1–2 g or more per day.

The patient may be intoxicated on presentation, and this may affect his/her ability to provide and receive information.

See **Appendix B** for a guide to managing intoxication and overdose.

Assessment of intoxicated individuals may be difficult, and assessment findings should be reviewed after signs of intoxication have abated.

5.2.2 Unplanned withdrawal

Patients in hospital, prison, or other institutional care may undergo unplanned opioid withdrawal.

Patients may not always reveal their use of opioids. Indicators of the possibility of unplanned opioid withdrawal include:

- "track marks" in the typical venous access sites
- repeated requests for analgesia or specifically for opioid drugs, in excess of what would be expected from the patient's clinical circumstances.

Patients who are opioid tolerant are likely to require higher than usual doses of analgesic drugs to achieve reasonable levels of pain relief.

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

5.3 Withdrawal

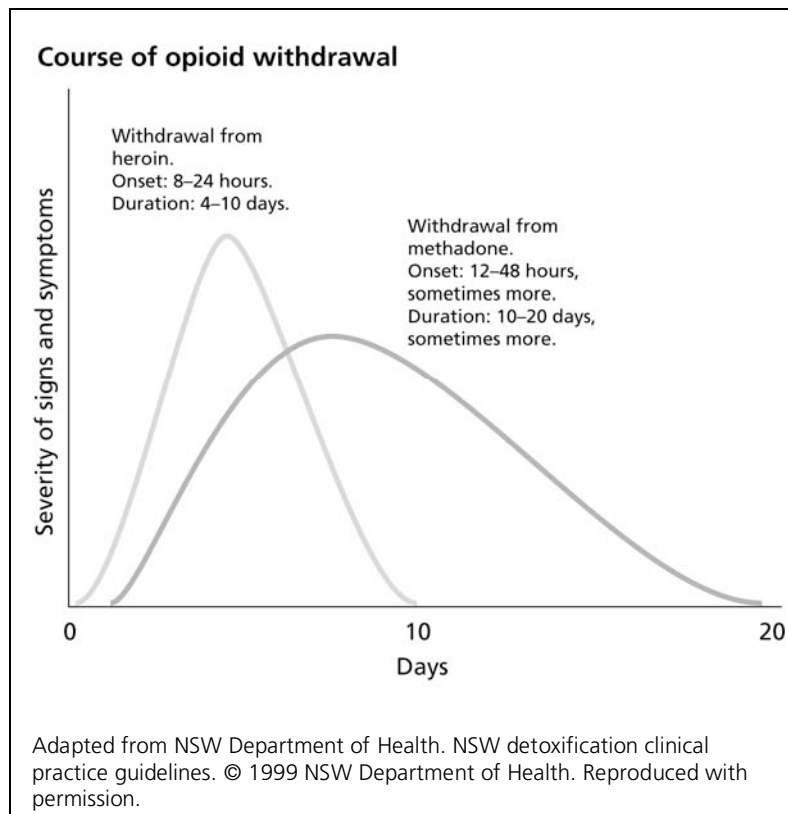
5.3.1 Onset and duration of withdrawal

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.

Withdrawal from a long-acting 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, but 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, but withdrawal from buprenorphine is generally milder than withdrawal from methadone or heroin because of its slow dissociation from the μ receptor. 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.



5.3.2 Signs and symptoms of opioid withdrawal

| Signs | Symptoms |
|--|------------------------------|
| Restlessness | Anorexia and nausea |
| Yawning | Abdominal pain |
| Perspiration | Hot and cold flushes |
| Rhinorrhoea | Bone, joint and muscle pain |
| Dilated pupils | Insomnia and disturbed sleep |
| Piloerection | Cramps |
| Muscle twitching (particularly restless legs while lying down) | Intense craving for opioids |
| Vomiting | |
| Diarrhoea | |

5.3.3 Monitoring

Patients should be monitored regularly, and this may include use of a withdrawal scale. The frequency of observations should be determined by the severity of the withdrawal.

Monitoring should be clinically based on observations, objective signs and subjective symptoms.

5.3.4 Withdrawal scales

The Clinical Opiate Withdrawal Scale (COWS) (see **Appendix L**) 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 M**) rates 16 items from 0 to 64 and is used in some clinical units.

Withdrawal scales do not diagnose withdrawal, but are merely guides to the severity of an already diagnosed withdrawal syndrome.

Re-evaluate the patient regularly to ensure that it is opioid withdrawal and not another underlying medical condition that is being monitored, particularly if the patient is not responding well to treatment.

5.4 Treatment

5.4.1 The regulatory context of treatment of addiction

In Australia, it is not legal to prescribe Schedule 8 drugs (drugs of addiction such as morphine) to anyone who is a known addict for the purposes of treating addiction without an individual authority to prescribe from a state health department.

In hospital settings, doctors may use methadone or buprenorphine as part of management of opioid-dependent individuals hospitalised with medical problems. Outside hospital, methadone and buprenorphine may only be used in the treatment of opioid dependence by medical practitioners authorised to deliver this treatment.

5.4.2 Treatment planning

Treatment planning should:

- address the patient's reasons for seeking treatment, social setting, and expectations about withdrawal
- identify short and long-term goals of treatment
- 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.

5.4.3 Key elements of opioid withdrawal treatment

Information

People who use illicit drugs often possess a great deal of information about drug use, withdrawal and treatment. Much of this knowledge results from their own experience and deserves to be respected, but some reflects misinformation and misunderstanding. This misinformation may concern the nature and course of withdrawal, its severity, the effectiveness of treatments, and especially the response of health professionals to illicit drug users. These beliefs need to be elicited and responded to with objective information.

Support

An empathic, non-judgemental approach from healthcare providers and an encouraging and supportive attitude during withdrawal are essential. For details on supportive care, see section 2.6.3.

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 aggressive fluid replacement.

Medication

Various pharmacological options can be used to treat opioid withdrawal. Medication is unlikely to entirely relieve the symptoms of withdrawal, but can be used to reduce the patient's discomfort. Medications are detailed in the following sections.

5.4.4 Buprenorphine

Buprenorphine is the principal treatment option for managing opioid withdrawal. It relieves symptom severity in opioid withdrawal so that other symptomatic medication is not usually required.

Buprenorphine can precipitate withdrawal in someone who has recently used heroin (in the previous 12 hours) or methadone (in the previous 48 hours). Give 4–6 mg of buprenorphine as the first dose. Review the patient 3–4 hours after the first dose. If the patient is experiencing no increase in withdrawal severity and is still reporting withdrawal, give another 2–4 mg of buprenorphine.

If using a withdrawal scale as part of patient assessment:

- treatment should not begin until a COWS score of at least 8 (representing the mid point of the scale, see **Appendix L**) or a SOWS score of 16–25 (representing mild to more moderate withdrawal, see **Appendix M**).

Combined use of other sedative substances (eg, benzodiazepines, opioids, alcohol, and tricyclic antidepressants) with buprenorphine can be extremely dangerous and may result in respiratory depression, coma and death.

If a patient is aged 16 or 17 years, a second opinion is required before authority to prescribe buprenorphine can be granted. A second opinion must be obtained from a drug and alcohol specialist in the local drug and alcohol service and be documented. Prescribing buprenorphine to patients less than 16 years of age requires an exemption to the provisions of the *Children and Young Persons (Care and Protection) Act 1998*. The request for an exemption should include a second opinion from a drug and alcohol medical specialist nominated by the Area Health Service and a written application must be made as per the protocol in *New South Wales Opioid Treatment Program: clinical guidelines for methadone and buprenorphine treatment* (NSW Department of Health GL2006_019 2006, page 22).

Pain management and use of buprenorphine

Buprenorphine binds strongly with opioid receptors and there is a theoretical risk that it may interfere with the effectiveness of other opioids prescribed for pain relief. See *New South Wales Opioid Treatment Program: clinical guidelines for methadone and buprenorphine treatment* (NSW Department of Health GL2006_019 2006) for further information.

Outpatient management

The recommended duration of buprenorphine treatment for heroin withdrawal is 4–8 days (see table below). If patients choose to continue buprenorphine, this should be done as maintenance treatment.

Example buprenorphine regimen

| Suggested regimen | | Recommended lower and upper limits |
|-------------------|-------|------------------------------------|
| Day 1 | 6 mg | 4–8 mg |
| Day 2 | 8 mg | 4–12 mg |
| Day 3 | 10 mg | 4–16 mg |
| Day 4 | 8 mg | 2–12 mg |
| Day 5 | 4 mg | 0–8 mg |
| Day 6 | 0 | 0–4 mg |
| Day 7 | 0 | 0–2 mg |
| Day 8 | 0 | 0–1 mg |

Patients should be reviewed daily by an experienced health professional during the first few days of a withdrawal regimen. This is important for adjusting doses if necessary and to ensure provision of supportive care.

Flexibility of dosing is recommended, and doses should be titrated to meet the severity of withdrawal symptoms. An initial dose of 4 mg or less will minimise precipitated withdrawal. Further doses can be administered after 4 hours and should be guided by patient symptoms.

Inpatient management

Fixed regimens can be negotiated for inpatient areas where staff do not have 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 (eg, 2 mg) can be administered throughout the day (see table above for upper and lower dose limits).

5.4.5 Symptomatic treatments

Medication of symptoms and supportive care are often sufficient in treating mild withdrawal (see table of symptomatic treatments below). Adjunctive therapies (such as hot baths) are also helpful.

Clonidine

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 (ie, blood pressure is less than systolic 90 mmHg or diastolic 50 mmHg)
 - heart rate is less than 50 per minute
 - there is clinical evidence of impaired circulation.

Initial test dose:

- Administer 75 µg 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 µg dose and continue treatment as shown in the table of symptomatic treatments.

Symptomatic treatments

| Symptoms | Suggested treatments |
|------------------------------|--|
| Muscle aches/pains | Paracetamol 1000 mg, every 4 hours as required (maximum 4000 mg in 24 hours) or Ibuprofen 400 mg every 6 hours as required (if no history of peptic ulcer or gastritis). |
| Nausea | Metoclopramide 10 mg, every 4–6 hours as required or Prochlorperazine 5 mg, every 4–6 hours as required. Second line treatment for severe nausea/vomiting: 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. |
| Sleeplessness | Temazepam 10–20 mg at night. Cease the dose after 3–5 nights. |
| Agitation or anxiety | Diazepam 5 mg four times daily as needed. |
| Restless legs | Diazepam (as above) or baclofen 10–25 mg every 8 hours. |
| Sweating, sedating agitation | Clonidine 75 µg every 6 hours |

5.4.6 Naltrexone

Planned naltrexone-assisted opioid withdrawal is a validated and valuable treatment option for some patients. It should be conducted only in highly supervised specialist environments.

A *Code of professional conduct for rapid detoxification in an unlicensed setting* has been approved by the NSW Minister for Health. The Code sets out the minimum standards of care to be observed by medical practitioners using opioid antagonists to accelerate withdrawal from opioid drugs in an unlicensed setting. The Code can be viewed at the NSW Medical Board's website <www.nswmb.org.au>.

5.5 Special issues

5.5.1 Pregnancy and breastfeeding

The preferred treatment of pregnant opioid users is methadone maintenance (withdrawal presents risks to the fetus and requires specialist management if it is to be attempted). Managing withdrawal in pregnancy is beyond the scope of these guidelines. If possible, specialist obstetric and drug and alcohol input should be sought.

Patients (including those on methadone maintenance treatment) are encouraged to breastfeed in conjunction with appropriate postnatal support.

5.6 Continuing care

During the first week of treatment, post-withdrawal management options should be discussed with the patient. These include abstinence with or without naltrexone assistance or residential support, or continuation on buprenorphine treatment.

5.6.1 Transfer to naltrexone

Patients who have completed withdrawal can begin taking naltrexone 48 hours after ceasing buprenorphine. Some patients have a reasonably uneventful induction onto naltrexone; others experience considerable distress. It is best to warn prospective patients to expect symptoms. It may be useful to prescribe symptomatic medication for the 24 hours after induction or in the event of precipitated withdrawal.

If patients have used heroin during withdrawal before induction onto naltrexone, symptoms of withdrawal may be more severe. The history provided should be combined with the physical presentation of the patient (evidence of intoxication, recent use or withdrawal) to make a clinical judgement on the commencement of naltrexone.

Under circumstances where there is any doubt, a naloxone test before the first dose of naltrexone may be useful.

The first dose of naltrexone should not exceed 12.5 mg. Patients should be observed for 3 hours, warned of possible delayed withdrawal, and reviewed on the next day. For the next 2 days, they should receive 25 mg per day, and thereafter 50 mg per day as tolerated.

The routine use of naltrexone implants has not been approved in Australia. Results from studies in this country are awaited.

5.6.2 Post-withdrawal management

Post-withdrawal management services include Narcotics Anonymous, outpatient programs, counselling and residential services. A variety of outpatient services may also be combined with naltrexone maintenance.

It is important to link to these services in a timely manner, minimising the period from completing withdrawal to engaging in continuing treatment. In particular, organising direct transfer from a residential withdrawal setting to a longer term residential service is desirable for patients who have decided on continuing residential treatment.

See section 2.8 for more information on continuing care.

