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Department of Health and Ageing

Guidelines for the

Treatment of Alcohol Problems

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Prepared for the Australian Government Department of Health and Ageing
by Paul Haber, Nicholas Lintzeris, Elizabeth Proude and Olga Lopatko

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Guidelines for the Treatment of Alcohol Problems

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Project Advisory Committee members who gave advice on the overall project, were consulted throughout, and reviewed the Guidelines: Professor Steven Allsop, Curtin University WA; Associate Professor Robert Ali, University of Adelaide; Professor Robert Batey, New South Wales Health; Dr Andrew Baillie, Macquarie University; Professor Margaret Hamilton, University of Melbourne; Dr Anthony Shakeshaft, NDARC, University of New South Wales; Associate Professor Kate Conigrave, Sydney South West Area Health Service; Professor John Saunders, University of Queensland; Ms Andrea Stone, RN, Sydney South West Area Health Service; Professor Nick Zwar, University of New South Wales.

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Summary of recommendations

Screening

Recommendation		Strength of recommendation	Level of evidence
3.1	Screening for risk levels of alcohol consumption and appropriate intervention systems should be widely implemented in general practice and emergency departments.	A	Ia
3.2	Screening for risk levels of alcohol consumption and appropriate intervention systems should be widely implemented in hospitals.	D	IV
3.3	Screening for risk levels of alcohol consumption and appropriate intervention systems should be widely implemented in community health and welfare settings.	D	IV
3.4	Screening for risk levels of alcohol consumption and appropriate intervention systems should be widely implemented in high-risk workplaces.	D	IV
3.5	Quantity–frequency estimates is the recommended way to detect levels of consumption in excess of the NHMRC 2009 guidelines in the general population.	D	IV
3.6	AUDIT is the most sensitive of the currently available screening tools and is recommended for use in the general population.	A	I
3.7	In pregnant women, quantity–frequency estimation is recommended to detect any consumption of alcohol. T-ACE and TWEAK questionnaires may be used in this population to detect consumption at levels likely to place the foetus at significant risk of alcohol-related harm.	D	IV
3.8	Direct measures of alcohol in breath and/or blood can be useful markers of recent use and in the assessment of intoxication.	D	II
3.9	Indirect biological markers (liver function tests or carbohydrate-deficient transferrin) should only be used as an adjunct to other screening measures as they have lower sensitivity and specificity in detecting at-risk people than structured questionnaire approaches (such as AUDIT).	A	Ia

Comprehensive assessment

Recommendation		Strength of recommendation	Level of evidence
3.10	Assessment should include patient interview, structured questionnaires, physical examination, clinical investigations and collateral history. The length of the assessment should be balanced against the need to keep the patient in treatment and address immediate concerns.	D	IV
3.11	A quantitative alcohol history should be recorded.	A	I
3.12	Motivation to change should be assessed through direct questioning, although expressed motivation has only a moderate impact on treatment outcome.	B	II
3.13	Assessment of the patient's alcohol-related problems, diagnosis and severity of dependence should be recorded.	S	–
3.14	Assessment for alcohol-related physical health problems should be routinely conducted. A medical practitioner should assess patients at risk of physical health problems.	S	–

Recommendation		Strength of recommendation	Level of evidence
3.15	Assessment for mental health problems, such as anxiety, depressive symptoms and suicidal risk, should be routine, including mental stage examination. Referral for further specialist assessment may be needed if significant mental problems are suspected.	S	–
3.16	Screening for cognitive dysfunction should be conducted if the clinician suspects the patient has cognitive impairment. Referral to a clinical psychologist or neuropsychologist for further testing may be appropriate. The need for formal cognitive assessment is generally deferred until the patient has achieved several weeks of abstinence.	S	–
3.17	Collateral reports should be incorporated in the assessment where inconsistencies appear likely, with the patient's permission where possible, and subject to legal and ethical boundaries.	S	–
3.18	The social support for the patient should be assessed and this information should be incorporated into the management plan.	S	–
3.19	Clinicians should determine if the patient cares for any children under the age of 16, and act according to jurisdictional guidelines if there are any concerns about child welfare.	S	–
3.20	In the event of suspected or continuing concerns over safety of the patient or others, specialist consultation is advised.	S	–

Assessment

Recommendation		Strength of recommendation	Level of evidence
3.21	Assessment should lead to a clear, mutually acceptable comprehensive treatment plan that structures specific interventions to meet the patient's needs.	D	IV
3.22	Patients should be involved in goal setting and treatment planning.	A	I
3.23	Treatment plans should be modified according to reassessment and response to interventions (stepped care approach).	S	–
3.24	Evidence-based treatment should be offered in a clinical setting with the appropriate resources based on the patient's needs.	S	–
3.25	Alcohol dependence is a chronic and relapsing disorder such that long-term care is generally appropriate through self-help programs, primary care or other interventions that are acceptable to the patient.	S	–

Brief interventions

Recommendation		Strength of recommendation	Level of evidence
4.1	Brief interventions are effective in reducing alcohol use in people with risky pattern of alcohol use and in non-dependent drinkers experiencing alcohol-related harms and should be routinely offered to these populations.	A	Ia
4.2	Brief interventions are not recommended for people with more severe alcohol-related problems or alcohol dependence.	A	Ib
4.3	Brief interventions may consist of the five components of the FLAGS acronym: feedback, listening, advice, goals, and strategies (or equivalent).	A	Ia

Recommendation		Strength of recommendation	Level of evidence
4.4	Brief advice may be sufficient for those drinking above NHMRC recommendations but not experiencing harm.	S	–
4.5	Brief interventions should be implemented in general practice and other primary care settings.	A	Ia
4.6	Brief interventions should be implemented in emergency departments and trauma centres.	A	Ia
4.7	Brief interventions should be implemented in general hospital settings.	D	IV
4.8	Brief interventions in community health and welfare settings may be used, but should not be a sole intervention strategy.	D	IV
4.9	Brief interventions in high-risk workplaces may be used, but should not be a sole intervention strategy.	D	IV

Alcohol withdrawal: patient assessment and treatment planning

Recommendation		Strength of recommendation	Level of evidence
5.1	The risk of severe alcohol withdrawal should be assessed based on current drinking patterns, past withdrawal experience, concomitant substance use, and concomitant medical or psychiatric conditions.	B	II
5.2	Successful completion of alcohol withdrawal does not prevent recurrent alcohol consumption and additional interventions are needed to achieve long-term reduction in alcohol consumption.	A	Ia
5.3	Realistic goals of clinicians, patients and their carers for withdrawal services include: interrupting a pattern of heavy and regular alcohol use, alleviating withdrawal symptoms, preventing severe withdrawal complications, facilitating links to ongoing treatment for alcohol dependence, providing help with any other problems (such as accommodation, employment services).	D	IV
5.4	Ambulatory withdrawal is appropriate for those with mild to moderate predicted withdrawal severity, a safe 'home' environment and social supports, no history of severe withdrawal complications, and no severe concomitant medical, psychiatric or other substance use disorders.	D	IV
5.5	Community residential withdrawal is appropriate for those with predicted moderate to severe withdrawal, a history of severe withdrawal complications, withdrawing from multiple substances, no safe environment or social supports, repeated failed ambulatory withdrawal attempts, and with no severe medical or psychiatric comorbidity.	D	IV
5.6	Inpatient hospital treatment is appropriate for those with severe withdrawal complications (such as delirium or seizures of unknown cause), and/or severe medical or psychiatric comorbidity.	S	–
5.7	Hospital addiction medicine consultation liaison services should be accessible in hospitals to aid assessment, management and discharge planning.	S	–

Monitoring alcohol withdrawal severity

Recommendation		Strength of recommendation	Level of evidence
5.8	Patients withdrawing from alcohol should be regularly monitored for physical signs, severity of alcohol withdrawal and general progress during withdrawal.	S	–
5.9	Alcohol withdrawal scales (CIWA-Ar, AWS) can be used to assess withdrawal severity, to guide treatment (such as symptom-triggered medication regimens) and to aid objective communication between clinicians; but should not be used as diagnostic tools.	A	Ia
5.10	Alcohol withdrawal scales should not be used to guide treatment in patients concurrently withdrawing from other substances, or with significant medical or psychiatric comorbidity. Health professionals should consult a specialist drug and alcohol clinician about monitoring and management needs.	B	Ib
5.11	Scores on alcohol withdrawal scales are not always reproducible and should be checked before using them to make management decisions.	S	–

Supportive care in treatment of alcohol withdrawal

Recommendation		Strength of recommendation	Level of evidence
5.12	Patients (and carers) should be provided with information about the likely nature and course of alcohol withdrawal, and strategies to cope with common symptoms and cravings.	C	III
5.13	Treatment environment should be quiet, non-stimulating, and non-threatening, and where alcohol and other drugs are not available.	S	–
5.14	Supportive counselling should be provided to maintain motivation, provide strategies for coping with symptoms, and reduce high-risk situations.	D	III
5.15	Clinicians should ensure oral rehydration is adequate. Intravenous fluids may be necessary in severe dehydration and/or in those not tolerating oral fluids.	S	–

Prophylaxis of Wernicke's encephalopathy

Recommendation		Strength of recommendation	Level of evidence
5.16	Thiamine should be provided to all patients undergoing alcohol withdrawal to prevent Wernicke's encephalopathy.	D	IV
5.17	Thiamine should be given before any carbohydrate load (such as intravenous glucose) as carbohydrates can cause rapid use or depletion of thiamine and precipitate Wernicke's encephalopathy.	D	III
5.18	Healthy patients with good dietary intake should be administered oral thiamine 300 mg per day for 3 to 5 days, and maintained on 100 mg oral thiamine for a further 4 to 9 days (total of 1 to 2 weeks of thiamine).	D	IV
5.19	Chronic drinkers with poor dietary intake and general poor nutritional state should be administered parenteral (intramuscularly or intravenously) thiamine doses of 300 mg per day for 3 to 5 days, with subsequent oral thiamine doses of 300 mg per day for several weeks. The intramuscular route should not be used for patients with coagulopathy.	D	Ib

Recommendation		Strength of recommendation	Level of evidence
5.20	Thiamine supplementation should be continued indefinitely in an alcohol-dependent patient who continues to drink alcohol.	S	–
5.21	Sedatives (such as benzodiazepines) should not be continued beyond the first week of withdrawal. Behavioural approaches to management of anxiety and sleep problems should be encouraged.	D	IV
5.22	Clinicians should facilitate links to post-withdrawal treatment services during withdrawal treatment.	D	III