6 Cannabis

Chapter summary

- Commonly reported symptoms of cannabis withdrawal are anger or aggression, decreased appetite, irritability, nervousness or anxiety, restlessness and sleep difficulties including strange dreams. Less common symptoms include chills, depressed mood, stomach pain, shakiness and sweating.
 - The general management approach for cannabis withdrawal should be supportive counselling, accurate information and appropriate planning.
 - No specific pharmacotherapies have proven utility in managing cannabis withdrawal.
 - Premorbid tendencies toward aggression and violence appear to predict particularly problematic and clinically significant exacerbation of symptoms.
 - Tobacco smoking predicts a poorer outcome for cannabis smokers. Concomitant treatment for nicotine withdrawal should assist.
 - Underlying psychiatric illnesses or symptoms may be unmasked during withdrawal, and particular attention should be paid to patients with comorbid disorders (especially bipolar illness), and patients with other severe mood and psychotic disorders.
 - Post-withdrawal interventions should be used, such as motivational enhancement, relapse prevention, cognitive behavioural therapies, other psychosocial interventions and self-help groups.
-

6.1 Use and effects of cannabis

Positive effects of cannabis include quiet euphoria, feeling “mellow” and content. There can be sensory intensification and occasionally illusions or distortion, although frank hallucinations are rare, occurring occasionally after very high doses or after the use of oral preparations or potent strains.

Adverse effects include paranoia, anxiety, depression and sedation. Users may experience an increased appetite. Sedation occurs at higher doses and is used to aid sleep by many smokers.

Cannabis may be smoked, often with tobacco, or taken orally. In NSW, the use of “bongs” (water pipes) is particularly common. The user packs the cannabis (with or without tobacco) into a cone-shaped metal bowl, hence the term “smoking a cone” (see section 2.3.5).

One “joint” (cannabis cigarette) is equivalent in terms of tar to about 3–4 cigarettes. Cannabis contains as many carcinogens as tobacco, deposits a third more tar and is thought to be a risk factor for oropharyngeal and lung cancer as well as coronary heart disease.

Because cannabis can affect physical coordination and reaction time and result in perceptual distortions, confusion and short-term memory loss, driving and other manual tasks may be impaired.

6.2 Assessment issues specific to cannabis-dependent patients

Note: general assessment for withdrawal is detailed in section 2.3.

Cannabis

Identify as accurately as possible:

- the way in which the drug is consumed
- the frequency of use
- the amount spent per day on cannabis.

Users will usually be able to report how many grams (10–15 cones/gram, more if “mulled” or “spun” with tobacco) they smoke per day. Smoking marijuana cigarettes (rolled with or without tobacco) commonly known as “joints” or “spliffs” is another common mode of use. Heavy users can smoke more than 1 ounce / 28 grams) a week.

The patient may be intoxicated on presentation, and this may affect his/her ability to provide and receive information.

See **Appendix B** for a guide to managing intoxication and overdose.

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.

6.3 Withdrawal

6.3.1 Onset and duration of cannabis withdrawal

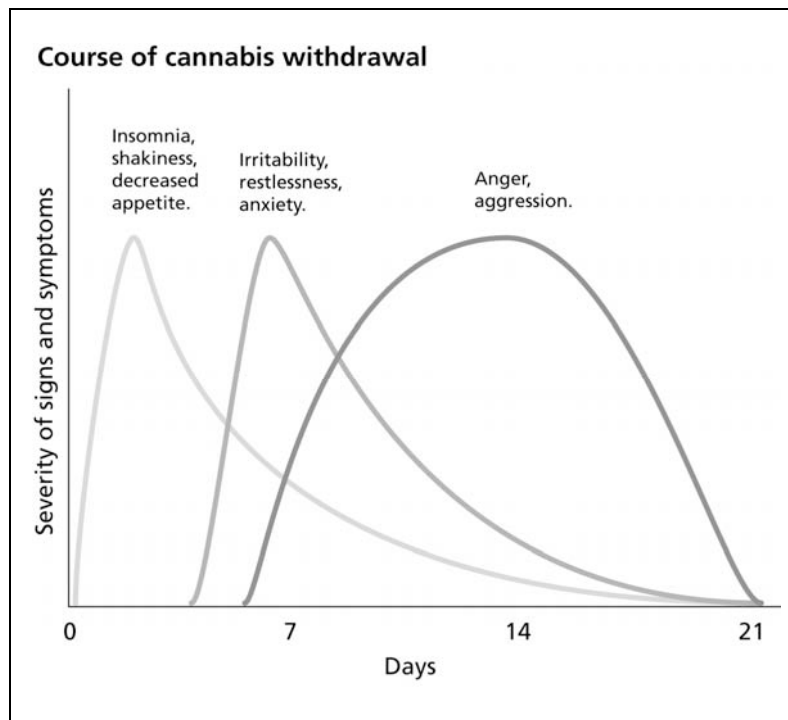
Most symptoms commence on day 1, peaking at day 2–3, returning to baseline after a week or two. However, there is temporal variation in the profile of specific symptoms, with the late onset of aggression (day 4) and anger (day 6) being particularly significant, with the former often peaking after 2 weeks of abstinence.

6.3.2 Symptoms of cannabis withdrawal

Clinical studies suggest that 50%–75% of dependent cannabis users will experience four or more symptoms, with sleep disturbance, reduced appetite, irritability, anger and aggressiveness occurring in at least 40%.

Symptoms of cannabis withdrawal

| Common symptoms | Less common symptoms/equivocal symptoms |
|--|---|
| Anger or aggression | Chills |
| Decreased appetite or weight loss | Depressed mood |
| Irritability | Stomach pain |
| Nervousness/anxiety | Shakiness |
| Restlessness | Sweating |
| Sleep difficulties, including strange dreams | |



6.3.3 Factors contributing to withdrawal severity

Variables affecting withdrawal include:

- psychiatric comorbidity
- dose: amount and potency of preparation consumed
- history of aggression or violence
- setting: outpatient withdrawal is more severe than inpatient withdrawal
- population: more severe in treatment seekers
- duration of current use
- rate of withdrawal
- comorbid substance use
- past or current substance use history.

6.3.4 Monitoring withdrawal

Assessment of withdrawal may be assisted by the use of a standardised withdrawal assessment scale or by direct questioning. The Clinician Cannabis Withdrawal Chart can be found in **Appendix N**. It is not a validated tool but can be useful for clinical practice.

6.3.5 Urine drug screening

Urine drug screening for the inactive cannabis metabolite (11-hydroxy-THC) can be supportive of cessation, and may be indicated as part of contingency management, positive feedback, or as a condition of a court diversion program.

Creatinine/cannabis ratios fall rapidly with cessation and, although it may take up to 12 weeks of abstinence to attain clean urine in chronic smokers, reductions in urinary concentration may support self-report.

6.4 Treatment

The default management approach for cannabis withdrawal should be supportive counselling, accurate information and appropriate planning.

When planning for cannabis withdrawal, therapists should take note of impending crises, current psychosocial stressors, likely triggers, paraphernalia, contact with users/dealers, and so on. The use of self-help booklets can be helpful, such as:

- *Mulling it over*
<http://www.adf.org.au/store/article.asp?ContentID=pproduct_33212>

- *Quitting cannabis? Client booklet and clinician guidelines*
<<http://ndarc.med.unsw.edu.au/ndarcweb.nsf/page/resources#quitting>>

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.

6.4.1 Indications for inpatient cannabis withdrawal

When attempts at outpatient-supported withdrawal have been repeatedly unsuccessful, or where there are compelling psychosocial indications, admission for 1–2 weeks of inpatient withdrawal may be warranted. Often this will be as much for removal of the patient from a source of the drug and psychosocial support as it is to monitor and medicate withdrawal.

Inpatient withdrawal from cannabis may be indicated if:

- Repeated outpatient attempts have proved unsuccessful.
- The patient has significant mental health problems (eg, schizophrenia, bipolar disorder). If there is doubt over the existence of co-existing psychopathology, a period of confirmed abstinence with observation and monitoring within an inpatient unit may assist in assessment and diagnosis.
- The patient has a history of severe pre-morbid aggression or violence, especially if previous withdrawal attempts have been associated with an exacerbation of such symptoms. This is particularly important if others sharing the user's home (especially children) may be placed at risk during the withdrawal period. It may be appropriate with some patients to conduct a formal risk assessment to determine the most appropriate setting for management.
- The patient has polydrug dependence, where complicated withdrawal may be expected.

6.4.2 Pharmacotherapies

There are no specific pharmacotherapies that have proven utility in managing cannabis withdrawal or maintaining abstinence. Although most clinical practice involves the use of benzodiazepines, there are no controlled studies assessing the efficacy of this practice.

Users should refrain from caffeinated drinks during the withdrawal period, as they may increase restlessness, irritation and insomnia.

Based on the limited literature available, the table below presents options that may be chosen on the basis of physician and patient preference, safety and supervision issues, contraindications and particular symptom profile.

Medications to consider for different symptom clusters in cannabis withdrawal

| Symptom | Medication |
|-------------------------------------|---|
| Sleep problems | benzodiazepines, zolpidem, zopiclone, promethazine |
| Restlessness, anxiety, irritability | diazepam |
| Stomach pains | hyoscine (Buscopan), atropine |
| Physical pain, headaches | paracetamol, non-steroidal anti-inflammatory agents |
| Nausea | promethazine, metoclopramide |

6.4.3 Symptomatic relief by symptom cluster

Given the wide interpersonal variability in the response to cannabis withdrawal, dosages and prescribing schedules for symptomatic relief will most effectively be decided upon only after thoroughly exploring the individual patient's symptom profile and circumstances.

Outpatient regimens might be:

- 7 days of diazepam 5 mg four times daily, zopiclone 7.5 mg at night, NSAIDs/buscopan as needed; or
- 7 days of zolpidem 7.5 mg at night.

Inpatient regimens should not use other medication types, but there may be a need to use higher doses of selected pharmacotherapies, administered for a longer period.

Regular patient contact and monitoring, either via clinic visits or telephone, can be useful in adjusting drug selection and dose. Monitoring should continue when withdrawal is complete and medication ceases, to identify any psychiatric symptoms that were previously masked or latent. Routine outpatient follow-up during the first 2–4 weeks should be offered.

6.4.4 Psychosocial management, including dose tapering

Many users will be able to stop smoking abruptly without experiencing significant withdrawal. Two specific cannabis reduction strategies are:

- sudden cessation, with or without symptomatic relief

- gradual dose reduction through use of diaries and in combination with an evidence-based psychological intervention (the need for symptomatic relief may be reduced).

Clinical experience suggests that, if the user is able to exert some control over the level of use (perhaps supported by a family member), a gradual tapering of consumption can significantly reduce the severity of withdrawal. It may be the only intervention required in some users, and may negate the need for psychotropic medication.

With these complementary strategies in mind, it is possible to offer patients a choice of methods for getting through any withdrawal they might experience. Depending on precise patient characteristics and other clinical imperatives (eg, acute psychotic episode), the patient, clinician or carer may express a preference. Where pain is an issue, a more gradual reduction is advisable to ensure that adequate alternative analgesia is in place before cessation.

Patients should be provided with a choice of intervention strategies and their preference should be strongly supported unless clinically contraindicated.

Even if such approaches do not lead to abstinence, they support the user in reducing or controlling intake and are useful harm reduction interventions.

Gradual reduction in daily use

Suggestions to assist in the gradual taper of cannabis use may involve one or more of the following strategies:

- 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 is a good way to develop a short-term drop in tolerance. It also permits the opportunity for the user to take part in some non-drug reinforcing activity, preferably one incompatible with smoking or other substance use such as exercise (eg, walking, running).
- Gradually reducing either cone size or cone strength, to reduce the amount consumed from each bong.
- For joint smokers, alternative reduction techniques can be used, such as rolling smaller joints or weaker joints, or not smoking the whole joint at once.
- Having an agreed dose reduction schedule (most users should aim to reduce to zero over 1–4 weeks)

Family support

The family or carers should be educated 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. They may help in controlling access to cannabis (eg, rationing), although this is only likely to be effective if requested by the user. Safety is a key issue, especially among young men with a history of violence/aggression. In such cases, a risk assessment should be conducted. Cannabis withdrawal requires supportive management if young children or women may be at risk.

Self-help booklets

There is a wide range of excellent self-help books to assist in the management of cannabis use disorders.

6.5 Special issues

6.5.1 Premorbidly aggressive and prison populations

In people with histories of aggression or severe withdrawal, closer monitoring and support should be provided, with particular attention to the withdrawal environment and individual's circumstances. Inpatient admission may occasionally be appropriate.

Cannabis withdrawal within gaols or young offenders' institutions has anecdotally been associated with increased levels of aggression and violence. Health service providers to correctional facilities may wish to consider the potential effect of cannabis withdrawal on health and safety.

6.5.2 Pregnancy

Research findings on the effects of maternal cannabis consumption on fetal development, perinatal outcome and childhood development are inconsistent, but do not appear to suggest that use through pregnancy is a significant teratogen or cause of significant infant mortality.

Cannabis use may be a marker for other more significant substance use, and if consumed with tobacco, carries the risks of intrauterine growth retardation and prematurity.

Pregnant women should be strongly advised to stop and be supported using the minimum of medication.

6.5.3 Pain

Some people with chronic pain syndromes frequently use cannabis. Cannabis is an effective adjunctive analgesic with particular benefits for people with chronic pain or musculoskeletal/spasm/arthritis disorders such as multiple sclerosis. In these patients, careful consideration needs to be given to providing alternative analgesia before reducing cannabis use.

6.5.4 Young people

Dependent use of cannabis by people younger than 16 years often exists as one of many problems experienced by the child. The absence of protective factors, co-existing family discord, poor school attainment, social exclusion, and childhood psychiatric disorder (eg, conduct disorder, post traumatic stress disorder, and attention deficit hyperactivity disorder) are likely to compound the problems associated with cannabis dependence and withdrawal.

Non-confrontational approaches using motivational interviewing should be used, with family support where available and appropriate. Medication should be avoided. Admission to adult inpatient units should be avoided. Inpatient admission should be to a specialist adolescent unit within or supported by a drug and alcohol service.

6.5.5 Comorbid psychiatric conditions

Underlying psychiatric illnesses or symptoms may be unmasked during withdrawal, and particular attention should be paid to patients with comorbid disorders, especially bipolar illness (where sudden cessation can be associated with manic relapse), and in patients with other severe mood and psychotic disorders (where cessation can also lead to decompensation). In such instances, inpatient admission may be appropriate. Assessment after withdrawal may permit the accurate diagnosis and appropriate treatment of pre-existing psychiatric disorders. Frequent disorders reported in association with cannabis include depression, anxiety, paranoia and depersonalisation.

Among patients receiving drug treatment for psychotic disorders, use of cannabis may be associated with antagonism of neuroleptic effect, reduced compliance and higher doses. These patients should be engaged in a planned intervention around their cannabis use. Key approaches include harm reduction advice, motivational interviewing and, particularly, compliance therapy, a variant on motivational enhancement therapy that has been shown to increase compliance and improve outcome among those prescribed antipsychotic medication.

6.6 Continuing care

There are no specific continuing care strategies for cannabis dependence once abstinence or a desired reduction in use has been attained. Standard interventions aimed at reducing relapses and sustaining motivation should be used.

Supportive group programs may be useful for some.

For general information on continuing care after withdrawal, see section 2.8.

7 Psychostimulants (amphetamines, cocaine and ecstasy)

Chapter summary

- Mental state symptoms such as paranoia, delusions or perceptual disturbances are common among stimulant users seeking treatment. Signs and symptoms can fluctuate with time. A formal mental state examination of all patients presenting with a history of stimulant use and a suicide risk assessment should be conducted (see section 2.3.12)
 - Withdrawal typically occurs in three phases. The *crash phase* commences as stimulants wear off, and can last for several days. Key features include fatigue, flat affect, increased sleep and reduced cravings. The *withdrawal phase* typically commences 2–4 days after last amphetamine use and 1–2 days after last cocaine use. Features are predominantly psychological, with fluctuating mood and energy levels, cravings, disturbed sleep, and poor concentration. Withdrawal features gradually subside during the *extinction phase*, which lasts from weeks to months.
 - Withdrawal from stimulant drugs is not medically dangerous, and no specific treatment has been shown to be effective. The usual objectives in treating stimulant withdrawal are to assist the patient to interrupt a period or pattern of compulsive use, to identify and manage comorbid conditions and to initiate relapse prevention treatment.
 - The role of medication in managing cocaine or amphetamine withdrawal is unclear. At present, there is no specific medication schedule recommended for treating this condition.
 - The protracted extinction phase of stimulant withdrawal requires integration between withdrawal services and post-withdrawal services.
-

7.1 Use and effects of psychostimulants

Psychostimulants are a group of drugs including amphetamines, cocaine and ecstasy (MDMA).

The term “amphetamine” includes the three types of amphetamines: amphetamine, dexamphetamine and methamphetamine. Most illicit drugs bought as speed or amphetamines are likely to be methamphetamine.

Speed is a powder form of amphetamine or methamphetamine. It is produced in different colours and ranges in texture from fine granules to coarse crystals. It is the weakest form of illicit amphetamines and is usually injected, snorted or swallowed.

Base is an oily, waxy, sticky form of methamphetamine coming in a moist paste or damp powder. There is also a liquid form called ‘ox blood’. It is high purity freebase and stronger in purity than speed and is normally swallowed or smoked.

Ice is the strongest form of methamphetamine. It either comes as a crystalline powder or crystals and is white or translucent. It is the highest purity form of methamphetamine and is usually smoked or injected.

Cocaine is a white crystalline powder and it is snorted, injected or swallowed. Crack cocaine, which is smoked, has been reported in Australia. Use of cocaine is relatively uncommon in Australia at present.

Ecstasy (methylenedioxymethamphetamine) is readily available in NSW and is ingested generally in a tablet form. Tablets may contain a range of drugs often including methamphetamine.

A range of psychostimulants are available for the treatment of various conditions. These may also be used non-medically or illicitly. These include methylphenidate (trade name Ritalin), diethylphenidate (Tenuate), phentermine (Duramine), ephedrine and pseudoephedrine (Dimetapp, Sudafed, Benadryl and Sinutab).

Psychosis in amphetamine users has increased over recent years reflecting increased use and availability of methamphetamine. To date, no pharmacological treatment managing this psychosis has been proven to be more effective than another.

Stimulants are used by diverse groups in the community, including:

- young people experimenting with illicit drugs
- shift workers
- people (often women) seeking to lose weight

- individuals seeking to self medicate against depression, attention deficit hyperactivity disorder, or to counter the effects of sedating medication (eg, methadone, antipsychotics)
- people in certain cultural groups where stimulant use is prevalent (eg, rave scenes).

The pattern of stimulant use varies across these different groups. Amphetamines and cocaine can be injected, swallowed, snorted or smoked. Polydrug use is very common among people who use stimulants. A common pattern among dependent users is high-dose binges lasting for days, followed by exhaustion and withdrawal dysphoria.

In general, stimulants increase alertness, the sense of well-being, and the pleasurable reinforcement experienced with many activities. Some individuals move into a pattern of repeated use and higher doses, in an increasing search for intense euphoric sensations.

Effects of psychostimulants

| Immediate effects | Effects of higher doses |
|------------------------------------|---------------------------------|
| Increased alertness | Headaches |
| Increased energy | Pale skin |
| Increased confidence | Restlessness |
| Euphoria | Dizziness |
| Increased talkativeness | Rapid or irregular heartbeat |
| Loss of appetite | Paranoia |
| Insomnia | Anxiety |
| Increased heart rate and breathing | Panic attacks |
| Nausea/vomiting | Depression |
| Headaches | Confusion (feeling “scattered”) |
| Jaw clenching | |
| Hot and cold flushes | |
| Sweats | |

7.2 Assessment issues specific for stimulant users

Note: general assessment for withdrawal is detailed in section 2.3.

Amphetamines are the most frequently used group of drugs in this category.

Define the route of administration, the specific agents used, and the frequency and pattern of use.

Many street products will not be pure, and urine drug screening is appropriate to document what has been consumed.

Consumption may be recorded as frequency of administration or as dollars spent.

The patient may be intoxicated on presentation, and this may affect his/her ability to provide and receive information.

See **Appendix B** for a guide to managing intoxication and overdose.

Assessment of intoxicated individuals is difficult but should be pursued as far as is possible. Assessment findings should be reviewed after signs of intoxication have abated.

Patients may not consider their stimulant use to be a problem and therefore not disclose use unless a systematic enquiry of all drug classes is performed. Use of other drugs is common in association with (either during or after) stimulant use.

7.2.1 Regular monitoring and repeated assessment over time

Patients undergoing stimulant withdrawal require ongoing assessment and regular monitoring, particularly in the first 2 weeks of abstinence (by which time peak symptoms will have appeared).

Patients may appear calm, with few cravings and generally well, in the first few days without stimulant use (during the “crash” phase), but withdrawal or mental state problems may become apparent several days after the initial assessment.

7.2.2 Assessment of potential complications of psychostimulant use

All patients withdrawing from stimulants should undergo a medical and mental state assessment.

Mental state symptoms such as paranoia, delusions or perceptual disturbances are common among stimulant users seeking treatment. Signs and symptoms can fluctuate with time. Repeated assessment is indicated — mental state problems may not surface until late in the first week of withdrawal, with features masked during the crash phase.

If mental state problems are severe and/or persistent (eg, for longer than a week after last stimulant use), then specialist psychiatric assessment is necessary.

The presence of significant mental state problems requires regular monitoring over a longer period (months) to differentiate the diagnosis.

There are many potential complications associated with cocaine and amphetamine use, and every body system can be affected (see table below).

A phenomenon associated with stimulant use is “kindling”: once an individual experiences certain complications from their stimulant use (eg, arrhythmias, seizures, psychosis), they are more susceptible to further episodes, even with low doses. Warn patients who have experienced stimulant-related complications against further stimulant use.

Specialist medical assessment is required for patients with medical complications.

Medical and psychiatric complications of stimulant use

| System | Complication |
|----------------|--|
| Cardiovascular | <p>Arrhythmias: tachycardia, bradycardia, ventricular tachycardia.</p> <p>Hypertension: may lead to cerebrovascular accidents.</p> <p>Spasm of arteries: leading to myocardial infarcts or cerebrovascular accidents (myocardial infarcts can occur during first weeks of withdrawal).</p> <p>Cardiomyopathy and congestive heart failure.</p> |
| Neurological | <p>Seizures: clonic convulsions.</p> <p>Cerebrovascular accident: including brain haemorrhages, infarcts and ischaemic episodes.</p> <p>Neuropsychological changes: deficits in attention, concentration, memory and new learning skills.</p> <p>Movement disorders: eg, tics, disturbed gait, stereotyped repetitive movements, choreoform movements.</p> |
| Psychiatric | <p>May mimic any psychiatric disorder. More commonly:</p> <p>Depression, with changes in mood and affect, sleep, activity.</p> <p>Paranoia, ranging from hypervigilance to paranoid psychosis.</p> <p>Anxiety and aggression, ranging from irritability and agitation to panic attacks or violence (more common in amphetamine users).</p> <p>Delirium, with clouding of consciousness, disorientation, confusion.</p> <p>Psychosis, characterised by paranoia and anxiety, impaired reality testing with loss of insight and delusions (eg, ideas of reference, persecutory delusions) and perceptual disturbances (including misperceptions and visual, auditory or tactile (formication) hallucinations).</p> |
| Respiratory | <p>Smoking of cocaine and amphetamines can result in chronic lung damage (including pneumonia, pulmonary oedema, bronchitis).</p> |
| Sexuality | <p>Short-term stimulant use is often associated with increased sexual drive and performance. However, chronic use can lead to difficulties achieving orgasm, altered menstruation (oligomenorrhea, amenorrhea) and galactorrhea in women, and reduced libido, impotence and gynaecomastia in men.</p> |
| Hyperpyrexia | <p>Extremely 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.</p> |
| Pregnancy | <p>Stimulant use during pregnancy is associated with higher rates of obstetric complications (spontaneous abortion, miscarriage and placental abruption), and harm to the fetus.</p> |
| Other | <p>Weight loss (chronic loss of appetite and increased metabolism).</p> <p>Skin lesions and abscesses, due to adulterants, particularly in injectors.</p> |

7.2.3 Unplanned withdrawal

Stimulant users come in contact with a variety of services, and may undergo withdrawal incidental to their primary presentation. Patients may conceal or under-report their stimulant use, as they may not consider it to be a problem.

To detect stimulant use:

- conduct a comprehensive and systematic assessment of all classes of drug use within recent weeks
- be familiar with common patterns of use and withdrawal commonly associated with stimulant use
- look for injection marks. Stimulant users who inject often do so multiple times during a session (particularly cocaine). Multiple recent injection marks are suggestive of stimulant injecting
- individuals presenting to health services with complications of stimulant use should have a systematic assessment of their drug use.

7.3 Withdrawal

7.3.1 Onset and duration

Withdrawal typically occurs in three phases:

| Phase | Time since last stimulant use | Common signs and symptoms |
|------------|---|---|
| Crash | <p><i>Amphetamines</i>: typically commences 12–24 hours after last amphetamine use, and subsides by days 2–4.</p> <p><i>Cocaine</i>: occurs within hours of last use, with short duration (up to 48 hours). Some individuals do not report a significant crash on stopping cocaine.</p> | <p>Exhaustion, fatigue</p> <p>Sleep disturbances (typically increased sleep, although insomnia or restless sleep may occur)</p> <p>Mood disturbances — typically flat mood or dysphoria; may be associated with anxiety or agitation</p> <p>Low cravings</p> <p>Generalised aches and pains</p> |
| Withdrawal | <p><i>Amphetamines</i>: typically commences 2–4 days after last use, peaks in severity over 7–10 days, and then subsides over 2–4 weeks.</p> <p><i>Cocaine</i>: typically commences 1–2 days after last use, peaking in severity over 4–7 days, then subsides over 1–2 weeks.</p> | <p>Strong cravings</p> <p>Fluctuating mood and energy levels, alternating between: Irritability, restlessness, anxiety, and agitation</p> <p>Fatigue, lacking energy, anhedonia</p> <p>Disturbed sleep, including vivid dreams, insomnia</p> <p>General aches and pains, headaches</p> <p>Muscle tension</p> <p>Increased appetite</p> <p>Poor concentration and attention</p> <p>Disturbances of thought (eg, paranoid ideation, strange beliefs) and perception (misperceptions, hallucinations) can re-emerge during withdrawal phase after having been masked during crash.</p> |
| Extinction | Weeks to months | <p>Gradual resumption of normal mood with episodic fluctuations in mood and energy levels, alternating between: irritability, restlessness, anxiety, agitation, fatigue, lacking energy and anhedonia</p> <p>Episodic cravings</p> <p>Disturbed sleep</p> |

7.3.2 Factors affecting severity of withdrawal

There is considerable variation in the severity of withdrawal upon ceasing regular and heavy psychostimulant use. The following factors appear to affect the severity of withdrawal:

- intensity of psychostimulant use
- type of psychostimulant (less potent psychostimulants [eg, ephedrine, duramine] are likely to produce less severe withdrawal)
- dose, frequency and duration of use
- mode of administration (injecting is often associated with greater amounts of stimulant use, higher incidence of psychopathology, higher severity of dependence, and perhaps more severe withdrawal)
- other drug use
- intercurrent illness
- patient expectations
- environment and psychosocial supports.

7.4 Monitoring

Mood and energy levels fluctuate over time — a patient may present with low mood, flat affect and psychomotor retardation at one time, yet be quite restless and agitated later in the same day.