Using benzodiazepines to treat alcohol withdrawal

Recommendation		Strength of recommendation	Level of evidence
5.23	Benzodiazepines are the recommended medication in managing alcohol withdrawal. In Australia, diazepam is recommended as 'gold standard' and as first-line treatment because of its rapid onset of action, long half-life and evidence for effectiveness.	A	Ia
5.24	Shorter acting benzodiazepines (lorazepam, oxazepam, midazolam) may be indicated where the clinician is concerned about accumulation and over sedation from diazepam, such as in the elderly, severe liver disease, recent head injury, respiratory failure, in obese patients, or where the diagnosis is unclear.	D	III
5.25	Benzodiazepines should not be continued beyond the first week for managing alcohol withdrawal due to the risk of rebound phenomenon and dependence.	D	III
5.26	Diazepam should be administered in a symptom-triggered regimen in residential withdrawal settings for people with no concomitant medical, psychiatric or substance use disorders.	B	Ia
5.27	Diazepam should be administered in a loading regimen (20 mg 2 hourly until 60 to 80 mg or light sedation) in patients with a history of severe withdrawal complications (seizures, delirium); in patients presenting in severe alcohol withdrawal and/or with severe withdrawal complications (for example, delirium, hallucinations, following withdrawal seizure).	B	Ib
5.28	Diazepam should be administered in a fixed dose regimen in ambulatory settings, or for those with concomitant medical, psychiatric or substance use disorders.	C	Ib

Alternative and symptomatic medications in treatment of alcohol withdrawal

Recommendation		Strength of recommendation	Level of evidence
5.29	Carbamazepine is safe and effective as an alternative to benzodiazepines, although it is not effective in preventing further seizures in the same withdrawal episode.	A	Ia
5.30	Phenytoin and valproate are not effective in preventing alcohol withdrawal seizures and are not recommended.	A	Ia
5.31	Newer anticonvulsant agents (such as gabapentin) are not recommended at this stage due to limited clinical evidence.	D	IV
5.32	There is no benefit in adding anticonvulsants to benzodiazepines to manage alcohol withdrawal.	A	Ia

Recommendation	Strength of recommendation	Level of evidence
5.33 Anticonvulsant medications should be continued in patients who take them regularly (such as for epilepsy not related to withdrawal).	S	–
5.34 Antipsychotic medications should only be used as an adjunct to adequate benzodiazepine therapy for hallucinations or agitated delirium. They should not be used as stand-alone medication for withdrawal.	A	Ia
5.35 Anti-hypertensive agents (beta-blockers) should be used for managing extreme hypertension that has not responded to adequate doses of diazepam for alcohol withdrawal.	D	IV
5.36 A range of symptomatic medications may be used for addressing specific symptoms (such as paracetamol for headache, anti-emetics, anti-diarrhoeal agents).	D	IV
5.37 Electrolyte replacement may be a necessary adjunctive treatment for patients with electrolyte abnormalities (such as hypomagnesaemia, hypokalaemia). Hyponatraemia should not be aggressively corrected due to the risk of central pontine myelinolysis.	S	–
5.38 Chlormethiazole, barbiturates, alcohol, beta-blockers, clonidine and gamma-hydroxybutyric acid (GHB) are not recommended in the routine management of alcohol withdrawal.	A	Ia

Managing alcohol withdrawal seizures

Recommendation	Strength of recommendation	Level of evidence
5.39 Alcohol withdrawal seizure should only be assumed if the clinical presentation is typical of an alcohol withdrawal seizure, no other causes of seizure are suspected, and the patient has a history of previous alcohol withdrawal seizures. All other cases need full investigation.	B	II
5.40 Heavy drinkers with a seizure of unknown cause should be admitted to hospital and monitored for at least 24 hours. Investigations include biochemical tests and MR neuro-imaging, and possibly EEG.	C	III
5.41 Loading with benzodiazepines (diazepam, lorazepam) and close monitoring for at least 24 hours is recommended after an alcohol withdrawal seizure.	A	Ia
5.42 Anticonvulsants are not effective in preventing further seizures in the same withdrawal episode.	A	Ia
5.43 Long-term anticonvulsant treatment is not recommended to prevent further alcohol withdrawal seizures.	D	IV

Managing alcohol withdrawal delirium

Recommendation	Strength of recommendation	Level of evidence
5.44 Alcohol withdrawal delirium requires hospitalisation, medical assessment, and close monitoring.	A	I
5.45 The patient should be managed in a quiet environment with minimal sensory stimulation.	C	III
5.46 Dehydration and electrolyte imbalance should be corrected.	S	–
5.47 Benzodiazepines should be used to achieve light sedation. Oral diazepam or lorazepam loading until desired effect is the treatment of choice. Intravenous diazepam or midazolam is appropriate if rapid sedation is needed.	A	Ia

Recommendation		Strength of recommendation	Level of evidence
5.48	Antipsychotic medications should be used to control agitation of alcohol withdrawal as an adjunct to (not instead of) adequate benzodiazepine doses.	A	Ia

Assessing and managing Wernicke's encephalopathy

Recommendation		Strength of recommendation	Level of evidence
5.49	Clinicians should consider MR contrast neuro-imaging where the diagnosis of Wernicke's encephalopathy is not clinically established.	D	III
5.50	All patients exhibiting any features of Wernicke's encephalopathy should be treated as though Wernicke's encephalopathy is established.	D	III
5.51	All patients suspected of Wernicke's encephalopathy should be treated with high-dose parenteral thiamine (at least 500 mg daily) for at least 3 to 5 days. The intramuscular route should not be used for patients with coagulopathy. Subsequent oral thiamine doses of 300 mg per day for several weeks.	D	III
5.52	Patients suspected of Wernicke's encephalopathy should have hypomagnesaemia corrected in order for thiamine supplements to be effective.	D	III

Psychosocial interventions for alcohol-use disorders

Recommendation		Strength of recommendation	Level of evidence
6.1	A stepped care approach is recommended as a framework for selecting psychosocial interventions, incorporating assessment, monitoring, implementation of a treatment plan, regular review of progress, and increasing intervention intensity in the absence of a positive response to treatment.	D	IV
6.2	Motivational interviewing approaches can be used as a first-line or stand-alone treatment, or as an adjunct to other treatment modalities in addressing patient's ambivalence to change their drinking or other behaviours.	A	Ia
6.3	Behavioural self-management (controlled drinking program) can be recommended as a treatment strategy for people with no or low level dependence and for when patient and clinician agree that moderation is an appropriate goal.	A	Ib
6.4	Coping skills training is recommended for people who appear to lack the relevant skills to achieve and remain abstinent.	A	Ib
6.5	Cue exposure in conjunction with other psychosocial interventions can be an effective intervention for treating alcohol dependence.	A	Ib
6.6	Behavioural couples therapy, which focuses on drinking behaviour as the problem, can improve drinking outcomes following treatment and should be delivered by an appropriately trained clinician.	A	Ia
6.7	Psychosocial relapse prevention strategies are recommended for use with all moderately to severely alcohol-dependent patients.	A	Ib
6.8	Psychosocial relapse prevention strategies are best delivered as soon as acute withdrawal symptoms have subsided.	C	III
6.9	Residential rehabilitation programs can be effective for patients with moderate to severe dependence who need structured residential treatment settings.	D	IV

Pharmacotherapies for alcohol dependence

Recommendation		Strength of recommendation	Level of evidence
7.1	Pharmacotherapy should be considered for all alcohol-dependent patients, in association with psychosocial supports.	A	Ia
7.2	Naltrexone is recommended as relapse prevention for alcohol-dependent patients.	A	Ia
7.3	Naltrexone is not suitable for people who are opioid dependent or who have pain disorders needing opioid analgesia.	S	–
7.4	Naltrexone should be started as soon as possible after completion of withdrawal (usually 3 to 7 days after last drink).	A	Ib
7.5	Naltrexone is usually taken for at least 3 to 6 months.	D	IV
7.6	Acamprosate is recommended as relapse prevention for alcohol-dependent patients.	A	Ia
7.7	Acamprosate should be started as soon as possible after completion of withdrawal (usually 3 to 7 days after last drink).	A	Ib
7.8	Acamprosate is usually taken for at least 3 to 6 months.	D	IV
7.9	Disulfiram is recommended in closely supervised alcohol-dependent patients motivated for abstinence and with no contraindications.	A	Ia
7.10	Disulfiram is usually taken for at least 3 to 6 months.	D	IV
7.11	A range of medications appear promising agents in reducing alcohol relapse (such as topiramate, gabapentin, baclofen, aripiprazole); however, need further research and are not recommended as first-line options at this stage.	B	II
7.12	Benzodiazepines and antidepressants are not recommended as relapse prevention agents in alcohol dependence.	B	II
7.13	Medication compliance can be improved with use of adherence enhancing strategies.	B	Ia

Self-help programs

Recommendation		Strength of recommendation	Level of evidence
8.1	Long-term participation in Alcoholics Anonymous can be an effective strategy to maintain abstinence from alcohol for some patients.	B	II
8.2	Assertive referral practices to Alcoholics Anonymous increase participation and improve outcome.	A	I
8.3	SMART Recovery® may be an effective self-help alternative to Alcoholics Anonymous for reducing alcohol consumption.	D	IV
8.4	Self-help groups for families may provide support for those affected by people with alcohol dependence.	D	IV

Specific populations: Adolescents and young people

Recommendation		Strength of recommendation	Level of evidence
9.1	NHMRC guidelines recommend that not drinking alcohol is the safest option for children and young people under 18 years of age.	D	IV

Recommendation		Strength of recommendation	Level of evidence
9.2	Screening and brief intervention for tobacco, alcohol and other drug use should occur routinely. Binge drinking and polydrug use are common among adolescent problem drinkers.	D	IV
9.3	A broad medical and psychosocial history is needed to work effectively with young people.	S	–
9.4	Engagement and therapeutic relationships require an understanding of adolescent development and a cognitively and developmentally appropriate approach.	S	–
9.5	Brief interventions may suit some young people drinking excessively and/or experiencing alcohol-related harms.	A	Ia
9.6	Motivational interviewing, cognitive behavioural and family therapies have been shown to be of benefit in reducing alcohol and other drug use and related harms.	A	Ia
9.7	Limited evidence exists on the role of pharmacotherapies in reducing alcohol use in adolescents.	B	II
9.8	Adolescent drinkers may experience a range of psychosocial crises. In these cases, outreach and crisis interventions should be engaged.	D	IV
9.9	Mental health disorders, including depression, suicidal ideation, anxiety, sexual abuse and antisocial behaviour, are common in young people with alcohol and other drug problems, and should be addressed in the treatment plan.	D	IV

Specific populations: Pregnant and breastfeeding women

Recommendation		Strength of recommendation	Level of evidence
9.10	Women who are or may become pregnant should be advised of new NHMRC guidelines that recommend abstinence. Clinicians who provide advice to pregnant women should familiarise themselves with the risk analysis described in those guidelines. Women who drink alcohol sparingly (less than one standard drink per drinking day without intoxication) may be reassured that there is no consistent evidence this is harmful.	S	–
9.11	Breastfeeding women should be advised of current NHMRC guidelines that recommend abstinence from drinking. If a woman wishes to drink, it is recommended that she breastfeeds before drinking. Otherwise, wait until the blood alcohol returns to zero (one hour per standard drink consumed) before resuming breastfeeding. It is not necessary to express or discard milk before this time.	S	–
9.12	Brief interventions are recommended for use during pregnancy, including the partner where relevant. Follow-up evaluation of response to the intervention is important.	B	II
9.13	If a woman presents intoxicated during pregnancy, hospital admission is recommended to assess foetal safety, maternal safety, and for comprehensive assessment and care planning.	D	IV
9.14	Alcohol withdrawal during pregnancy should be managed in a general hospital, ideally in a high-risk maternity unit in consultation with a specialist drugs-in-pregnancy team. Diazepam may be given as needed to control withdrawal. Nutritional intervention should be initiated, including parenteral thiamine, folate replacement and assessment for other supplementation in hospital.	S	–

Recommendation	Strength of recommendation	Level of evidence
9.15 Women who present during pregnancy with serious alcohol (and/or other drug) problems should be admitted to an appropriate hospital unit for stabilisation, comprehensive assessment and care planning.	S	–
9.16 Assertive follow-up is recommended for antenatal care, substance misuse treatment, and welfare support and child protection.	S	–
9.17 Pharmacotherapy to maintain abstinence from alcohol cannot be recommended during pregnancy due to insufficient safety data.	S	–
9.18 Assertive antenatal care, including monitoring of foetal growth and health, is recommended.	S	–
9.19 Management of infants with neonatal alcohol withdrawal should be undertaken in consultation with a specialist unit.	S	–
9.20 Infants born to women who have consumed alcohol regularly during pregnancy should be carefully assessed for foetal alcohol spectrum disorders by a peadiatrician aware of the maternal history, with further management directed by the appropriate experts.	S	–
9.21 Assessment of the family unit is an essential aspect of managing substance use in women. Intervention should be directed to the whole family unit to reduce consumption of alcohol.	S	–
9.22 Indigenous women should be offered referral to culturally appropriate clinical services.	D	IV
9.23 Comprehensive mental health assessment is an essential component of an integrated care plan for pregnant women with alcohol problems.	S	–

Specific populations: Indigenous Australians and people from other cultures

Recommendation	Strength of recommendation	Level of evidence
9.23a Given late presentation of alcohol problems, active detection is recommended.	D	IV
9.24 Indigenous Australians, like all other Australians should have access to the full range of treatment services, including early intervention and where appropriate, relapse prevention medications.	D	IV
9.25 Indigenous Australians should be offered access to trained Indigenous health care workers and services where possible.	D	IV
9.26 Non-Indigenous clinicians should work in partnership with Indigenous health professionals and/or agencies to improve treatment access and appropriateness for communities.	D	IV
9.27 A respectful, holistic and integrated approach to assessment and management is necessary, considering the patient in the context of both the family and the community.	D	IV
9.28 Indigenous cultures and customs vary. Use of language and approach to communication should be appropriate for both the individual and the community.	D	IV

Recommendation	Strength of recommendation	Level of evidence
9.29 Given the high prevalence of physical and mental comorbidities in the Indigenous population, clinicians should consider the possibility of physical and/or mental comorbidity in all presentations.	A	I
9.30 The ongoing impact of colonisation should be considered and efforts to provide a range of treatment options for alcohol problems to Indigenous population should be combined with wider community measures addressing both alcohol misuse-related problems and underlying social determinants of alcohol misuse.	D	IV

Specific populations: Older people

Recommendation	Strength of recommendation	Level of evidence
9.31 Older Australians should be screened for alcohol use and related harms (such as trauma, exacerbation illness, drug interactions, violence or physical neglect) across a range of health and welfare settings.	D	IV
9.32 Brief interventions should be employed for older people drinking at risky levels or experiencing alcohol-related harms (such as falls, driving impairment, drug interactions).	A	Ia
9.33 Concurrent physical or mental illness, medications, social conditions and functional limitations need to be considered when assessing older drinkers.	D	IV
9.34 Abstinence can be associated with marked physical, mental and cognitive improvements; alternatively, alcohol use may have been masking underlying illness. Consequently, the severity and management of concomitant physical and mental conditions should be reviewed several weeks to months after cessation of drinking.	D	IV
9.35 Withdrawal management of older dependent drinkers requires close monitoring, nutritional supplements, careful use of sedative medication, and management of comorbid conditions.	S	–
9.36 Caution should be exercised when prescribing medications to older drinkers. Short-acting benzodiazepines (such as oxazepam, lorazepam) are preferred for alcohol withdrawal management over long-acting benzodiazepines (such as diazepam).	D	IV
9.37 Psychological and pharmacological treatment approaches should be tailored to physical, cognitive and mental health of older patients.	D	IV

Specific populations: Cognitively impaired patients

Recommendation	Strength of recommendation	Level of evidence
9.38 A brief assessment of cognitive functioning should be a routine part of assessment upon treatment entry.	S	–
9.39 More detailed diagnostic and functional assessment should be carried out where brief assessment suggests that a patient suffers from significant cognitive deficits.	S	–

Recommendation	Strength of recommendation	Level of evidence
9.40 The possibility of improvement in cognitive functioning should be taken into account by allowing a sufficient period of abstinence from alcohol to elapse before finalising treatment planning.	D	IV
9.41 Where cognitive impairment is confirmed, information presented to patients should be concrete and patients should be given opportunities to practice behaviours taught in treatment.	B	II
9.42 Clinicians should engage cognitively impaired patients in treatment by providing information about treatment, discussing different treatment options and maintaining contact with the patient.	S	–
9.43 Cognitively impaired patients should be taught relapse prevention strategies.	D	IV

Managing patients with alcohol-related physical comorbidity

Recommendation	Strength of recommendation	Level of evidence
10.1 Comprehensive assessment is indicated for patients with physical comorbidity related to alcohol, as multiple pathology is the rule.	A	I
10.2 Abstinence is recommended for those with physical comorbidity related to alcohol unless mild and reversible pathology is present. In particular, pancreatitis may recur after a single drink.	D	IV
10.3 Comprehensive management requires a single practitioner with a broad range of clinical skills or close coordination between an appropriate team.	S	–

Managing co-occurring mental and alcohol-use disorders

Recommendation	Strength of recommendation	Level of evidence
10.4 Patients with comorbid disorders of alcohol use and persisting mental health comorbidity should be offered treatment for both disorders.	A	Ib
10.5 More intensive interventions are needed for comorbid patients, as this population tends to be more disabled and carries a worse prognosis than those with single pathology.	B	I
10.6 AUDIT is recommended for screening psychiatric populations.	A	Ib
10.7 Assessment for comorbid disorders should take place once the patient's withdrawal syndrome has diminished, since some anxiety and depressive symptoms may abate once alcohol consumption is reduced or ceased.	B	II
10.8 Comorbid mood and anxiety disorders that do not abate within 3 to 6 weeks after alcohol withdrawal is complete should be treated with integrated/concurrent cognitive behavioural therapy for the comorbid disorder.	B	II
10.9 Cognitive behavioural therapy, behaviour therapy, cognitive therapy, and interpersonal therapy should be considered for treatment of patients with comorbid mental and alcohol use disorders because of their demonstrated effectiveness in non-comorbid cases.	B	Ib
10.10 Integrating psychosocial treatment for mood disorders and psychoses with psychosocial treatment for alcohol-use disorder may be beneficial in treating patients with such comorbidity.	D	IV

Recommendation	Strength of recommendation	Level of evidence
10.11 Selective serotonin reuptake inhibitor antidepressants are not recommended as primary therapy to reduce alcohol consumption in patients with comorbid mood or anxiety disorders.	B	II
10.12 Benzodiazepines are not recommended for treatment of comorbid anxiety in patients with alcohol-use disorders due to high risk of dependence and a potential synergistic interaction with alcohol.	S	–

Managing polydrug use and dependence

Recommendation	Strength of recommendation	Level of evidence
10.13 All patients with alcohol-use disorders should be screened for other substance use using quantity–frequency estimates, or through structured screening instruments such as the ASSIST questionnaire.	D	IV
10.14 Polydrug dependence is typically associated with higher levels of physical, psychiatric and psychosocial comorbidity that should be addressed in comprehensive treatment plans.	D	IV
10.15 Use of other drugs can be affected by cessation or reduction in alcohol use, and treatment plans should address use of alcohol and other drugs together.	D	IV
10.16 Patients undergoing polydrug withdrawal need close monitoring, increased psychosocial care, and increased medication. Consider specialist advice.	D	IV
10.17 Fixed diazepam dosing regimens are preferred for managing alcohol withdrawal in the context of other drug withdrawal, with regular review of dosing regimens. Withdrawal scales (such as CIWA-Ar) need careful interpretation in patients withdrawing from multiple drugs, and should not be used to direct medication.	D	IV
10.18 Patients dependent on alcohol and benzodiazepines or opioids should be stabilised on substitution medications while undergoing alcohol withdrawal.	D	IV

Aftercare and long-term patient follow-up

Recommendation	Strength of recommendation	Level of evidence
11.1 Long-term follow-up of patients following an intensive treatment program is recommended as part of a comprehensive treatment plan, reflecting the chronic relapse possibility of alcohol dependence.	D	IV
11.2 A range of clinical strategies should be used to reduce alcohol-related harm in people who continue to drink heavily and resist treatment. These include attending to medical, psychiatric, social and medico-legal issues, maintaining social supports, and facilitating reduction in alcohol intake.	D	IV

Chapter 1. Introduction

1. Introduction

These Guidelines for the Treatment of Alcohol Problems have evolved over the past 15 years. In 1993, the National Drug and Alcohol Research Centre published a monograph, 'An outline for the management of alcohol problems: Quality assurance in the treatment of drug dependence project' (Mattick & Jarvis 1993). The Australian Government commissioned the National Drug and Alcohol Research Centre to update this document and develop guidelines for treating alcohol problems, which were published in 2003 (Shand et al. 2003). The present document was commissioned to update the guidelines in light of recent evidence and to be integrated with the Australian Guidelines to Reduce Health Risks from Drinking Alcohol (NHMRC 2009).