Underlying mental state problems may be masked during the initial assessment or crash phase, and may surface later in the withdrawal.

Withdrawal scales have not been routinely used in clinical practice.

7.5 Treatment

Withdrawal from stimulant drugs is not medically dangerous, and no specific treatment has been shown to be effective in reducing withdrawal symptoms.

The primary aim of withdrawal management is to attend to complications and engage the patient in relapse prevention.

7.5.1 Treatment planning

Treatment planning needs to consider the specific characteristics of stimulant withdrawal. In particular, the onset of withdrawal discomfort may be delayed for several days after stopping stimulant use.

Managing the prolonged withdrawal typical of psychostimulant dependence requires careful integration and coordination between withdrawal and post-withdrawal services to provide ongoing support to the patient. Treatment should not be restricted to short term (1–2 week) episodes.

To manage the high prevalence of complications (particularly mental state problems) in stimulant users, withdrawal services require adequate resources (eg, staff able to conduct mental state examinations, policies and procedures for dealing with aggressive patients) and coordination with relevant medical and psychiatric services.

7.5.2 Treatment settings

The usual treatment setting is ambulatory. People who are acutely psychotic may require management in a psychiatric unit.

7.5.3 Supportive care

The general principles of supportive care involve:

- providing information
- supportive counselling, aimed at helping the client cope with symptoms and cravings, and to maintain motivation
- specific strategies for addressing agitation, anger, perceptual disturbances and sleep disturbances
- frequent orientation, reassurance and explanation of procedures to patients with thought or perceptual disturbances, as they can easily misinterpret actions or events around them
- crisis intervention, addressing accommodation, personal safety, or other urgent welfare issues.

7.5.4 Pharmacotherapies

The role of medication in managing cocaine or amphetamine withdrawal is unclear. Medications that have been tried fall into two categories:

- those intended to counter the reduced dopaminergic, noradrenergic and/or serotonergic activity associated with stimulant withdrawal, including desipramine, bromocriptine, amantadine and various selective serotonin reuptake inhibitors (SSRIs; eg, fluoxetine)
- mood stabilisers, such as lithium or carbamazepine.

Symptomatic medications may be beneficial in ameliorating particular symptoms for individual patients during withdrawal.

Antipsychotic medication should be considered for patients with features of psychosis (thought disorder, perceptual disturbances) which are distressing to the patient or others. Consult a psychiatrist if symptoms are severe or do not quickly resolve (within days). Medication should be continued for at least 1–2 weeks after symptoms resolve with careful monitoring for return of symptoms as the medication is withdrawn.

Benzodiazepines are useful for anxiety and sleep disturbances, but should not be used for longer than 2 weeks without review. Alternative approaches to managing anxiety and sleep problems should be encouraged, such as sleep hygiene, exercise, and relaxation techniques.

Antidepressants are helpful for managing clients with persistent features of depression following stimulant withdrawal. Specialist assessment and a treatment plan combining counselling (eg, cognitive behavioural therapy) and antidepressants should be considered.

7.5.5 Addressing complications during withdrawal

Specialist medical attention is required for patients with potential complications. Even if the complication is thought to be associated with stimulant use and to have resolved (eg, seizure), specialist referral and investigation for underlying predisposing conditions or alternative diagnoses (eg, epilepsy) are recommended for patients who have not previously been investigated.

7.6 Continuing care

Integration of withdrawal services and post-withdrawal services is required to manage the protracted nature of the extinction phase of stimulant withdrawal.

Interventions such as relapse prevention and self-help groups should be encouraged for all patients.

Specialist assessment should be considered for patients with medical or psychiatric complications (eg, persistent or severe features of psychosis or depression).

Harm reduction interventions should be encouraged for patients who plan to resume stimulant use.

For general information on continuing care after withdrawal, see section 2.8.

8 Nicotine

Chapter summary

- Symptoms of nicotine withdrawal include four or more of the following: depressed mood, insomnia, irritability, frustration or anger, anxiety, difficulty in concentration, restlessness, decreased heart rate and increased appetite or weight gain.
 - The general management approach for nicotine withdrawal should be supportive counselling, accurate information, pharmacotherapy options and appropriate planning.
 - Nicotine replacement therapy (NRT) is widely used to decrease withdrawal symptoms. Bupropion, clonidine and nortriptyline can also be used during withdrawal. These pharmacotherapies should be considered in a holistic approach to smoking cessation.
 - Cannabis smokers often mix tobacco for smoking. Concomitant treatment for cannabis withdrawal should be initiated if the person is stopping cannabis use (see Chapter 6).
 - Post-withdrawal interventions should be used, such as the Quitline (131 848), motivational enhancement, relapse prevention, cognitive behavioural therapies, other psychosocial interventions and self-help groups.
-

8.1 Use and effects of nicotine

Nicotine is a psychoactive drug that affects mood and performance and is the source of addiction to tobacco. Nicotine facilitates the release of neurotransmitters including acetylcholine, norepinephrine, dopamine and serotonin. Behavioural rewards from nicotine and perhaps nicotine dependence as well are linked to dopamine release.

In NSW in 2004, tobacco smoking was the cause of 18% of all male and 10% of all female deaths. In 2004–2005, it is estimated that smoking caused 55 591 hospitalisations (4% of all male and 2% of all female hospital admissions). Adverse effects include acute effects on the central nervous, gastrointestinal and musculoskeletal systems, and longer-term effects on the cardiovascular system and respiratory system. Tobacco use contributes to complications related to pregnancy, degenerative disease and injuries. It is a major cause of malignancy in the lung and elsewhere. Environmental tobacco smoke causes disease in non-smokers.

Tobacco is generally smoked using cigarettes, cigars or pipes. Tobacco can also be chewed. “Chop-Chop” is tobacco that has been made and sold illegally. Because of the lack of quality control in its production, it may contain a range of substances, including mould and fungus, that can cause additional health problems.

8.2 Assessment issues specific for nicotine-dependent patients

Note: general assessment for withdrawal is detailed in section 2.3.

The Fagerstrom test for nicotine dependence should be used to gauge the dependence of a tobacco smoker and their risk of nicotine withdrawal (see **Appendix O**). A two-question version of this test can be used.

Two question version of Fagerstrom test for nicotine dependence

| Question | Answer | Score |
|---|--|-------|
| How soon after waking up do you smoke your first cigarette? | Within 5 minutes | 3 |
| | 6–30 minutes | 2 |
| How many cigarettes a day do you smoke? | 10 or less | 0 |
| | 11–20 | 1 |
| | 21–30 | 2 |
| | 31 or more | 3 |
| Score | 0–2 very low 3 low 4 moderate 5 high 6 very high | |

8.3 Withdrawal

8.3.1 Onset and duration of nicotine withdrawal

Withdrawal symptoms commence within a few hours of the last cigarette, peaking in the first 24–72 hours and resolve in about 2–4 weeks. The DSM-IV states that four or more of the symptoms below within the first 24 hours of nicotine reduction or cessation indicate nicotine withdrawal.

Signs and symptoms of nicotine withdrawal:

- depressed mood
- insomnia
- irritability, frustration or anger
- anxiety
- difficulty in concentration
- restlessness
- decreased heart rate
- increased appetite or weight gain.

8.3.2 Factors contributing to withdrawal severity

Variables affecting withdrawal may include:

- psychiatric comorbidity
- duration of current use
- past or current substance use history or withdrawal.

The default management approach for nicotine withdrawal should be supportive counselling, accurate information, pharmacotherapy and appropriate planning.

In planning for nicotine withdrawal, health care workers should take note of impending crises, current psychosocial stressors as likely triggers. Health care professionals such as General Practitioners and Pharmacists can provide support and advice.

Patients should be given information to assist them in reaching an informed choice of which pharmacotherapy (if any) they would wish to use.

For individuals likely to receive a pharmacotherapy, explanation and information concerning the dosing schedule, duration of treatment and possible side effects should be provided.

8.4 Treatment

8.4.1 Indication for inpatient nicotine withdrawal

There is generally no indication for admission into an inpatient facility for management of nicotine withdrawal. However, many patients will be admitted to hospital and experience withdrawal from nicotine consequently. Patients should be informed of the NSW Department of Health Smoke Free Workplace Policy (1999) and offered support to stop; nicotine replacement therapy (NRT) should be used when not contraindicated. Information on offsite / outdoor designated smoking areas should be provided, if available, if patients wish to continue to smoke. Assessment, information, education, support, NRT and referral should be offered to all patients in this situation whether they intend to continue smoking on discharge not. If they intend to stop, a referral to the Quitline and a general practitioner or pharmacist should be provided.

Supportive counselling, accurate information, pharmacotherapy options and appropriate planning should be used during the withdrawal period. A range of resources are available including fact sheets, self help booklets and the Quitline for use during and after the withdrawal period. Counselling is also provided by some services. The guidelines for coping skills in **Appendix I** can help in dealing with cravings and anxiety.

Quitline 131 848.
The National Tobacco Campaign
<<http://www.quitnow.info.au/>>

8.4.2 Pharmacotherapies

A holistic approach to smoking cessation is important and a pharmacotherapy should be seen as one part of this approach.

Pharmacotherapies include:

- Nicotine replacement therapy (NRT)
- Bupropion
- Other options such as clonidine, and nortriptyline.

Nicotine replacement therapies

NRT provides lower nicotine levels than those achieved by smoking, but can relieve the physiological withdrawal symptoms of smoking, reducing the urge to smoke cigarettes. NRT options are gum, patches and an inhaler. Combining a patch with another self administered form of NRT may be more efficacious than one form alone.

Because NRTs are available without prescription at pharmacies, pharmacists can play an important role in providing information to people wanting to use this option. In general, issues such as the type of NRT, previous withdrawal symptoms and patterns, the need for a combination of agents and regular review should be explored in all settings. Not smoking while using NRT should be strongly encouraged.

Bupropion (Zyban)

Bupropion is an alternative to NRT and smokers should start 7 days before they plan to stop smoking. It should be taken for 7 weeks.

Clonidine and nortriptyline

Clonidine and nortriptyline should be considered if NRT and bupropion are contraindicated, but may have more severe side effects.

Dosage for nicotine replacement therapy

| Type | NRT dose matched to dependency | | | Side effects | Contraindications |
|---------|---------------------------------|-----------------------------------|-----------------------------------|---|--|
| | Less than 10 cigarettes per day | 10–20 cigarettes per day | More than 20 cigarettes per day | | |
| Patches | None | Nicabate 4 mg Nicorette 10 mg | Nicabate 21 mg Nicorette 15 mg | Transient skin irritation, itching, dreams, sleep disturbance, indigestion, diarrhoea | <i>Relative:</i> Ischaemic heart disease <i>Absolute:</i> Recent myocardial infarction Serious arrhythmias Unstable angina pregnancy |
| Gum | None | 2 mg, 8-12 per day | 4 mg, 8-12 per day | Jaw discomfort, nausea, indigestion, hiccups, excess saliva, sore throat | |
| Inhaler | None | Nicorette 6-12 cartridges per day | Not recommended | Mouth and throat irritation, cough, nausea and indigestion | |

Dosage for bupropion replacement therapy

| Bupropion dose (for all patients) | Side effects | Contraindications |
|---|--|--|
| 150 mg for 3 days then 150 mg twice a day for 7 weeks | Headaches, dry mouth, impaired sleep, seizures, nausea, constipation, anxiety, and dizziness | Seizure disorders or significant risk of seizure Bulimia Anorexia nervosa Bipolar disorders |

8.5 Special issues

8.5.1 Pregnancy

There are great benefits in stopping smoking before and during pregnancy and all women and their partners should be offered information and support. NRT is contraindicated in pregnancy although it may be considered if the woman's smoking is considered a greater risk.

8.5.2 Comorbidity

Some smokers report that smoking helps relieve depression and some smokers become severely depressed after stopping smoking. The neurochemical effects of smoking may resemble effects of some antidepressant medication (Degenhardt and Hall 2001).

8.6 Continuing care

Post-withdrawal interventions should be used, such as the Quitline, motivational enhancement, relapse prevention, cognitive behavioural therapies and other psychosocial interventions and self-help groups. Referrals to general practitioners or pharmacists are also encouraged for the patient's ongoing support and advice on pharmacotherapies. Acupuncture, hypnosis and relaxation therapy also may be offered or requested for smoking cessation, but they have not proven to be effective in randomised control trials. There is a range of information on the internet concerning tobacco and quitting smoking; many links are available at <www.quitnow.info.au>.

For general information on continuing care after withdrawal, see section 2.8.

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Alcohol and Other Drugs Council of Australia (ADCA)
www.adca.org.au

Alcoholics Anonymous
www.alcoholicsanonymous.org.au

Australian Drug Foundation
Provides drug facts sheets and resources regarding drug and alcohol use
www.adf.org.au

Australian Drug Information Network (ADIN)
Provides drug and alcohol information via websites and data bases
www.adin.com.au

Australian Drug Foundation.
Mulling it over [booklet available for purchase]
www.adf.org.au/store

Counselling online, Turning Point Alcohol and Drug Centre
This service is for anyone seeking help about their own drug use or the drug use of a family member, relative or friend. The service is free and available 24-hours a day, 7-days a week, across Australia.
www.counsellingonline.org.au

NSW Department of Health
Clinical guidelines, fact sheets and information
www.health.nsw.gov.au

Drug & Alcohol Multicultural Education Centre (DAMEC)
DAMEC helps bridge service gaps by assisting alcohol and other drugs service providers improve access for non-English-speaking-background (NESB) clients. DAMEC also works with NESB Communities to develop resources and information on alcohol and other drugs.
www.damec.org.au

Austroads. Assessing fitness to drive.
www.austroads.com.au/aftd/index.html

Family drug support
Provides information and support for people affected by someone's illicit drug use
www.fds.org.au

Al-anon, Alateen Family support
Helps families and friends of alcoholics recover from the effects of living with the problem drinking of someone close.
www.al-anon.alateen.org/australia/

Nar-anon family groups
Self-help support groups for families and friends of drug users.
www.naranon.com.au/

G-Line: 1800 633 635
NSW Office of Liquor, Gaming and Racing
G-line (NSW) is a telephone helpline offering crisis counselling for people affected by gambling problems and is available to professional and patients.
www.dgr.nsw.gov.au/gaming_hfpg_gline.asp

Hepatitis C Council of NSW
Provides information to people affected by Hepatitis C and the community
www.hepatitisc.org.au

Health Insurance Commission. Prescription shopping project and Prescription shopping information service
www.medicareaustralia.gov.au/providers/programs_services/pbs/prescription_shop.shtml

Narcotics Anonymous
na.org.au/community/index.php

National Drug and Alcohol Research Centre:
For drug facts sheets, drug and alcohol research and related information.
ndarc.med.unsw.edu.au

NSW Users and Aids Association (NUAA)
Provides a range of information and advocacy for injecting drug users.
www.nuaa.org.au/nuaa/about/index.html

NSW Multicultural Health Communication Service (Multicultural Communication)
Provides information and services to assist health professionals to communicate with non-English-speaking communities throughout New South Wales.
www.mhcs.health.nsw.gov.au

SMART Recovery
SMART Recovery offers free face-to-face and online mutual help groups. It aims to help people recover from all types of addictive behaviors, including: alcoholism, drug abuse, substance abuse, drug addiction, alcohol abuse, gambling addiction, cocaine addiction, and addiction to other substances and activities.
www.smartrecovery.org

Turning Point Alcohol and Drug Centre
To promote and maximise the health and wellbeing of individuals and communities living with and affected by alcohol and other drug-related harms.
www.turningpoint.org.au

Glossary

A wide range of terms has been listed to assist those who are not expert in the assessment of patients for withdrawal.

This list has been adapted from *Ordinary people: integrating alcohol and other drug management into nursing practice*, produced by Western Sydney Area Health Service in 1996.

Note: quotation marks denote that the expression is slang or jargon.

Alcohol related brain damage (ARBD)

A generic term that encompasses chronic impairment of memory and higher mental functions associated with the frontal lobe and limbic system.

Ambulatory detoxification

Managed withdrawal from a drug undertaken with the patient visiting the medical practitioner from home or travelling to and from a day care facility.

Amphetamine

A synthetic central nervous system stimulant. The term includes the three types of amphetamines: amphetamine, dexamphetamine and methamphetamine. Amphetamines have medical uses (such as in the treatment of attention deficit disorder), but most are manufactured and sold illegally.

Antidepressant

One of a group of psychoactive drugs prescribed for the treatment of depressive disorders. Also used for other conditions such as panic disorder.

“Bad trip”

Substance users’ jargon for an adverse effect of drug use, consisting of any mixture of the following feelings: losing control, distortions of body image, bizarre and frightening hallucinations, fears of insanity or death, despair, suicidal thoughts and strong negative mood. Physical symptoms may include sweating, palpitations, nausea and paraesthesia. A “bad trip” usually refers to the effect of a hallucinogen, but can also refer to amphetamines and other stimulants, antihistamines and sedatives/hypnotics.

Barbiturate

One of the sedative–hypnotic groups of drugs that are now rarely seen in Australia. With increasing dosage they produce progressive CNS depression, ranging from mild sedation to anaesthesia and death from respiratory depression. They are strongly dependence-inducing.

Benzodiazepine

One of the sedative-hypnotic groups of drugs. Introduced as safer alternatives to barbiturates, they have a general depressant effect that increases with the dose, from sedation to hypnosis to stupor. Benzodiazepines have significant potential for dependence. These are also referred to as minor tranquillisers.

Binge drinking

An episodic pattern of heavy drinking with periods of lesser alcohol consumption.

Blood alcohol level

The concentration of alcohol (ethanol) present in blood. The legal blood alcohol limit for driving in New South Wales is 0.05 g/100 mL

Brief intervention

A treatment strategy in which a short structured therapy is offered (between five minutes and two hours) and typically on a single occasion. Aimed at helping a person to reduce or stop substance use.

Buprenorphine

A partial opioid agonist drug used in the treatment of opioid withdrawal and as a maintenance treatment for opioid dependence.

Cannabis

The generic name given to the psychoactive substances found in the marijuana plant *Cannabis sativa*. The main active constituent is delta 9- tetrahydrocannabinol (THC).

Cap

A small amount of heroin, wrapped in foil.

Cocaine

A 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.

Continuing care

In the context of withdrawal management, continuing care means managing the transition to life after withdrawal, when patients are likely to have continuing issues arising from their drug dependence. Continuing care includes referral to counselling, maintenance treatment, self-help groups and family services.

Controlled drinking

Drinking that is moderated to avoid intoxication or hazardous use of alcohol.

Craving

A very strong desire for a substance, or for the intoxicating effects of that substance.

Delirium tremens

An acute confusional 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 (criteria for substance dependence)

Dependence, as defined by DSM-IV (Diagnostic and statistical manual of *mental disorders*, 4th ed), is a maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time in the same 12-month period:

—*Tolerance*, as defined by either of the following:

- a) a need for markedly increased amounts of the substance to achieve intoxication or desired effect
- b) markedly diminished effect with continued use of the same amount of the substance.

—*Withdrawal*, as manifested by either of the following:

- a) the characteristic withdrawal syndrome for the substance
- b) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms.

—The substance is often taken in larger amounts or over a longer period than was intended.

—There is a persistent desire or unsuccessful efforts to cut down or control substance use.

—A great deal of time is spent in activities necessary to obtain the substance (eg, visiting multiple doctors or driving long distances), use the substance (eg, chain-smoking), or recover from its effects.

—Important social, occupational, or recreational activities are given up or reduced because of substance use.

—The substance use is continued, despite knowledge of having a persistent or recurrent physical or physiological problem that is likely to have been caused or exacerbated by the substance (eg, current cocaine use despite recognition or cocaine induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption).

Depressant

Any substance that suppresses, inhibits or decreases some aspects of CNS activity. The main classes of CNS depressants are sedatives/hypnotics, opioids and neuroleptics.

Detoxification

Now outmoded term for managed withdrawal from a drug of dependence, the process by which a person is withdrawn from a psychoactive substance on which they are dependent.

"Drop"

To overdose.

Ecstasy

(MDMA, 3,4-methylenedioxy-N-methylamphetamine)

A synthetic drug with stimulant effects on the central nervous system.

Comorbidity

In the context of withdrawal management, refers to a person who has coexisting substance use and mental health problems.

"Fit"

A needle and syringe used for injecting drugs.

Fetal alcohol syndrome

A pattern of retarded growth and development, both mental and physical, caused to a child *in utero* by excessive alcohol consumption when the mother is pregnant.

"Flashbacks"

A perception disorder that can occur after a period (from months or years) following hallucinogen use. Flashbacks are a spontaneous recurrence of the feelings that occurred when the person was intoxicated with hallucinogens. These feelings include visual distortions, physical symptoms, loss of ego boundaries, or intense emotions, and the flashbacks can last from a few seconds to a few hours.

GHB (gamma-hydroxybutyrate)

A central nervous system depressant, sometimes used illegally as an alternative to ecstasy, usually in liquid form.

Glue sniffing

Inhaling fumes from glue, petrol, or other volatile substances including petrol (also called inhalants, solvents) for their psychic effect.

GHB (gamma-hydroxybutyrate)

A central nervous system depressant, sometimes used illegally as an alternative to ecstasy, usually in liquid form.

Glue sniffing

Inhaling fumes from glue, petrol, or other volatile substances including petrol (also called inhalants, solvents) for their psychic effect.

Hallucinogen

A substance that alters perception, typically by inducing illusions or even hallucinations. Hallucinogens can include naturally occurring compounds (eg, magic mushrooms) and synthetic chemicals. They are usually taken orally.

"Half-weight"

Half a street gram of heroin.

"Hanging out"

Withdrawing from opioids.

"Hangover"

A state that follows excessive consumption of alcohol. Physical features may include fatigue, headache, thirst, vertigo, gastric disorders, nausea, vomiting, insomnia, fine tremors of the hands, and raised or lowered blood pressure. Psychological symptoms include anxiety, guilt, depression, irritability and extreme sensitivity. Usually lasts not more than 36 hours after alcohol has been cleared from the body.

Harm minimisation/harm reduction

A drug strategy based on a harm minimisation approach has the following primary objectives:

- To minimise the harm and the social problems to the individual and the community resulting from the use of drugs
- To reduce the prevalence of hazardous levels and patterns of drug use in the community
- To prevent the initiation into harmful or hazardous drug use, especially by young people.

Harmful use

A pattern of substance use that is causing damage to health—either physical (eg, hepatitis following injecting of drugs) or mental (eg, depressive episodes after heavy alcohol intake). Harmful use commonly has adverse social consequences.

Hashish

A concentrated form of cannabis.

Hazardous use

A pattern of substance use that increases the risk of harmful consequences for the user.

Heroin

Heroin is the most common illicit opioid drug of dependence. It is usually intravenously injected, but it can also be smoked.

Ice

The strongest form of methamphetamine. It either comes as a crystalline powder or crystals and is white or translucent. It is the highest purity form of methamphetamine and is usually smoked or injected.

Illicit drug

A substance obtained and used illegally for its psychoactive or physical effect.

Inhalant

One of a group of gases and highly volatile compounds, or mixtures of compounds, that are inhaled for their intoxicating effects. Inhalants are also called solvents or volatile substances.

Intoxication

The condition resulting from use of a psychoactive substance that produces behavioural and/or physical changes.

Ketamine

A dissociative general anesthetic used legally for human and veterinary use, and traded illegally as a recreational drug.

LSD (lysergic acid diethylamide)

A hallucinogenic substance.

Maintenance therapy

A form of treatment of substance dependence by prescribing a substitute drug (eg, methadone for the treatment of heroin).

Marijuana

See *cannabis*.

Methadone

A long acting synthetic opioid drug used in maintenance therapy for those who are dependent on opioids (prescribed in oral doses).

Methamphetamine

The most common illicit amphetamine, available in powder, base or ice form.

Morphine

An opioid drug.

Naloxone

An opioid receptor blocker that reverses the features of opioid intoxication. It is sometimes prescribed for the treatment of opioid overdose.

Naltrexone

A specific opioid antagonist similar to naloxone, but more potent and long-acting.

Narcotic

A chemical agent that induces stupor, coma, or insensibility to pain. The term usually refers to opioids, which are called narcotic analgesics. In general use, this term is often used incorrectly to refer to illicit drugs.

Narcotics Anonymous

A self-help group based on the 12-step philosophy of Alcoholics Anonymous, in which participants support each other in recovering or maintaining recovery from opioid dependence.

Narrowing of repertoire

A feature of dependence: the tendency of substance use to become progressively stereotyped around a self-imposed routine of custom and ritual. Characterised by reduced variation of dose and type of substance taken and of time, place and manner of self-administration.

Neuroadaptation

Physical dependence on a psychoactive substance. This means that a person has developed tolerance to the substance. If the drug is withdrawn, the person is likely to experience withdrawal symptoms.

Neuroleptic

One of a class of drugs used for treating acute and chronic psychoses. Also known as major tranquillisers and antipsychotics.

Nicotine

The major psychoactive substance in tobacco, which has both stimulant and relaxant effects. Considerable tolerance and dependence develop to nicotine.

Opiate

One of a group of substances derived from the opium poppy with the ability to induce analgesia, euphoria and, in higher doses, stupor, coma, and respiratory depression. This term excludes synthetic opioids.

Opioids

The generic term applied to alkaloids from the opium poppy, their synthetic analogues, and similar compounds synthesised within the body.

Overdose

The use of any drugs in such an amount that acute adverse physical or mental effects are produced. A dose that exceeds the individual's tolerance. Overdose may produce transient or lasting effects, or death.

PCP (phencyclidine, phenylcyclohexylpiperidine)

A dissociative drug formerly used as an anaesthetic agent, with hallucinogenic and neurotoxic effects.

Pharmacotherapy

Drug treatment: in the context of withdrawal management, drug treatment for the symptoms and signs of withdrawal from a drug of dependence.

Polydrug use

Where a person uses more than one drug, often at the same time or following one another, and usually with the intention of enhancing, potentiating, or counteracting the effects of another substance.

Psychoactive substance

A substance that, when ingested, affects mental processes.

Psychostimulants

A class of drug with stimulatory effects on the central nervous system. The psychostimulants most commonly used illicitly in Australia today are amphetamines, ecstasy and cocaine.

Psychotropic

In the most general sense, a term with the same meaning as "psychoactive" (ie, affecting the mind or mental processes).

“Rave”

A dance party, often involving the use of psychoactive substances, especially amphetamines and hallucinogens.

Recreational use

Use of a drug, usually an illicit substance, in social circumstances. This term implies that the user is not dependent on the substance; it has the same connotations as “social drinking”.

Rehabilitation

The process by which a person recovers from a substance use disorder to achieve an optimal state of health, psychological functioning, and well being.

Relapse

A return to substance use after a period of abstinence.

“Rush”

An immediate, intense, pleasurable effect that follows injection of certain substances (eg, heroin, amphetamine, cocaine).

Sedative/hypnotic

Any of a group of central nervous system depressants that can relieve anxiety and induce calmness and sleep.

Selective withdrawal

Managed withdrawal of one drug of dependence from a person with multiple drug dependencies.