Purpose of the guidelines

These guidelines provide up-to-date, evidence-based information to clinicians on the available treatments for people with alcohol problems. The guidelines are directed to the broad range of health care professionals who treat people with these problems, including primary care (general practitioners, nurses), specialist medical practitioners, psychologists and other counsellors, and other health professionals. As all forms of treatment will not be readily available or suitable for all populations or settings these guidelines may require interpretation and adaptation. Health service planners represent a significant audience for this document. These guidelines do not attempt to provide information about systems of treatment delivery, which is a policy decision that relates to the needs, resources and structure of health care within jurisdictions.

At the outset, the authors recognise that many people with alcohol problems change their behaviour without formal help or intervention. The way people identify a drinking problem, recognise their responsibility to change, and achieve the self-efficacy to do so, remains variable and incompletely understood. At best, professional treatment can only contribute to a person's self-awareness.

Structure of the guidelines

These guidelines are intended for interested clinicians and health service planners who want a comprehensive review of the treatment options for people with alcohol problems. This document is to be read in parallel with the updated Review of the Evidence, which provides more detail concerning the evidence base for the recommendations within these guidelines. A full list of references associated with recommendations is also provided in the Review of the Evidence.

A needs analysis was conducted with a range of health professionals (general practitioners, hospital-based workers, alcohol and drug workers and community counsellors) about the most appropriate content and format for guideline information to be used by clinicians.

These are described in a separate unpublished report (Cooney et al. 2008). Arising from this needs analysis the guidelines are also accompanied by:

- Quick Reference Guide for use at the point of care. These are designed to make key information more easily accessible to the busy health care worker. The Quick Reference Guide summarise information on assessment, brief interventions, withdrawal management, and post-withdrawal interventions (including psychosocial and pharmacotherapies) for dependent drinkers.
- Key resources for patients and carers, such as patient literature on alcohol withdrawal and post-withdrawal services, designed to reinforce clinical interventions.

These resources are available at <www.alcohol.gov.au> reflecting contemporary approaches by patients and health care professionals in accessing information.

Development of the guidelines

The guidelines were developed by:

- updating the review of the evidence for treatment of alcohol problems and published as a companion document (Proude et al. 2009)
- consulting with an expert panel
- seeking feedback from clinicians concerning the previous edition (reported separately).

In developing the guidelines, the authors relied on evidence from well-designed randomised controlled trials wherever possible. Where this evidence was not available, recommendations are based upon the best available research or clinical experience. Where appropriate, material from the 2003 edition and its accompanying literature review is included.

In almost all cases, the relevant evidence is cited in the revised Review of the Evidence and removed from the guidelines themselves. In turn, the Review of the Evidence has been structured to match the guidelines, so as to clarify the evidence that was considered for each recommendation (to the extent that this could be achieved).

Each chapter begins by briefly stating the aim of that chapter. The recommendations within each chapter identify key issues for clinical practice, and most have an identified supporting 'level of evidence' and 'strength of recommendation'; they are consolidated at the beginning of the guidelines. Consistent with contemporary approaches to guideline development (Shekelle et al. 1999), levels of evidence for causal relationships and observational relationships are presented as Levels I, II, III or IV and strength of recommendations are presented as A, B, C, D or S (Table 1.1).

Recommendations aim to inform clinical decision-making. The strength of recommendation reflects the available evidence, and the clinical importance of the research. For example, it is possible to have methodologically sound (Category I) evidence about an area of practice that is of little clinical importance and therefore attracts a lower strength of recommendation. Alternatively, it is often necessary to extrapolate clinical recommendations from limited or low quality evidence, resulting in lower strength recommendations (B, C or D). Indeed in some circumstances, clinical recommendations are not based upon systematic evidence, but represent a consensus (practical or ethical) approach, indicated as S (standard of care).

Table 1.1: Categories of evidence and strength of recommendations

Categories of evidence for causal relationships and treatment	
Ia	Evidence from meta-analysis of randomised controlled trials
Ib	Evidence from at least one randomised controlled trial
IIa	Evidence from at least one controlled study without randomisation
IIb	Evidence from at least one other type of quasi-experimental study
III	Evidence from non-experimental descriptive studies, such as comparative studies, correlation studies and case-control studies
IV	Evidence from expert committee reports or opinions and/or clinical experience of respected authorities
Categories of evidence for observational relationships	
I	Evidence from large representative population samples
II	Evidence from small, well-designed, but not necessarily representative samples
III	Evidence from non-representative surveys, case reports
IV	Evidence from expert committee reports or opinions and/or clinical experience of respected authorities
Strength of recommendation	
A	Directly based on Category I evidence
B	Directly based on Category II evidence or extrapolated recommendation from Category I evidence
C	Directly based on Category III evidence or extrapolated recommendation from Category I or II evidence
D	Directly based on Category IV evidence or extrapolated recommendation from Category I, II or III evidence
S	Standard of care

Sources: Shekelle, PG, Woolf, SH, Eccles, M & Grimshaw, J 1999, 'Clinical guidelines: developing guidelines', British Medical Journal, vol. 318, no. 7183, pp. 593–96; Lingford-Hughes AR, Welch S, Nutt DJ 2004, 'Evidence-based guidelines for the pharmacological management of substance misuse, addiction and comorbidity: recommendations from the British Association for Psychopharmacology', Journal of Psychopharmacology, vol. 18, no. 3, pp. 293–335.

The 2003 edition of the guidelines used the NHMRC levels of evidence hierarchy (I to IV) to summarise research evidence (NHMRC 2000), and a three-tier system for strength of recommendation (strong, moderate, fair). However, it did not directly link the recommendations to the evidence levels.

The framework adopted for this edition more closely links evidence to clinical recommendations, allowing for greater emphasis to be placed upon consensus recommendations and standards of care that reflect good clinical practice and avoiding therapeutic nihilism where there is insufficient evidence available.

Although experimental research evidence is the most appropriate way to determine the relative efficacy of one treatment against another, the effects seen in research trials might be diluted when the interventions are applied in normal clinical settings. Most trials examine the effects of interventions under highly controlled and relatively ideal conditions. Loss of effect can result from factors associated with the realities of health care delivery, such as the training and experience of clinicians, the faithfulness with which the intervention is delivered, and the time and resources available to implement the intervention. These problems are present in all areas of health care, although they are likely to be more marked in non-pharmacological and non-proprietary methods of intervention.

Evidence-based health care

A range of treatment procedures supported by current research and specialist opinion is described so clinicians can select those approaches that match the setting and patient needs. Individual clinicians may use the guidelines to guide but not to limit treatment needed for their individual patients. It is no longer appropriate for clinicians in Australia to continue using treatment approaches of uncertain efficacy when there are procedures for which there is now reasonable evidence of effectiveness. It is the responsibility of individual clinicians, as well as the government systems which support treatment provision, to ensure the treatments

made available are those believed to be the most effective. Interventions not described in these guidelines were excluded because there was no research supporting their effectiveness (based on the Review of the Evidence), or they were deemed irrelevant because of undeveloped research, or they were not easily implemented.

Community and population approaches to alcohol problems

A key limitation of treatment for alcohol problems is that it addresses the drinking of only a proportion of the risky and problem drinkers in our society, and only once these problems have become manifest. A comprehensive public health approach to reducing the harms associated with alcohol consumption (including injuries, violence and public disorder) also includes community-level responses aimed at preventing excessive use of alcohol. Like clinical interventions, these interventions should be supported by evidence of feasibility, effectiveness and cost-effectiveness (Ministerial Council on Drug Strategy 2006; RACP & RANZCP 2005). Such interventions include:

- Decreasing affordability through increased pricing, to be achieved by volumetric taxation reform (RACP & RANZCP 2005).
- Reducing access to alcohol through restricting outlet density in communities, blocking access altogether in specific locations (as in some Aboriginal communities) or to certain age groups (Livingston et al. 2007; Hogan et al. 2006).
- Restricting alcohol advertising (for example, those targeting high-risk groups, such as young people).
- Running campaigns to promote public awareness of risky patterns of alcohol use (for example, NHMRC 2009); however, the effectiveness of this approach is unclear (Babor et al. 2005; Loxley et al. 2004).
- Increasing the personal or community consequences associated with excessive drinking; for example, drink-drive legislation and random breath testing with associated penalties, workplace programs that lead to sanctions for presentations under the influence of alcohol (Ritter & Cameron 2006).

A note on terminology

These guidelines do not use any specific terminology to define the levels of drinking in relation to the *Australian Guidelines to Reduce Health Risks from Drinking Alcohol* (NHMRC 2009). Where necessary, we indicate that the levels are either within or in excess of the current guidelines. Alcohol consumption is described in terms of standard drinks (see Glossary). Specific diagnostic terms, definitions of alcohol-related harm and risk levels, and some traditional terms describing levels and patterns of drinking, are also included in the Glossary.

These guidelines use the term patient rather than client or consumer to refer to the person seeking treatment for a drinking problem. Some evidence shows that users of treatment services themselves prefer the term. The authors acknowledge that some health professionals prefer not to use the term.

Further, the authors avoid using the term alcoholic except as an adjective, such as alcoholic liver disease. In these guidelines the term 'problem drinker' is used to indicate a person with alcohol-related problems without specific diagnosis.