Solvent

See *inhalant*.

“Speed”

See *amphetamine*.

“Speedball”

A combination of a stimulant and an opioid (eg, cocaine and heroin, amphetamine and heroin).

Steroid

One of a group of naturally occurring or synthetic hormones that affect chemical processes in the body, growth, and sexual and other physiological functions. Steroids can be taken orally or injected.

Stimulant

Any agent that activates, enhances, or increases neural activity of the central nervous system. Stimulants include the amphetamines, cocaine, caffeine and nicotine.

THC

Tetrahydrocannabinol, the main active constituent in cannabis.

Therapeutic community

A structured environment in which people with drug use problems live in order to achieve rehabilitation. Such communities are often specifically designed for drug dependent people.

Tolerance

A decrease in response to a drug dose that occurs with continued use. Increased doses of the drug are required to achieve the effect originally produced by lower doses.

Tranquilliser

General term for several classes of drugs employed to manage symptoms of various mental disorders. The tranquillisers have a quieting or dampening effect on psychomotor processes without — except at high doses — interfering with consciousness and thinking. In this way they differ from the sedatives/hypnotics, which are used, among other things, to induce sleep. The term tranquilliser is often used to refer to any drug that is used for treating anxiety disorders.

Volatile substance

See *inhalant*.

Wernicke’s encephalopathy

An acute, life threatening, neurological syndrome consisting of confusion, apathy, dullness, a dreamy delirium, palsies of the ocular muscles and of gaze, nystagmus and disturbances in equilibrium, and ataxia. Its most common cause is thiamine deficiency associated with long term excessive use of alcohol. If not treated immediately with thiamine, the patient is likely to progress to an amnestic syndrome. In some cases fatality can occur.

Withdrawal syndrome

A series of symptoms that occur when a person who has developed tolerance to a drug (after long and/or high dose use) stops or reduces use of the drug.

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Appendix A Withdrawal services in New South Wales

There is a range of inpatient/outpatient, medicated/non medicated, government/non-government/private withdrawal services (also known as detoxification services) in NSW. Services change over time, so it is important to check first with the service and or ADIS.

| Name | Type | Location | Phone number |
|--|-------------------------------------|-------------------------------|--------------|
| Greater Southern Area Health Service | | | |
| NGO/Private, southern NSW | | | |
| O'Connor House | Inpatient, medicated | Wagga Wagga | 6925 4744 |
| Greater Western Area Health Service | | | |
| NGO/Private, western NSW | | | |
| Lyndon Withdrawal Unit | Inpatient, medicated | Orange | 6362 5444 |
| Hunter / New England Area Health Service | | | |
| Lakeview Detox Unit | Inpatient/outpatient, medicated | Belmont (Lake Macquarie) | 4923 2060 |
| Lorna House | Outpatient, medicated | Mater Hospital Newcastle | 4921 1825 |
| Calvary Mater Hospital Newcastle | Inpatient, medicated | Newcastle | 4921 1825 |
| North Coast Area Health Service | | | |
| Riverlands Drug and Alcohol Centre | Inpatient, medicated | Lismore | 6620 7600 |
| NGO/Private, north coast NSW | | | |
| Sherwood Cliffs | Inpatient, non medicated | Glenreach(near Coffs Harbour) | 6649 2139 |
| Northern Sydney / Central Coast Area Health Service | | | |
| Herbert Street | Inpatient, medicated | Royal North Shore Hospital | 9906 7083 |
| Maruma-Li Centre | Inpatient, medicated | Wyong Hospital | 4394 4880 |
| Private, northern Sydney | | | |
| Northside Clinic | Inpatient and outpatient, medicated | Greenwich | 9433 3555 |

| Name | Type | Location | Phone number |
|---|-------------------------------------|----------------------|--------------|
| South Eastern Sydney / Illawarra Area Health Service | | | |
| Drug and Alcohol Community Adult Team | Outpatient and home, medicated | Port Kembla Hospital | 1300 652 226 |
| Gorman House | Inpatient, non-medicated | Darlinghurst | 9361 8080 |
| Jarrah House (for women with children) | Inpatient, medicated | Little Bay | 9661 6555 |
| Langton Centre | Outpatient, medicated | Surry Hills | 9332 8777 |
| Orana House | Inpatient, medicated | Port Kembla Hospital | 1300 652 226 |
| St George Alcohol and Drug Service | Outpatient medicated | St George Hospital | 9350 2944 |
| Wollongong Crisis Centre | Inpatient, non-medicated | Berkeley | 4272 3000 |
| Private, southern Sydney | | | |
| The Sydney Clinic | Inpatient, medicated | Bronte | 9389 8888 |
| Wandene Private | Inpatient, medicated | Kogarah | 9587 5077 |
| Sydney South West Area Health Service | | | |
| Canterbury Drug and Alcohol Service | Outpatient, medicated | Canterbury Hospital | 9787 0272 |
| Corella Drug Treatment Services | Inpatient, medicated | Fairfield | 9616 8586 |
| McKinnon Unit | Inpatient, medicated | Rozelle Hospital | 9556 9241 |
| NGO/Private, south-western Sydney | | | |
| Odyssey House | Inpatient, medicated | Campbelltown | 9281 5144 |
| St John of God | Inpatient, medicated | Burwood | 9747 5611 |
| Wesley Private Hospital | Inpatient, medicated | Croydon | 9716 1400 |
| Sydney West Area Health Service | | | |
| Wentworth Centre for Drug and Alcohol | Inpatient and outpatient, medicated | Penrith | 4734 1333 |
| Private, western Sydney | | | |
| Northside West | Inpatient, medicated | Wentworthville | 8833 2222 |
| St John of God | Inpatient, medicated | North Richmond | 4588 5088 |

Appendix B Assessment of intoxication and overdose

Patients who use drugs or alcohol often present intoxicated, or having overdosed. The correct management of these conditions is an essential part of practice.

Intoxication occurs when a person's intake of a substance exceeds his or her tolerance and produces behavioural and/or physical abnormalities. It complicates the assessment and management of patients because:

- psychoactive drugs affect mood, cognition, behaviour and physiological functioning
- intoxication can have a major impact on informed consent to treatment and the validity of all further information reported by the patient
- intoxication can mimic or mask serious illness and injury
- patients who are aggressive or disruptive because they are intoxicated can risk their own safety or the safety of others
- severe intoxication can be life threatening by altering physical and mental functions leading to inappropriate actions or central nervous system depression and death.

Identifying intoxication and overdose

In withdrawal settings, always assess the possibility that the patient is intoxicated. Some serious medical conditions can mimic intoxication. Objective observations should be given more weight than the patient's report.

Managing intoxication

Assessment is urgent if intoxication is pronounced, and medical assessment is required if intoxication is worsening or affecting breathing, blood pressure or level of consciousness.

Identify the most recent drug type, dose and time consumed.

Consider the possibility that underlying illness (eg, concussion, subdural haematoma, infections, diabetes, or electrolyte disturbances) may be the cause of apparent intoxication.

Check for possible head injury if the patient is incoherent, disoriented or drowsy.

Monitor the airway if breathing is affected or consciousness is impaired, as death may occur from respiratory depression or aspiration pneumonia.

Indications of intoxication

Maladaptive behaviour

Evidence of intoxication by history and physical examination

Blood alcohol level by breath analysis. Saliva, urine or blood testing for alcohol and other drugs

Behavioural and physical signs:

Alcohol: loss of control of voluntary movements, slurred speech, disinhibition, low blood pressure, smells of alcohol

Benzodiazepines: slurred speech, loss of control of voluntary movements, sedation, nystagmus (repetitive eye movement), low blood pressure, drooling, disinhibition

Opioids: pinpoint pupils, sedation, low blood pressure, slowed pulse, itching and scratching

GHB: rapid onset of drowsiness, disinhibition, dizziness, nausea, muscle spasms, movement and speech impairment

Cannabis: increased pulse, confusion, restlessness, excitement, hallucinations, anxious or panicky, disconnected from reality, paranoia, violent or suicidal behaviour

Psychostimulants (amphetamines, cocaine and ecstasy): Increased confidence, excitement, euphoria, anxiety, agitation, speech, hypervigilance, increased body temperature and blood pressure, dry mouth, paranoia, psychotic features

LSD: anxiety, fear, frightening hallucinations, panic, feeling of loss of control, going mad, paranoia, violent or suicidal behaviour

Magic mushrooms (psilocybin): Similar to LSD

PCP: similar to LSD, with euphoria, numbness, psychosis, aggression

Ketamine: thought disorder, hallucinations, perceptual distortion, anxiety, agitation, tachycardia, hypertension, analgesia and sensory dissociation

Keep intoxicated patients under observation until their intoxication diminishes and they are considered safe. If the intoxication does not diminish, assess the patient for other possible causes of the condition.

Managing suspected overdose

Monitor signs of intoxication to identify possible overdose (ie, intoxication to the point of loss of consciousness) on the patient's arrival and then as frequently as the patient's state requires (usually 1–4 hourly). The Glasgow Coma Scale plus vital signs provide the best method of assessment.

Indications of overdose

In order of progressive impairment:

- increasing agitation
- cold and clammy skin
- pinpoint pupils (opioids)
- changing mental state (hallucinations, panic or deep depression)
- changes to heart rate (eg, irregular, below 60/min, or above 120/min)
- lowered body temperature
- slow and noisy respiration
- muscle twitching
- cyanosis
- pulmonary oedema
- stupor
- convulsions
- coma.

People with decreased levels of consciousness require:

- urgent medical assessment
- management in a medical setting
- monitoring of vital signs and neurological function
- examination and support of airway, breathing and circulation.

Appendix C Area Health Service drug and alcohol intake lines

| Area Health Service | Central intake number |
|---|-----------------------------|
| Greater Southern Area Health Service | |
| Greater Murray | 1800 800 944 / 02 9425 3923 |
| Southern | 1800 809 423 |
| Greater Western Area Health Service | |
| Far West | 1800 665 066 / 08 8080 1556 |
| Macquarie | 1800 092 881 / 02 6841 2360 |
| Mid Western | 1300 887 000 |
| Hunter / New England Area Health Service | |
| Hunter | 02 4923 2060 |
| New England | 1300 660 059 |
| North Coast Area Health Service | 1300 662 263 |
| Mid North Coast | 02 6588 2882 |
| Northern Rivers | 02 6620 7612 |
| Northern Sydney / Central Coast Area Health Service | |
| North Sydney | 1300 889 788 |
| Central Coast | 4394 4880 |
| South Eastern Sydney / Illawarra Area Health Service | |
| South East Sydney | 02 9113 4444 |
| Illawarra | 1300 652 226 |
| Sydney South West Area Health Service | |
| South West Sydney | 02 9616 8586 |
| Central Sydney | 02 9515 6311 |
| Sydney West Area Health Service | |
| Wentworth | 02 4734 1333 |
| Western Sydney | 02 9840 3355 |

Appendix D One week consumption calendar

| Drug type | Sun | Mon | Tue | Wed | Thur | Fri | Sat | Total |
|-----------|--|-------------|-------------|------|-------|--------|--------|--------|
| A | L 100g | L 20g | L 200g | L10g | L150g | L 150g | L 150g | L 780g |
| T | H 40 cigs/day Nicotine = 40x8 = 320 mg | H 320 mg | H 240 mg | H | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Coding of drug types

| Drug type | Route | Amount |
|---------------------|------------------|--------------------------|
| A = alcohol | L = oral | g = grams |
| B = benzodiazepines | N = anal | mg = milligrams |
| O = opioids | I = injecting | \$ = amount spent |
| M = amphetamines | H = inhalation | F = number of injections |
| T = tobacco | S = subcutaneous | |

Source: Frank L, Peard J. New concepts in drug withdrawal: a resource handbook. © 1995 State of Victoria. Reproduced with permission.

Immediate management

The safety of the person being assessed is of primary concern throughout the assessment process. The level of observation/supervision before and after the assessment while waiting for referral is an important issue. Is the person medically fit enough to participate in the interview and or do they require a medical assessment?

Suicide risk ratings and actions for community based services (see flow chart below)

Guidelines have been developed for the management of patients with possible suicidal behaviour in general community setting (specifically drug and alcohol services), emergency departments, general hospital wards, mental health inpatient facilities, community mental health services and corrections health services (Justice Health) (see NSW Department of Health PD2005_121 and *Framework for suicide risk assessment and management* [NSW Department of Health 2004] for further information).

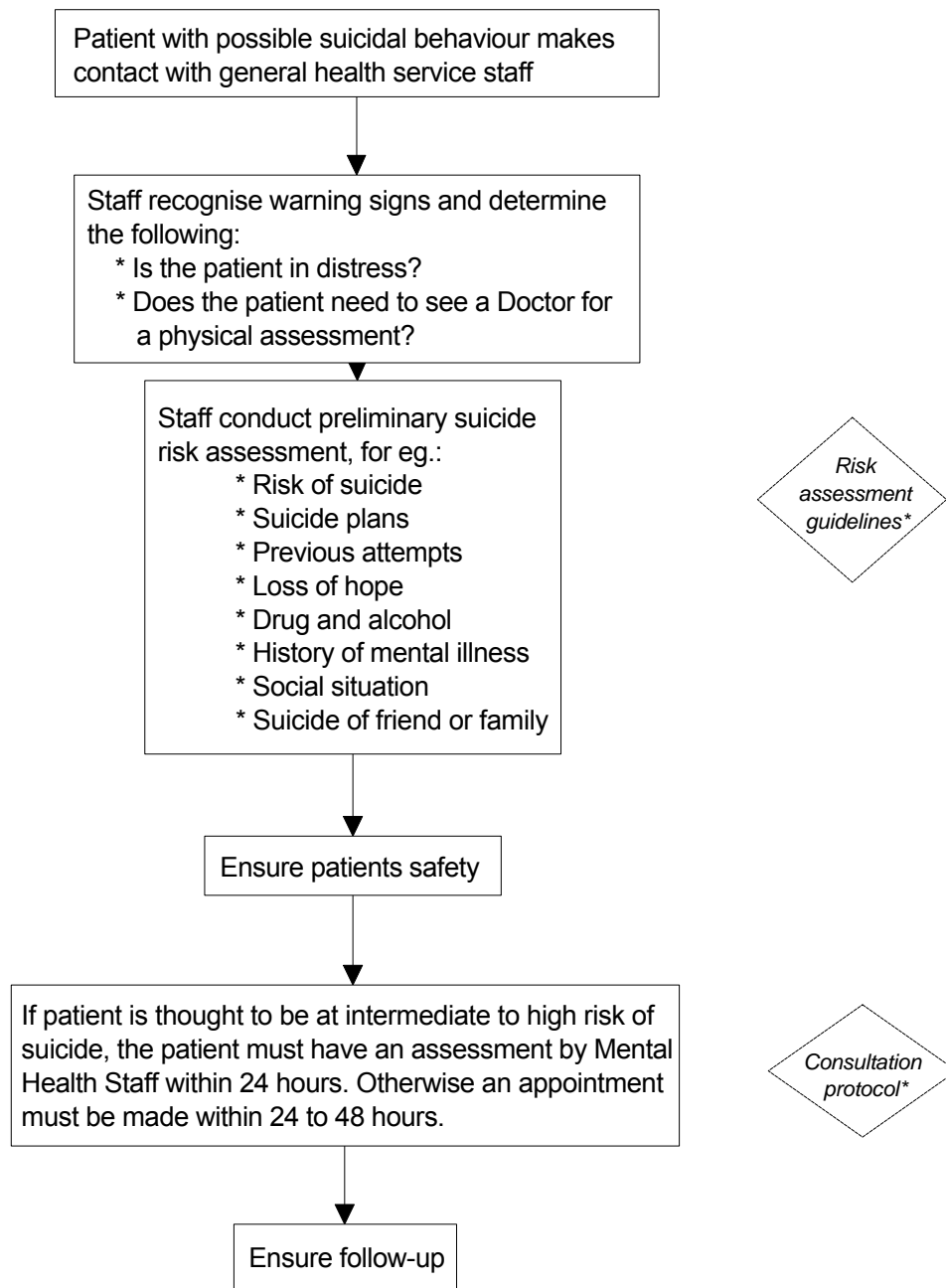
For general community health settings, including drug and alcohol services:

- If there is any immediate risk of harm to the patient, staff or others, follow local protocols.
- If there is high or intermediate risk of suicide, the clinician ensures the person is in a safe and secure environment and that they are assessed by mental health services within 24 hours. The clinician ensures contingency plans are in place for re-assessment if distress or symptoms escalate.
- Low risk – an appointment is made with mental health services within 24–48 hours. The clinician ensures that contingency plans are in place for re-assessment if distress or symptoms escalate.

Referral to mental health services / follow up arrangements / care planning

Referral to mental health service should be via local processes, which need to be developed, well known and maintained. **A preliminary assessment, by drug and alcohol staff, needs to be conducted before this referral is made.** Negotiations then need to occur regarding referral to the mental health service. If you are unable to provide support yourself, you must contact an appropriate service and formally transfer ongoing responsibility for the patient. The key staff member managing the assessment must be identified to the patient and relevant supports. The follow-up appointment times and place, what 24-hour supports are available and contingency plans need to be communicated to the patient and supports. A management plan should be negotiated. Any further contact or information regarding drug and alcohol services, including withdrawal services, should be arranged at an appropriate time in the process.

Flow Chart for General Community Health Services



*Development of model protocols will be facilitated by the Department of Health and will be available from the *Centre for Mental Health* as they are developed.

Appendix F Routine screening for domestic violence

Routine screening for domestic violence is a key element of the NSW Department of Health policy and procedures for identifying and responding to domestic violence.

Further information

NSW Department of Health Routine for Domestic Violence Program Snapshot Report: November 2003.
<<http://www.health.nsw.gov.au/pubs/2004/routinescreen.html>>

NSW Department of Health. Policy for identifying and responding to domestic violence. 2003.
<http://www.health.nsw.gov.au/pubs/p/pdf/policy_dom_violence.pdf>

NSW Department of Health Policy Directive PD2006_084. Domestic violence — identifying and responding.
<http://www.health.nsw.gov.au/policies/PD/2006/pdf/PD2006_084.pdf>

Health Worker to complete this form.

Medical Record Number

Date / /

Explain:

- In this Health Service we ask all women the same questions about violence at home.
- This is because violence in the home is very common and can be serious and we want to improve our response to women experiencing domestic violence.
- You don't have to answer the questions if you don't want to.
- What you say will remain confidential to the Health Service except where you give us information that indicates there are serious safety concerns for you or your children.

Ask:

Q1. Within the last year have you been hit, slapped or hurt in other ways by your partner or ex-partner? ☐ YES ☐ NO

Q2. Are you frightened of your partner or ex-partner? ☐ YES ☐ NO

If the woman answers NO to both questions, give the information card to her and say:
Here is some information that we are giving to all women about domestic violence.

If the woman answers YES to either or both of the above questions continue to question 3 and 4.

Q3. Are you safe to go home when you leave here? ☐ YES ☐ NO

Q4. Would you like some assistance with this? ☐ YES ☐ NO

Consider safety concerns raised in answers to questions.

Complete:

Action taken

- ☐ Domestic violence identified, information given
- ☐ Domestic violence identified, information declined
- ☐ Domestic violence not identified, information given
- ☐ Domestic violence not identified, information declined
- ☐ Support given and options discussed
- ☐ Reported to DoCS
- ☐ Police notified
- ☐ Referral made to _____
- ☐ Other action taken _____
- ☐ Other violence/abuse disclosed _____

Screening was not completed due to

- ☐ Presence of partner
- ☐ Presence of other family members
- ☐ Woman declined to answer the questions
- ☐ Other reason (specify) _____

Signature of Staff

Name

Designation

Appendix G Patient assessment summary

Name: Sex: M / F

Date of birth: Age:

Date of interview:

Name of practitioner:

Major problems (including comment):

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Summary of assessment:

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Treatment plan:

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Signature of health professional:

Appendix H Supportive care protocol

To be undertaken and recorded in addition to physical observations (ie, at least every 4 hours).

| | |
|---|----------------------------------|
| Check withdrawal severity (with withdrawal scale) | Check environment |
| | 1 Calm |
| Offer fluids | 2 Quiet |
| | 3 Low lighting |
| Check general health | 4 Privacy |
| 1 Consciousness | 5 Safety |
| 2 Blood pressure | 6 Self report |
| 3 Self report | 7 Supportive person (s) |
| Check physical comfort | Reassure |
| 1 Pillows | 1 Allay concerns and fears |
| 2 Blankets | 2 Give positive encouragement |
| 3 Hot packs | 3 Offer information |
| Orientate | |
| 1 Time | |
| 2 Place | |
| 3 Person | |

Source: Naranjo C, Sellers E. Clinical assessment and pharmacotherapy of alcohol withdrawal syndrome. In: Galanter M, editor. Recent developments in alcoholism. New York: Plenum Press, 1986: 265–281.

Appendix I Guidelines for coping skills

Adapted from: National Health and Medical Research Council. Guidelines for the prevention and management of benzodiazepine dependence. Canberra: AGPS, 1991.

Relaxation

Preparation

1. Sit in a comfortable chair or lie down somewhere comfortable in a quiet, airy room where you will not be interrupted.
2. If you are sitting, take off your shoes, uncross your legs, and rest your arms on the arms of a chair.
3. If you are lying down, lie on your back with your arms at your sides and cover yourself with a blanket.
4. Close your eyes, notice how you are breathing and where the muscle tensions are.

Breathing

1. Start to breath slowly and deeply, expanding your abdomen as you breathe in, then raising your rib cage to let more air in, until your lungs are filled right to the top.
2. Hold your breath for a couple of seconds and then breathe out slowly, allowing your rib cage and stomach to relax and empty your lungs completely.
3. Keep this slow, deep, rhythmic breathing going throughout your relaxation session.

Relaxing

After you have your breathing pattern established, start the following sequence: tense each part of the body on the inbreath, hold your breath while you keep your muscles tense, then relax and breathe out at the same time.

1. Curl your toes hard and press your feet down—then relax.
2. Press your heels down and bend your feet up—then relax.
3. Tense your calf muscles—then relax.
4. Tense your thigh muscles, straighten your knees, making your legs stiff—then relax.
5. Make your buttocks tight—then relax.

6. Tense your stomach—then relax.
7. Bend your elbows and tense the muscles of your arms—then relax.
8. Hunch your shoulders and press your head back—then relax.
9. Clench your jaw, frown and screw up your eyes really tight—then relax.
10. Tense all your muscles together—then relax.

Remember to breathe deeply and be aware when you relax of the feeling of physical well being and heaviness spreading through your body.

11. After you have done the whole sequence and you are still breathing slowly and deeply, imagine something pleasant, eg, a beautiful country scene. Try to “see” whatever you have chosen as clearly as possible, concentrating your attention on it for 30 seconds. Do not hold your breathing during this time. Continue to breathe as you have been doing. After this, go on to visualise another peaceful object of your choice in a similar fashion.
12. Lastly, give yourself the instruction that when you open your eyes you will be perfectly relaxed but alert.

The six second breath

Controlling your rate of breathing is one of the most important things you can do to stop your anxiety from getting out of control.

If you keep your breathing to one breath every six seconds this will help: breathe in over three seconds and out over the next three seconds. This can be in stages (eg, in–in–in, out–out–out).

The six second breath can be used anywhere and any time when you feel anxious. It does pay, however, to practise this technique a few times per day so that you will have it rehearsed for when you really need it.

Sleep

Disturbed sleep is one of the features of withdrawal. It is not uncommon to experience difficulty falling asleep, have disturbing dreams or nightmares, night sweats, wake up in the middle of the night, or wake up early in the mornings. It can take a number of weeks before your sleep pattern returns to normal. It is important to remember that disturbed sleep is a normal part of withdrawal and that it is not permanent.

Hints for better sleep

1. Have a comfortable sleeping environment.
2. Do not exercise before bedtime. Exercise earlier in the day to increase physical tiredness.
3. Lie down to go to sleep only when you are actually sleepy.
4. Do not use your bed for activities other than sleeping (sex is the only exception to this rule).
5. If you do not fall asleep within about 30 minutes after turning out the light, get up, go to another room, and do something that is not too arousing (eg, watch TV).
6. If you return to bed and still cannot sleep, repeat step 5. Do this as often as necessary until you fall asleep within 30 minutes of going to bed.
7. If you wake up in the middle of the night and cannot go back to sleep, follow steps 5 and 6.
8. Get up at the same time every morning, regardless of how long you have slept. This will help your body to develop a regular sleep rhythm.
9. Do not nap during the day.
10. Do some form of relaxation before sleeping.
11. Most of the thinking and worrying that we do in bed needs to be done—it just does not need to be done in bed. Take time earlier in the day for thinking and worrying.

12. Avoid stimulants such as caffeine or cigarettes late at night and cut down on your caffeine consumption during the day. Alcohol can make you sleepy, but it also has a waking effect after several hours sleep, so that it often results in a poor night's sleep overall. Hot drinks such as chamomile or valerian tea, or warm milk (with nutmeg) late at night can help put you to sleep.

Diet

1. Drink lots of fluids: at least two litres a day. Water with a dash of lemon juice, fruit juices, cordial mixed with water and non fizzy mineral water are very good. Also, try to keep the fluids going in throughout the day, taking small sips all the time.
2. Take nourishing meals in a relaxed environment. Avoid large meals. Try to eat small meals and snacks throughout the day rather than one big meal a day, and chew your food well.
3. Avoid greasy, fried, fatty foods, or large amounts of fatty meat if you have indigestion.

Craving

1. Cravings are usually only very severe for short periods (usually less than 1 hour), then the severity of the craving reduces to a level which is easier to deal with. The goal is to see through this severe period.
2. Delay the decision for 1 hour as to whether you will use.
3. Distract yourself with some activity during this hour.
4. After an hour, ask yourself "Why don't I want to use?" and "What have I got to lose?"

Appendix J CIWA-AR, withdrawal assessment for alcohol*

Patient: Date: Time:

Pulse or heart rate, taken for one minute:

Blood pressure:/..... Rater's initials:

See below for key to scoring.

| | | |
|---|--|---|
| Nausea and vomiting (0–7) | | |
| Tremor (0–7) | | |
| Paroxysmal sweats (0–7) | | |
| Anxiety (0–7) | | |
| Agitation (0–7) | | |
| Tactile disturbances (0–7) | | Withdrawal severity: <10 Mild 10–20 Moderate >20 Severe |
| Auditory disturbances (0–7) | | |
| Visual disturbances (0–7) | | |
| Headaches, fullness in head (0–7) | | |
| Orientation and clouding of sensorium (0–4) | | |
| Total (maximum possible is 67) | | |

*Source: Sullivan J, Sykora M, Schneiderman J, et al. Assessment of alcohol withdrawal: the revised Clinical Institute withdrawal for alcohol scale (CIWA-AR). *Br J Addict* 1989; 84: 1353-1357.

Nausea and vomiting

Ask "Do you feel sick to your stomach? Have you vomited?" and observe.