Chapter 2. Prevalence of alcohol consumption and related harms in Australia

2. Prevalence of alcohol consumption and related harms in Australia

This chapter sets the context for the guidelines and provides evidence about the extent of the problems relating to excessive alcohol consumption in Australia.

Alcohol is commonly used in Australia and has always been part of the Anglo-Australian way of life. Rum arrived with the First Fleet in 1788 along with other accoutrements of Anglo-Celtic society and was often used as currency in the early days of settlement (Lewis 1992). In Europe and the British Isles in the eighteenth century and into the nineteenth century it was often safer to drink alcoholic drinks, such as beer or gin, than it was to drink water. Alcohol carries a lot of cultural significance; it is used on social occasions and also in religious ceremonies throughout the world. In some countries it is frowned upon; in others, banned altogether. Reasons for drinking range from a need for relaxation, for pleasure, and to accompany celebrations, to 'drowning of sorrows', to habit, followed by compulsion in some cases. However, harmful levels of use affect many people, across different age groups and cultural backgrounds (NHMRC 2009).

Prevalence of alcohol use

The recent data on alcohol consumption in Australia reflect the terminology of the previous edition of the alcohol guidelines (NHMRC 2001). These guidelines recognised three levels of alcohol consumption – low risk, risky and high risk – in terms of short-term harm (that is, risk of accidents and injuries occurring immediately after drinking) and long term-harm (that is, risk of developing alcohol-related disease).

Australia ranks fourteenth (9.8 litres) in OECD countries in the world for per capita consumption of pure alcohol; the United Kingdom is in ninth place (11.5 litres), and New Zealand is seventeenth (9.4 litres) (AIHW 2007). The legal drinking age in Australia was 21 years until 1974 when it was lowered to 18; this has led to a rise in alcohol consumption by youths and children aged from 14 years and an accompanying rise in alcohol-related accidents, mortality and morbidity.

The *2007 National Drug Strategy Household Survey* (AIHW 2008) reports that nine out of 10 (89.9%) Australians aged 14 years or older had tried alcohol at some time in their lives and 82.9 per cent had consumed alcohol in the 12 months preceding the survey. The proportion of the population drinking daily fell significantly between 2004 (8.9%) and 2007 (8.1%), whereas the average age at which people had their first full serve of alcohol (17 years) remained stable. The proportion of teenagers drinking at least weekly was around 22 per cent. One-quarter (25.4%) of Australians aged 14 years or older reported being verbally abused by someone under the influence of alcohol and 4.5 per cent had been physically abused.

Alcohol was thought to be associated with a drug 'problem' by one in 10 Australians (10.5%) aged 14 years or older, whereas 45 per cent approved (and a further 34 per cent did not oppose) the regular use of alcohol by adults. High-risk and risky drinkers were more likely than low-risk drinkers or abstainers to experience high or very high levels of

psychological distress. At all ages, greater proportions of the population drank at levels that would result in short-term harm, compared with risk for long-term harm. Overall, about one-third (35%) of people aged 14 years or older put themselves at risk or high risk of alcohol-related harm in the short-term on at least one drinking occasion during the previous 12 months. More than one-quarter (26%) of 14 to 19-year-olds put themselves at risk of alcohol-related harm in the short-term at least once a month during the previous 12 months; this rate was higher among females of this age (28%) than among males (25%). Males aged 20 to 29 years (17%) were the most likely group to consume alcohol at risky or high-risk levels resulting in short-term harm, at least weekly (AIHW 2008).

Considering both short and long-term harm, high-risk drinking or dependence in Australia is estimated at 5 per cent of the population: 15 per cent are considered 'at risk' drinkers, 65 per cent are 'low risk' drinkers, and 15 per cent are non-drinkers.

Patterns of alcohol misuse vary by age, sex, cultural and Indigenous status, and region. Harms associated with excessive alcohol use include higher levels of health problems, mortality, violence and drink–driving. Alcohol-related harm might also result not only from the intoxicating effects of the drug but also from the long-term toxicity of the drug on many organ systems in the body, for example, liver, brain, heart, pancreas, and peripheral nerves.

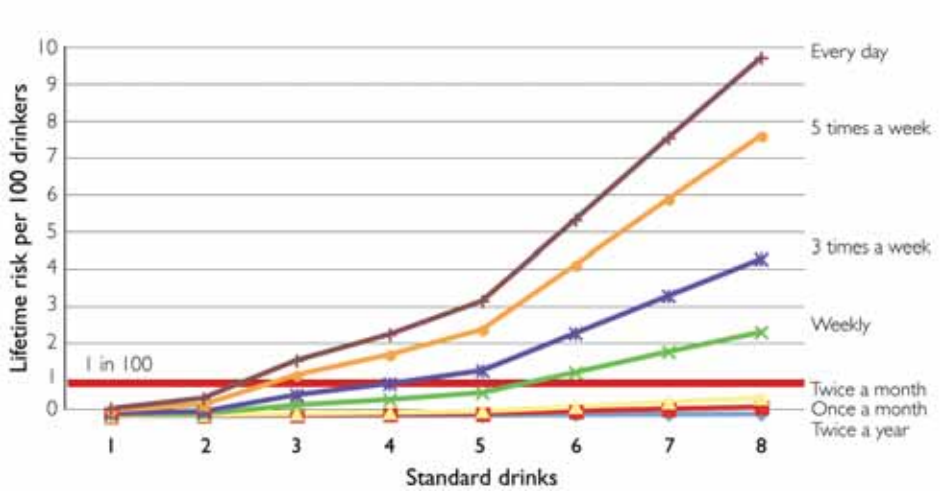
Alcohol-related harm

The World Health Organization estimates that alcohol causes a net harm of 4.4 per cent of the global burden of disease, and that the beneficial effects of alcohol are small compared to the detrimental effects. Alcohol causes a greater health burden for men than for women. Neuropsychiatric disorders – mainly alcohol use disorders – constitute the category linked to most alcohol-attributable burden of disease; unintentional injury is the second most important category. Contrary to popular opinion that cirrhosis is the most critical form of alcohol-induced morbidity and mortality, it only contributes to 10 per cent of the burden of disease caused by alcohol. The health burden is considerable both for acute and chronic health consequences (WHO 2007).

In Australia, alcohol consumption causes over 5000 deaths per year, and for each death about 19 years of life are prematurely lost. The burden of deaths is distributed unevenly across the population; males are over-represented in mortality and morbidity statistics compared to females, as are those living in non-metropolitan regions compared to metropolitan regions. Problems associated with drinking to intoxication are also unevenly distributed; with chronic diseases occurring among people aged over 30 years, whereas deaths and hospitalisations, largely caused by road accidents and violent assault, are much more common among younger people. This may be attributed to different drinking patterns between younger and older age groups (Chikritzhs et al. 2003).

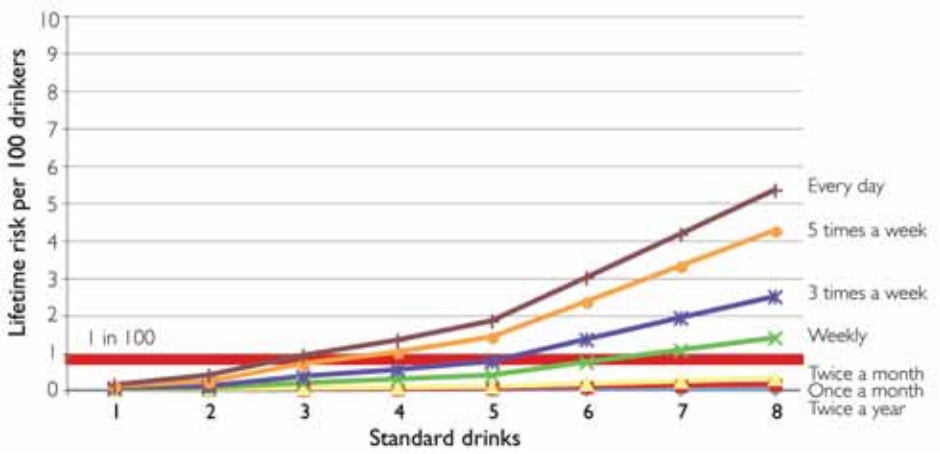
The lifetime risk of death from alcohol-related injury increases with the number of drinks and the frequency of drinking occasions, for male drinkers (Figure 2.1) and female drinkers (Figure 2.2). As well, the risk of death for men is higher than that for women, at all levels of consumption. Limiting consumption to two or fewer drinks per day lowers a person's risk of death from injury to less than 1 per cent, even if that person drinks every day (NHMRC 2009).

Figure 2.1: Lifetime risk of death from alcohol-related injury per 100 male drinkers, by number of standard drinks per occasion and frequency of occasions



Source: NHMRC 2009, *Australian Guidelines to reduce health risks from drinking alcohol*, National Health & Medical Research Council, Canberra: Figure 6, p. 45.

Figure 2.2: Lifetime risk of death from alcohol-related injury per 100 female drinkers, by number of standard drinks per occasion and frequency of occasions



Source: NHMRC 2009, *Australian Guidelines to reduce health risks from drinking alcohol*, National Health & Medical Research Council, Canberra: Figure 7, p. 46.

The risk of hospitalisation for alcohol-related injury also rises exponentially; for example, if a man consumes eight drinks per day, every day, his risk of hospitalisation rises to 40 per cent. When drinking occasions are frequent (for example, nearly every day) and the amount of alcohol consumed is two standard drinks or less, the lifetime risk of hospitalisation for alcohol-related injury is one in 10 for both men and women (NHMRC 2009).

The risk of injury increases with consumption of alcohol on a single occasion. The relative risk of injury increases two-fold in the six hours following consumption of four standard drinks on a single occasion. This risk rises more rapidly above the level of four standard drinks on a single occasion (NHMRC 2009). It should be noted that the NHMRC Guideline 2 does not represent a 'safe' drinking level nor does it recommend an absolute upper limit of alcohol consumption.

The NHMRC *Australian Guidelines to reduce health risks from drinking alcohol* provide evidence to help Australians make informed decisions about their level of alcohol consumption. Guidelines 1 and 2 (see box) are applicable to healthy adults aged 18 years and over, Guideline 3 is specific to children and young adults, and Guideline 4 relates to pregnant and breastfeeding women.

NHMRC GUIDELINES TO REDUCE HEALTH RISK FROM DRINKING ALCOHOL

Guideline 1: Reducing the risk of alcohol-related harm over a lifetime

The lifetime risk of harm from drinking alcohol increases with the amount consumed. For healthy men and women, drinking no more than two standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.

Guideline 2: Reducing the risk of injury on a single occasion of drinking

On a single occasion of drinking, the risk of alcohol-related injury increases with the amount consumed. For healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion.

Guideline 3: Children and young people under 18 years of age

For children and young people under the age of 18 years of age, not drinking alcohol is the safest option.

A: Parents and carers should be advised that children under 15 years of age are at the greatest risk of harm from drinking and that for this age group, not drinking alcohol is especially important.

B: For young people aged 15 to 17 years, the safest option is to delay the initiation of drinking for as long as possible.

Guideline 4: Pregnancy and breastfeeding

Maternal alcohol consumption can harm the developing foetus or breastfeeding baby.

A: For women who are pregnant or planning a pregnancy, not drinking is the safest option.

B: For women who are breastfeeding, not drinking is the safest option.

Source: NHMRC 2009, *Australian Guidelines to reduce health risks from drinking alcohol*, National Health & Medical Research Council, Canberra, pp. 2–5.

Chapter 3. Screening, assessment and treatment planning

3. Screening, assessment and treatment planning

This chapter provides clinical guidance about the role, and implementation of screening methods for people with potentially excessive alcohol consumption, clinical guidance about the comprehensive clinical assessment of problem drinkers, and an overview of treatment planning. It also alerts medical professionals to commonly encountered clinical problems.

Screening

Screening aims to identify people with risky or harmful patterns of alcohol use and initiate appropriate interventions. Screening facilitates identification of problem drinkers who may require comprehensive clinical assessment and targeting of brief, time-limited interventions aimed at reducing consumption for those with risky drinking patterns. Screening methods have been evaluated in a wide range of settings.

Where to screen

Screening should be conducted in settings where the prevalence of risky drinkers is likely to be highest and where detection will have the greatest salience for both the health care worker and the drinker. The settings appropriate for screening are:

- general practice and relevant specialist settings
- hospital settings, including emergency, mental health and general wards
- welfare and general counselling services
- the workplace.

The order of these settings reflects their probable effect; medical settings are most likely to show a high rate of identification.

General practice and relevant specialist settings

In routine general practice, without specific screening techniques, up to 70 per cent of risky and/or high risk drinkers are not detected. Australian evidence shows that screening and early intervention in primary care settings is cost-effective. Detection and brief intervention activities should be encouraged in general and relevant specialist medical practices. Because of their role in primary health care and their high rate of contact with the general public, general practitioners are ideally placed to detect and offer patients help with drug and alcohol problems.

Examples of initiatives to encourage screening in general practice settings include the Smoking, Nutrition, Alcohol and Physical Activity (SNAP) framework for general practitioners (University of New South Wales) and the Drink-Less package (University of Sydney).

Screening and brief interventions (see Chapter 4) are feasible in specialist settings where prevalence of alcohol use is high, such as drug and alcohol treatment services and sexual health services.

Hospital settings, including emergency, mental health and general wards

Alcohol use disorders are typically detected in only 25 per cent of hospitalised patients who have alcohol problems. All general hospitals should have routine screening procedures in place for excessive alcohol consumption among inpatients and outpatients, and procedures for appropriate interventions. As well, all hospitals should have in place routine procedures for facilitating follow-up in the community following discharge. The major benefits of such procedures may lie in earlier recognition, prevention and treatment of alcohol withdrawal and alcohol-related medical toxicity.

Screening procedures should be followed by appropriate hospital-based interventions and referral into the community, as necessary. Patients may be receptive to interventions addressing alcohol use following hospital presentation.

Hospital-based interventions may include:

- brief interventions delivered by general hospital medical, nursing and allied health professionals
- management of withdrawal, intoxication, and other alcohol-related medical morbidity.

Referral should include a letter to the referring general practitioner and other referral services, providing feedback about the level of risky consumption and advising the need for ongoing monitoring and further intervention.

Strategies to increase the detection rate in the hospital setting include:

- undergraduate and postgraduate multidisciplinary training
- system redesign incorporating systematic electronic recording of alcohol consumption data, or equivalent paper-based information systems
- specialist drug and alcohol consultation liaison services within all hospitals.

Welfare and general counselling services

Screening in welfare and counselling services offers the opportunity for problem identification and referral for intervention. It is likely in a significant proportion of cases that excessive alcohol intake has contributed to the presenting problem (relationship, financial, parenting, mental health, employment, violence, housing).

A structure needs to be developed in welfare and counselling settings where such screening would occur routinely. However, there are significant barriers and few incentives to implement screening activities in these settings.

The workplace

Evidence of high rates of problem drinking in some workplace settings suggests it is a suitable venue for detection of risky drinking and intervention. Such screening and intervention has the potential to increase the health and safety of workers, and limit hazards and accidents in the workplace.

Detection of unsafe alcohol consumption should form part of any routine health evaluation in the workplace. Workplace occupational health and safety procedures should identify appropriate strategies and referral options for those workers identified as having alcohol-related problems. Young male drinkers, who are less likely to attend primary care settings,

may be screened in the workplace. Alcohol may also be detected through occupational breath test screening; in which case, the individual should be offered referral for assessment by a clinician with expertise in diagnosis and management of alcohol use disorders. Those with alcohol use disorders should be offered treatment, as described in these guidelines.

Recommendation		Strength of recommendation	Level of evidence
3.1	Screening for risk levels of alcohol consumption and appropriate intervention systems should be widely implemented in general practice and emergency departments.	A	Ia
3.2	Screening for risk levels of alcohol consumption and appropriate intervention systems should be widely implemented in hospitals.	D	IV
3.3	Screening for risk levels of alcohol consumption and appropriate intervention systems should be widely implemented in community health and welfare settings.	D	IV
3.4	Screening for risk levels of alcohol consumption and appropriate intervention systems should be widely implemented in high-risk workplaces.	D	IV

How to screen

The methods for detecting risky drinkers include:

- asking the person about their alcohol consumption (quantity–frequency estimates)
- using screening questionnaires
- physically examining the person for intoxication or signs of harmful use of alcohol
- observing the biological markers of excessive alcohol consumption.

Evaluation of all methods suffers from the absence of a 'gold standard' against which they can be tested. The approaches used to detect people with risky drinking patterns vary considerably across settings. In some settings routine screening of all patients is recommended, in others this may not be feasible. Under such circumstances, it is important to identify alcohol use disorders where they are relevant to the presenting problem.

Asking the person about their alcohol consumption (quantity–frequency estimates)

A quantitative alcohol history can be a reliable method of detecting risky patterns of alcohol consumption. Such a history comprises:

- the daily average consumption (grams per day or standard drinks per day) of alcohol
- the number of drinking days per week (or month).

Where use exceeds that recommended in the NHMRC guidelines, a more detailed assessment is indicated to exclude harmful use and/or dependence.

For socially stigmatised behaviours, the health professional's interviewing style is important, and includes:

- taking a non-judgmental approach, normalising alcohol use (for example, asking about a range of lifestyle factors including nutrition, tobacco use, caffeine intake, alcohol use)

- taking a 'top down' approach (for example, suggesting a level of drinking that is higher than expected so the patient is more likely to feel comfortable admitting the real level of drinking by bringing the estimation down to the correct level).

It is important to carefully interpret language. For example, if a patient says he has had 'a drink', this might mean one standard drink or a night of heavy drinking. Quantitative measures should replace non-specific terms, such as a 'social drink'.

Recommendation		Strength of recommendation	Level of evidence
3.5	Quantity–frequency estimates is the recommended way to detect levels of consumption in excess of the NHMRC 2009 guidelines in the general population.	D	IV

Using screening questionnaires

One established method for detecting people with risky drinking habits is that of using a standard questionnaire. Many questionnaires have been designed to screen for alcohol dependence, but only a few have been devised specifically to detect risky drinkers who may be non-dependent. A comprehensive list of the available instruments for research use has been published (see Review of the Evidence).

Although none have been evaluated in relation to the current NHMRC guidelines, the recommended instruments are the Alcohol Use Disorders Identification Test (AUDIT) or related versions, such as AUDIT-C and AUDIT-3, for general populations, and the T-ACE or TWEAK for pregnant women.

Alcohol Use Disorders Identification Test

The World Health Organization developed the AUDIT questionnaire, which is designed to detect people with risky alcohol consumption (see Appendix 1). AUDIT consists of ten questions that represent the three major conceptual domains of intake (Questions 1 to 3), dependence (Questions 4 to 6) and problems (Questions 7 to 10). It effectively distinguishes between risky and non-risky drinkers, identifies dependent drinkers, and has cross-cultural validity. It is short (10 items), may be self-administered, and is suitable for primary health care settings.

AUDIT has demonstrated validity among a wide range of patient populations, including primary care adolescents, drug-dependent patients, cross-cultural groups, drink–drivers, emergency ward patients, and psychiatric patients. AUDIT performs as well as the Michigan Alcoholism Screening Test (MAST) and the CAGE for identifying dependent drinking, and has higher sensitivity and specificity for harmful drinking.

A shortened version of AUDIT – AUDIT-C – consists of only alcohol consumption Questions 1 to 3 (Table 3.1). It has been used successfully with male Veterans' Affairs patients to screen for heavy drinking and in primary care setting for identifying alcohol misuse. Score of 5 or more indicates further assessment is required.

Table 3.1: AUDIT-C

1. How often do you have a drink containing alcohol?				
Never	Monthly or less	2–4 times a month	2–3 times a week	4 or more times a week
(0)	(1)	(2)	(3)	(4)
2. How many drinks containing alcohol do you have on a typical day when you are drinking?				
1 or 2	3 or 4	5 or 6	7 to 9	10 or more
(0)	(1)	(2)	(3)	(4)
3. How often do you have six or more drinks on one occasion?				
Never	Less than monthly	Monthly	Weekly	Daily or almost daily
(0)	(1)	(2)	(3)	(4)

The third question of the AUDIT taken alone (AUDIT-3) has been shown to have almost as good sensitivity and specificity as the longer forms.