- 0 No nausea and no vomiting
- 1 Mild nausea with no vomiting
- 2
- 3
- 4 Intermittent nausea with dry heaves
- 5
- 6
- 7 Constant nausea, frequent dry heaves and vomiting

Tremor

Observe patient's arms extended and fingers spread apart.

- 0 No tremor
- 1 Not visible, but can be felt fingertip to fingertip
- 2
- 3
- 4 Moderate, with patient's arms extended
- 5
- 6
- 7 Severe, even with arms not extended

Paroxysmal sweats

- 0 No sweat visible
- 1 Barely perceptible sweating, palms moist
- 2
- 3
- 4 Beads of sweat obvious on forehead
- 5
- 6
- 7 Drenching sweats

Anxiety

Observe, and ask "Do you feel nervous?"

- 0 No anxiety, at ease
- 1 Mildly anxious
- 2
- 3
- 4 Moderately anxious, or guarded, so anxiety is inferred
- 5
- 6
- 7 Equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

Agitation

- 0 Normal activity
- 1 Somewhat more than normal activity
- 2
- 3
- 4 Moderately fidgety and restless
- 5
- 6
- 7 Paces back and forth during most of the interview, or constantly thrashes about

Tactile disturbances

Ask "Have you any itching, pins and needles sensations, any burning, any numbness or do you feel bugs crawling on or under your skin?"

- 0 None
- 1 Very mild itching, pins and needles, burning or numbness
- 2 Mild itching, pins and needles, burning or numbness
- 3 Moderate itching, pins and needles, burning or numbness
- 4 Moderately severe hallucinations
- 5 Severe hallucinations
- 6 Extremely severe hallucinations
- 7 Continuous hallucinations

Auditory disturbances

Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?", and observe.

- 0 Not present
- 1 Very mild harshness or ability to frighten
- 2 Mild harshness or ability to frighten
- 3 Moderate harshness or ability to frighten
- 4 Moderately severe hallucinations
- 5 Severe hallucinations
- 6 Extremely severe hallucinations
- 7 Continuous hallucinations

Visual disturbances

Ask "Does the light appear to be too bright? Is its colour different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?", and observe.

- 0 Not present
- 1 Very mild sensitivity
- 2 Mild sensitivity
- 3 Moderate sensitivity
- 4 Moderately severe hallucinations
- 5 Severe hallucinations
- 6 Extremely severe hallucinations
- 7 Continuous hallucinations

Headaches, fullness in head

Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or lightheadedness. Otherwise, rate severity.

- 0 Not present
- 1 Very mild
- 2 Mild
- 3 Moderate
- 4 Moderately severe
- 5 Severe
- 6 Very severe
- 7 Extremely severe

Orientation and clouding of sensorium

Ask "What day is this? Where are you? Who am I?"

- 0 Orientated and can do serial additions
- 1 Cannot do serial additions or is uncertain about date
- 2 Disorientated for date by no more than 2 calendar days
- 3 Disorientated for date by more than 2 calendar days
- 4 Disorientated for place and/or person

Appendix K Alcohol withdrawal scale (AWS)*

Patient: Date: Time:

Pulse or heart rate, taken for one minute:

Blood pressure:/..... Rater's initials:

See below for key to scoring.

| | | |
|---------------------------------------|--|---|
| Perspiration (0–4) | | Withdrawal severity: <4 Mild 5–14 Moderate >15 Severe |
| Tremor (0–3) | | |
| Anxiety (0–4) | | |
| Agitation (0–4) | | |
| Axilla temperature (0–4) | | |
| Hallucinations (0–4) | | |
| Orientation (0–4) | | |
| Total (maximum possible is 27) | | |

*A widely used scale in New South Wales. Novak H, editor. Nurse education and nursing management of alcohol and other drugs. Sydney: CEIDA, 1989.

Perspiration

- 0 No abnormal sweating
- 1 Moist skin
- 2 Localised beads of sweat, eg, on face, chest
- 3 Whole body wet from perspiration
- 4 Profuse maximal sweating—clothes, linen are wet

Tremor

- 0 No tremor
- 1 Slight tremor
- 2 Constant slight tremor of upper extremities
- 3 Constant marked tremor of extremities

Anxiety

- 0 No apprehension or anxiety
- 1 Slight apprehension
- 2 Apprehension or understandable fear (eg, of withdrawal symptoms)
- 3 Anxiety occasionally accentuated to a state of panic
- 4 Constant panic like anxiety

Agitation

- 0 Rests normally during day, no signs of agitation
- 1 Slight restlessness, cannot sit or lie still Awake when others asleep
- 2 Moves constantly, looks tense Wants to get out of bed but obeys requests to stay in bed
- 3 Constantly restless Gets out of bed for no obvious reason
- 4 Maximally restless, aggressive Ignores requests to stay in bed

Axilla temperature

- 0 Temperature of 37.0°C
- 1 Temperature of 37.1°C
- 2 Temperature of 37.6–38.0°C
- 3 Temperature of 38.1–38.5°C
- 4 Temperature above 38.5°C

Hallucinations (sight, sound, taste or touch)

- 0 No evidence of hallucinations
- 1 Distortions of real objects, aware that these are not real if this is pointed out
- 2 Appearance of totally new objects or perceptions, aware that these are not real if this is pointed out
- 3 Believes the hallucinations are real but still orientated in place and person
- 4 Believes himself to be in a totally non existent environment, preoccupied and cannot be diverted or reassured

Orientation

- 0 The patient is fully orientated in time, place and person
- 1 The patient is fully orientated in person but is not sure where he is or what time it is
- 2 Orientated in person but disorientated in time and place
- 3 Doubtful personal orientation, disorientated in time and place; there may be short periods of lucidity
- 4 Disorientated in time, place and person; no meaningful contact can be obtained.

Appendix L Clinical opiate withdrawal scale (COWS)

For each item, circle the number that best describes the patient's signs or symptom. Rate on just the apparent relationship to opiate withdrawal. For example, if heart rate is increased because the patient was jogging just prior to assessment, the increased pulse rate would not add to the score.

| | |
|--|--|
| Patient's Name: _____ Date and Time: ____/____/____:____ Reason for this assessment: _____ | |
| Resting Pulse Rate: _____ beats/minute <i>Measured after patient is sitting or lying for one minute</i> 0 pulse rate 80 or below 1 pulse rate 81–100 2 pulse rate 101–120 4 pulse rate greater than 120 | GI upset: over last ½ hour 0 no GI symptoms 1 stomach cramps 2 nausea or loose stool 3 vomiting or diarrhoea 5 multiple episodes of diarrhoea or vomiting |
| Sweating: over past ½ hour not accounted for by room temperature or patient activity. 0 no report of chills or flushing 1 subjective report of chills or flushing 2 flushed or observable moistness on face 3 beads of sweat on brow or face 4 sweat streaming off face | Tremor. Observation of outstretched hands 0 no tremor 1 tremor can be felt, but not observed 2 slight tremor observable 4 gross tremor or muscle twitching |
| Restlessness. Observation during assessment 0 able to sit still 1 reports difficulty sitting still, but is able to do so 3 frequent shifting or extraneous movements of legs/ arms 5 unable to sit still for more than a few seconds | Yawning. Observation during assessment 0 no yawning 1 yawning once or twice during assessment 2 yawning three or more times during assessment 4 yawning several times/minute |
| Pupil size 0 pupils pinned or normal size for room light 1 pupils possibly larger than normal for room light 2 pupils moderately dilated 5 pupils so dilated that only the rim of the iris is visible | Anxiety or irritability 0 none 1 patient reports increasing irritability or anxiousness 2 patient obviously irritable anxious 4 patient so irritable or anxious that participation in the assessment is difficult |
| Bone or joint aches. If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored 0 not present 1 mild diffuse discomfort 2 patient reports severe diffuse aching of joints/ muscles 4 patient is rubbing joints or muscles and is unable to sit still because of discomfort | Gooseflesh skin 0 skin is smooth 3 piloerection of skin can be felt or hairs standing up on arms 5 prominent piloerection |
| Runny nose or tearing not accounted for by cold symptoms or allergies 0 not present 1 nasal stuffiness or unusually moist eyes 2 nose running or tearing 4 nose constantly running or tears streaming down cheeks | Total score _____ The total score is the sum of all 11 items Initials of person completing assessment: _____ |
| Score: 5–12 = mild; 13–24 = moderate; 25–36 = moderately severe; more than 36 = severe withdrawal. Source: Wesson DR, Ling W. The clinical opiate withdrawal scale (COWS). <i>J Psychoactive Drugs</i> 2003; 35: 253-259. | |

Appendix M Subjective opiate withdrawal scale (SOWS)

| | | | | | | |
|--|---------------------------|---|-----------------|-------------------|--------------------|------------------|
| Date | Time | Please score each of the 16 items below according to how you feel NOW (circle one number) | | | | |
| | Symptom | Not at all | A little | Moderately | Quite a bit | Extremely |
| 1 | I feel anxious | 0 | 1 | 2 | 3 | 4 |
| 2 | I feel like yawning | 0 | 1 | 2 | 3 | 4 |
| 3 | I am perspiring | 0 | 1 | 2 | 3 | 4 |
| 4 | My eyes are teary | 0 | 1 | 2 | 3 | 4 |
| 5 | My nose is running | 0 | 1 | 2 | 3 | 4 |
| 6 | I have goosebumps | 0 | 1 | 2 | 3 | 4 |
| 7 | I am shaking | 0 | 1 | 2 | 3 | 4 |
| 8 | I have hot flushes | 0 | 1 | 2 | 3 | 4 |
| 9 | I have cold flushes | 0 | 1 | 2 | 3 | 4 |
| 10 | My bones and muscles ache | 0 | 1 | 2 | 3 | 4 |
| 11 | I feel restless | 0 | 1 | 2 | 3 | 4 |
| 12 | I feel nauseous | 0 | 1 | 2 | 3 | 4 |
| 13 | I feel like vomiting | 0 | 1 | 2 | 3 | 4 |
| 14 | My muscles twitch | 0 | 1 | 2 | 3 | 4 |
| 15 | I have stomach cramps | 0 | 1 | 2 | 3 | 4 |
| 16 | I feel like using now | 0 | 1 | 2 | 3 | 4 |
| <p>Range 0–64. Source: Handelsman L, Cochrane, K J, Aronson M J, et al. Two new rating scales for opiate withdrawal. <i>Am J Alcohol Abuse</i> 1987; 13: 293-308.</p> | | | | | | |

Appendix N Cannabis withdrawal chart

Patient MRN label here:

| | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DATE: | | | | | | | | | | | | |
| TIME: | | | | | | | | | | | | |
| SCORES: 0 — not at all, 1 — mild, 2 — moderate, 3 — severe | | | | | | | | | | | | |
| SYMPTOM | | | | | | | | | | | | |
| Craving for marijuana | | | | | | | | | | | | |
| Decreased appetite | | | | | | | | | | | | |
| Sleep difficulty | | | | | | | | | | | | |
| Increased aggression | | | | | | | | | | | | |
| Increased anger | | | | | | | | | | | | |
| Irritability | | | | | | | | | | | | |
| Strange dreams | | | | | | | | | | | | |
| Restlessness | | | | | | | | | | | | |
| Chills | | | | | | | | | | | | |
| Feverish feeling | | | | | | | | | | | | |
| Stuffy nose | | | | | | | | | | | | |
| Nausea | | | | | | | | | | | | |
| Diarrhoea | | | | | | | | | | | | |
| Hot flashes | | | | | | | | | | | | |
| Dizziness | | | | | | | | | | | | |
| Sweating | | | | | | | | | | | | |
| Hiccups | | | | | | | | | | | | |
| Yawning | | | | | | | | | | | | |
| Headaches | | | | | | | | | | | | |
| Shakiness | | | | | | | | | | | | |
| Muscle spasms | | | | | | | | | | | | |
| Stomach pains | | | | | | | | | | | | |
| Fatigue | | | | | | | | | | | | |
| Depressed mood | | | | | | | | | | | | |
| Difficulty concentrating | | | | | | | | | | | | |
| Nervousness | | | | | | | | | | | | |
| Violent outbursts | | | | | | | | | | | | |
| TOTAL SCORE | | | | | | | | | | | | |
| Person completing assessment (INITIAL) | | | | | | | | | | | | |

Source: Budney A, et al. *Archives of General Psychiatry* 2001; 58 (10): 917-924.

Appendix O Fagerstrom test for nicotine dependence

| Question | Answer | Score |
|--|------------------------------|----------------------|
| 1. How soon after waking up do you smoke your first cigarette? | Within 5 minutes | 3 |
| | 6-30 minutes | 2 |
| | 31-60 minutes | 1 |
| 2. Do you find it difficult to abstain from smoking in places where it is forbidden? | Yes | 1 |
| | No | 0 |
| 3. Which cigarette would you hate to give up? | The first one in the morning | 1 |
| | Any other | 0 |
| 4. How many cigarettes a day do you smoke? | 10 or less | 0 |
| | 11-20 | 1 |
| | 21-30 | 2 |
| | 31 or more | 3 |
| 5. Do you smoke more frequently in the morning than in the rest of the day? | Yes | 1 |
| | No | 0 |
| 6. Do you smoke even though you are sick in bed for most of the day? | Yes | 1 |
| | No | 0 |
| Total | | |
| Score | 0-2 | very low dependence |
| | 3-4 | low dependence |
| | 5 | medium dependence |
| | 6-7 | high dependence |
| | 8+ | very high dependence |

Source: Fagerstrom KO, Heatherton TF, Kozlowski LT. Nicotine addiction and its assessment. *Ear Nose and Throat Journal* 1990; 89(11): 763-765.

Appendix P Acknowledgements

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These guidelines are also available online at www.health.nsw.gov.au