MAST and CAGE questionnaire

Instruments such as the MAST and the CAGE questionnaires (see Appendix 1) were devised for their ability to distinguish chronic alcohol dependent people from non-alcohol dependent people. While their performance is good, in that 95 per cent or more of chronic alcohol dependent people are detected, they are much less effective in detecting people with less severe drinking problems. Because of this limitation they are not advocated for screening in primary care settings.

Other questionnaires

The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) is a useful screening questionnaire, recommended by the World Health Organization, which includes alcohol with other substances (see Chapter 10 and Appendix 1).

A number of other screening instruments have been developed to overcome the limitations of existing inventories. These are most useful for research rather than clinical settings and are not considered further in these guidelines.

Recommendation		Strength of recommendation	Level of evidence
3.6	AUDIT is the most sensitive of the currently available screening tools and is recommended for use in the general population.	A	I

Screening for alcohol use in pregnant women

Evolving Australian and international guidelines recommend minimal to no alcohol during pregnancy. The NHMRC advises that it is safest to consume no alcohol during pregnancy (NHMRC 2009). The low levels of consumption highlighted as a concern in recent guidelines cannot be identified using current questionnaires. A clinical history to estimate the quantity and frequency of alcohol use is the preferred method.

In light of the potential for adverse effects on the foetus, screening for alcohol use should be included in the usual antenatal history. All pregnant women should be asked about their level of alcohol consumption.

TWEAK and T-ACE questionnaires

Two screening instruments – TWEAK and T-ACE – have been developed for use with pregnant women. Both identify levels of drinking associated with a significant risk of foetal alcohol-related harms and, until new tools are developed to better reflect the NHMRC 2009 guidelines, can be recommended for use in this population.

TWEAK is a modified five-item version of MAST (see Appendix 1) and has five items; a score of two or more suggests the patient is drinking at risky levels. Further assessment should be recommended.

T-ACE consists of three CAGE questions and a tolerance question (see Appendix 1). It is quick and easy to administer; a score of two or more indicates the patient may be drinking at risky levels, and should be further investigated.

Both T-ACE and TWEAK are more specific and sensitive than either MAST or CAGE in identifying risky drinking levels.

All pregnant women should be made aware of the current recommendations relating to alcohol use during pregnancy. If alcohol use continues, a full assessment of alcohol intake and any adverse effects should be undertaken and appropriate referrals should be made. It is appropriate to reassure pregnant women drinking minimal amounts of alcohol (for example, 1–2 standard drinks per week without escalation to higher amounts) that there remains no evidence this is harmful.

The ASSIST questionnaire that screens for alcohol and other substances can also be used in this population (see Chapter 10 and Appendix 1).

See Chapter 9 for more information.

Recommendation		Strength of recommendation	Level of evidence
3.7	In pregnant women, quantity–frequency estimation is recommended to detect any consumption of alcohol. T-ACE and TWEAK questionnaires may be used in this population to detect consumption at levels likely to place the foetus at significant risk of alcohol-related harm.	D	IV

Physical examination for intoxication or signs of harmful use of alcohol

Clinical presentations related to alcohol use cover a diverse spectrum, varying across health and welfare settings: a characteristic is multiplicity of problems across these domains. Common examples of potentially alcohol-related presentations include:

- mental health problems, such as depression, anxiety, suicidal ideation, insomnia
- social problems, including work, financial, marital and relationship, domestic violence
- medical conditions, such as trauma, liver disease and seizures.

Common physical indicators of excessive alcohol use include hypertension, dilated facial capillaries, bloodshot eyes, hand or tongue tremor, gastrointestinal disorders (duodenal ulcers, pancreatitis, liver cirrhosis), cognitive deficits, a pattern of accidents, signs of alcohol intoxication. These clinical features are not conclusive, however, and their absence does not rule out the existence of risky alcohol consumption.

Patients presenting with such problems should be screened for alcohol use, and if appropriate, proceed to a more comprehensive assessment. General practitioners and other health and welfare workers encountering these presentations should have screening systems in place.

Biological markers of excessive alcohol consumption

Biological markers of excessive alcohol use include direct measures of alcohol (for example, alcohol in breath or blood) and a range of indirect indices such as liver enzymes activity, the levels of carbohydrate-deficient transferrin, characteristics of blood erythrocytes (for example, mean corpuscular volume) and others.

Measures of alcohol levels

Measures of alcohol concentration (in breath and blood) are important when screening for alcohol use in occupational and other settings. They are useful indicators in emergency departments and in outpatient clinics to confirm recent alcohol use and to assess suspected intoxication. Alcohol breath tests are less invasive and are widely used in roadside testing. The correlation between breath alcohol levels and intoxication may be affected by a range of factors and may require careful clinical interpretation.

Recommendation		Strength of recommendation	Level of evidence
3.8	Direct measures of alcohol in breath and/or blood can be useful markers of recent use and in the assessment of intoxication.	D	II

Indirect markers

A number of indirect biological markers are used to detect alcohol consumption, namely:

- liver function tests
  - alanine aminotransferase (ALT)
  - aspartate aminotransferase (AST)
  - serum gamma-glutamyltransferase (GGT)
- carbohydrate-deficient transferrin (CDT)
- high-density lipoprotein cholesterol (HDLC)
- mean corpuscular volume (MCV)
- uric acid.

Serum GGT, a liver enzyme, is the most useful of the currently available tests but has only moderate sensitivity and specificity. It is elevated in 30 per cent of patients with alcohol dependence in primary care and, depending on the clinical circumstances, 50 to 100 per cent of hospitalised patients with alcohol dependence. However, it is less likely to be raised in women and young people.

Elevated GGT levels are not specific for alcohol use where certain conditions exist. These conditions include:

- obesity (now the most common cause for elevated GGT levels in some populations)
- obstructive liver disease
- medications that induce hepatic cytochromes (such as anticonvulsants).

The carbohydrate-deficient transferrin test is not reimbursed by Medicare and is rarely used outside forensic settings. It has similar sensitivity to GGT but has a higher specificity.

Other biological markers (including acetaldehyde-protein adducts, fatty acid ethyl esters) are under investigation but are not yet available for routine clinical use. The other available laboratory tests are less sensitive: for example, an elevated mean corpuscular volume is found in only 5 to 20 per cent of alcoholic patients. The value of these tests in detecting non-alcohol dependent people with risky alcohol consumption is correspondingly lower.

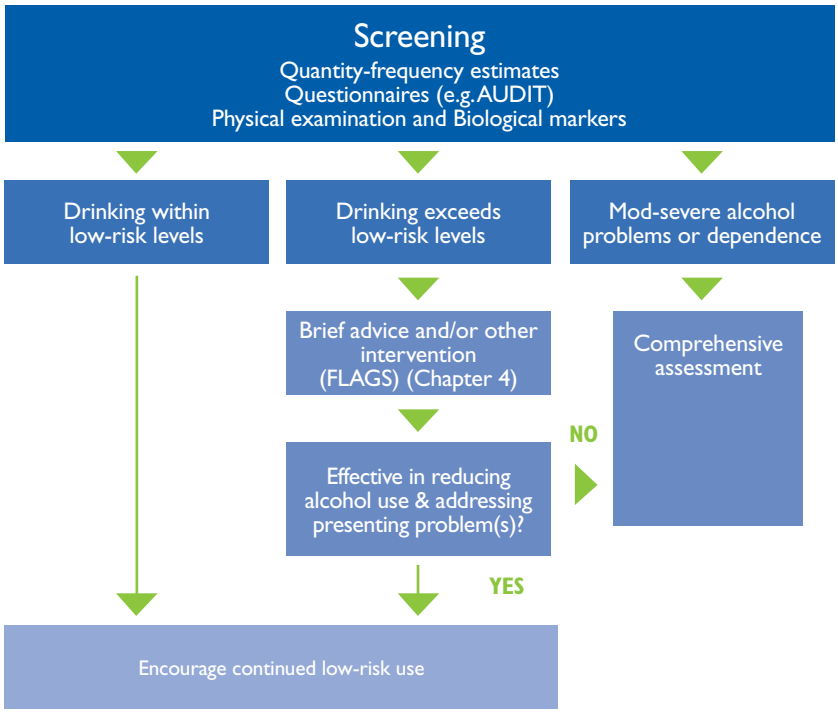
Combinations of tests have low specificity and cannot be used without further clinical evaluation.

Because of the greater sensitivity and specificity of questionnaire approaches (such as AUDIT) these are preferred to biological markers. Biological markers should only be used as an adjunct to other screening measures.

Recommendation		Strength of recommendation	Level of evidence
3.9	Indirect biological markers (liver function tests or carbohydrate-deficient transferrin) should only be used as an adjunct to other screening measures as they have lower sensitivity and specificity in detecting at-risk people than structured questionnaire approaches (such as AUDIT).	A	Ia

Patients drinking above low-risk levels (see NHMRC recommendations) should be offered a brief intervention. Those experiencing moderate to severe alcohol related problems, including dependence, require more comprehensive assessment and intensive treatment approaches (Figure 3.1)

Figure 3.1: Screening



Comprehensive clinical assessment

It is important to conduct a clinical assessment before developing a comprehensive treatment plan for those drinkers who have:

- not responded to advice to reduce their consumption of alcohol
- severe alcohol-related problems
- asked for or need help to deal with their drinking.

Assessment should include diagnostic interviews, physical examination, investigation of clinical and biological markers, and gathering of collateral information about the patient. Assessment intensity and detail varies across settings; the amount of assessment relates to the level of specialisation in alcohol problems. The areas for assessment include:

- motivation to change
- alcohol consumption pattern and severity of dependence
- alcohol-related harms (such as physical and psychological health problems, relationship problems, occupational problems and legal problems)
- family factors
- cognitive functioning.

The need for comprehensive assessment must be balanced with the desire to engage and retain the patient in treatment. If the patient perceives that little or no progress is being made in the first sessions, their motivation to stay in treatment may wane. The assessment might be spread over several sessions, allowing some time in each session for setting preliminary treatment goals and working toward those goals. As more in-depth assessment occurs, these treatment goals and strategies may need adjustment. Assessment continues throughout treatment as the patient's progress is measured against the treatment goals.

From the first contact with the patient it is important to instil a sense of hope and a belief that change is possible. This is especially important in patients who have repeatedly tried to alter their drinking habits and failed. Self-efficacy (that is, the patient's belief that there is something they can do about their problem) is an important factor in treatment success. Self-efficacy may, in turn, be influenced by the therapeutic relationship (see Chapter 6).

Purpose of assessment

Assessment has three important functions, namely:

- **To help the patient and clinician identify shared treatment goals and develop a treatment plan.**

  Different patients will need different approaches, as problem drinkers do not have a homogeneous group of problems. Any underlying or accompanying problems should be identified and addressed, even if the causal relationship is unclear. The treatment plan should be based on the most effective intervention for the patient, not just on the kind of treatment typically provided by the agency. The patient should be informed about the range of options for intervention available locally and assisted to make a reasoned decision as to which intervention is most suited to his or her needs (see 'Treatment planning' below).

- **To engage the patient in the treatment.**

  This is an opportunity for the clinician and patient to develop rapport. If the clinician shows the patient empathy and courtesy and provides a sense of hope and optimism,

the patient is less likely to take a defensive stance in the interview, and resist change. Feedback from the clinician can encourage the patient to appraise their situation from a new perspective. Assessment can be defined as the beginning of therapy; it often reveals, for the first time, the full extent of the drinking-related problems to both patient and clinician.

- **To motivate the patient to change drinking patterns and related behaviour.**

  The patient's perception of a gap between their goals and their present state may improve motivation for change. It is important to highlight the patient's perception of the opportunity for change; this requires the clinician to have a positive and realistic approach and a sympathetic understanding of the implications of change for the drinker and their family.

Recommendation	Strength of recommendation	Level of evidence
3.10 Assessment should include patient interview, structured questionnaires, physical examination, clinical investigations and collateral history. The length of the assessment should be balanced against the need to keep the patient in treatment and address immediate concerns.	D	IV

Diagnostic interviews

The initial assessment should ideally take the form of an open-ended, semi-structured interview where the patient and the clinician compile a narrative history, using appropriate questionnaires if desired (see Table 3.2). This has the advantage of clinician involvement that is personal and responsive to the drinker, rather than mechanical and impersonal. Yet, it should maintain a purposeful structure so as to avoid a vague, directionless discussion of the drinker's history or rumination on a few aspects. Standardised questionnaires are not often used at this stage, but in selected cases a number of validated instruments may prove useful.

Table 3.2: Matters to be covered in a comprehensive assessment

Presentation	• Presenting problems • Role of drinking/drug use in presenting problems • Motivation for presentation • Other concerns
Alcohol and other drug use	• Quantity, frequency, pattern of drinking and other drug use (tobacco, illicit drugs, pharmaceutical drugs, injecting drug use) • Last use of alcohol and other drugs (time and amount) • Duration of drug and alcohol problems • Features of abuse or dependence. If dependent, assess likely withdrawal severity and previous withdrawal complications (seizures, delirium, hallucinations).
Medical and psychiatric comorbidity	• Physical health problems (including liver, gastro-intestinal, trauma, cardiovascular, neurological, cognitive, endocrine) • Mental health problems (depression, anxiety, psychosis, suicide risk)
Social circumstances	• Social functioning (including relationship, employment, financial, housing, legal)
Examination (by suitably trained health professionals)	• Physical examination (general examination, signs of intoxication or withdrawal, nutritional assessment, neurological function, gastrointestinal, cardiovascular) • Mental state examination (signs of intoxication or withdrawal, cognitive function, mood, motivation and insight)
Motivation and treatment goals	• Goals of treatment (abstinence versus reduced drinking, other health concerns) • Involvement of other health and/or welfare professionals • Clinical risks and risk management plan (harm to self/others, serious physical or mental illness, driving, child protection, domestic violence, occupational concerns) • Treatment plan (need for brief interventions, controlled drinking strategies, detoxification, relapse prevention strategies, management of comorbidities)

Note: Comprehensive assessment may require more than one consultation, and involve gathering of additional information from clinical investigations and collateral history.

A complete assessment should evolve over two or more sessions as an ongoing part of the treatment. It should not be viewed as something that must be completed at the first visit and not revisited. Specific areas that need assessment include:

- level and history of alcohol consumption
- motivation
- dependence and alcohol-related harms
- physical wellbeing
- psychological and psychiatric disorders
- cognitive functioning.

While each area needs to be covered to ensure a comprehensive assessment, not every patient will need to be assessed extensively on each. In some cases, such a detailed assessment is unnecessary, as the status of the patient will be obvious. In other cases the information provided will allow the clinician to carry out a careful assessment of the important aspects.

The structure of clinical assessments differs between medical, psychological, nursing and other health professionals for a range of reasons and may need to be adapted to suit the environment in which it is being conducted. Structured diagnostic interviews are available but, due to their length, are not recommended for clinical practice; their use is limited to research and perhaps forensic settings (see also Review of the Evidence).

Assessing level and history of alcohol consumption

The assessment should gather information about the patient's drinking history, including how the drinking pattern evolved, fluctuated and/or progressed over time. A quantitative alcohol history should be recorded in every case. This comprises:

- the daily average consumption (grams per day or standard drinks per day) of alcohol
- the number of drinking days per week (or month).

A number of studies have shown that in general, reproducible and relatively accurate information can be obtained from a well-taken alcohol history. Nonetheless, it is difficult to do with some patients. Based on cumulative population self-reporting, overall alcohol use is under-reported, but interviewing style can influence the accuracy of self-reporting.

Adopt a non-judgmental tone in asking about alcohol use. Generally, assume the patient does drink alcohol as a normal part of their lifestyle. It is useful for the clinician to use the 'top-down approach', suggesting a level of drinking that is higher than expected so the patient is more likely to be comfortable admitting the real level of drinking by bringing the estimation down to the correct level.

Language should be carefully interpreted; thus, the phrase 'a drink after work' may mean any number of drinks per drinking day, and any frequency of drinking from once a fortnight to every day. The community shows little recognition of a standard drink. This should be clarified in every case using an appropriate visual aid such as that shown in Appendix 9.

The assessment should include the patient's reconstruction of a typical drinking day and week, from the time of waking through all the day's activities. For example, the clinician might ask at what time the first drink is taken, where and with whom. The time spent drinking or the money spent on alcohol can be compared with the patient's estimate of the amount of alcohol consumed to test the accuracy of that estimation. Consumption can be linked to particular events, behaviours and times. An assessment of a typical day also gives information about the antecedents and consequences of drinking. This information can be incorporated into advice about relapse prevention. The clinician needs to distinguish between daily drinking and binge drinking where the weekly or monthly consumption is concentrated over several days and the patient is abstinent or drinks lightly at other times. The use of drink diaries or calendars may help clarify the patterns.

Several structured methods are available to perform this assessment, although they are not routinely used in clinical practice (for example, the quantity–frequency index and the retrospective diary are both reliable ways of identifying high risk levels and patterns of consumption. The 'timeline follow-back' method helps to obtain an accurate, retrospective account of alcohol consumption over a particular period, typically 3 months. These are time consuming but useful approaches to gaining detailed clinical information.

Other drug use, including smoking, use of sedative medications and illicit drugs, should also be assessed.

Recommendation		Strength of recommendation	Level of evidence
3.11	A quantitative alcohol history should be recorded.	A	I

Assessing motivation

Motivation to change is an important predictor of treatment outcome, so it is important to assess the drinker's level of motivation. Treatment planning should take motivational state into account so as to maintain and enhance motivation to control excessive drinking. For example, if there is a low level of motivation to change, motivational intervention may be helpful and intensive intervention is likely to be unhelpful (see Chapter 6 'Motivational interviewing').

Direct questioning

Perhaps the simplest way to assess a drinker's readiness to change is through direct questioning during the assessment interview. Questions should be asked with curiosity and a willingness to explore the patient's answers, not in a judgmental, confronting or adversarial way. This should be done after risky alcohol consumption has been discussed, and the patient has received feedback on their level of drinking. Some questions that might prove useful are:

- 'How interested are you in changing your drinking now?'
- 'Do you feel that you ought to stop drinking', or 'Do you want to stop drinking now?'
- 'What would you be prepared to do to solve this drinking problem?'
- 'How confident are you that you can achieve this?'

The patient may be encouraged to explore the various treatment options from the perspective of motivation to participate. Alternatively, the patient may simply be asked: 'How do you feel about your drinking at the moment?' Responses may vary from:

- Pre-contemplative responses such as, 'I'm happy with my drinking', 'I enjoy drinking', 'I'm not interested in stopping drinking'.
- Contemplative responses such as, 'I'm thinking about stopping', 'I'm not sure if I'm ready at the moment', 'I'm interested in weighing up stopping'.
- Action-oriented responses such as, 'I want to stop now', 'I may need some help', or 'The disadvantages of drinking outweigh the benefits for me'.

Several questionnaires have been validated to assess the drinker's readiness to change; they are the University of Rhode Island Change Assessment (URICA) scale, the Readiness to Change Questionnaire (RTCQ) and the 32-item Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). These are generally reserved for research use.

It would be counterproductive to over-emphasise the assessment of motivation, as the expressed level of motivation does not predict outcome in every case. The stages of change model – also known as the trans-theoretical model – is widely quoted but may oversimplify the concept of motivation. The stages of motivation are not mutually exclusive and may fluctuate quickly. There is little evidence of sequential movement through discrete stages. Many patients express highly selective motivation; that is, they may want to stop drinking, but not see a clinician.

Finally, ambivalence is a key characteristic of the risky drinking population, characterised by simultaneously being motivated in apparently opposing directions. For example, a patient may say that he still enjoys drinking but acknowledges he has been advised to abstain. Hence, it is not surprising that there is evidence that greater expressed readiness to change is not always predictive of reduced alcohol consumption.

Recommendation		Strength of recommendation	Level of evidence
3.12	Motivation to change should be assessed through direct questioning, although expressed motivation has only a moderate impact on treatment outcome	B	II

Assessing dependence and alcohol-related harms

When assessing the patient's dependence on alcohol and the related harms he may be consequently suffering, clinicians should examine:

- the severity of dependence
- the consequences of drinking
- previous experiences of abstinence and treatment.

Severity of dependence

The measurement of the degree to which a drinker is dependent upon alcohol allows the clinician to plan treatment goals and interventions. The severity of dependence provides an indication of the risk of withdrawal and might also provide some initial indication of how intense the treatment program needs to be. For example, a person who is more alcohol dependent may be less able to achieve controlled drinking.

Table 3.3 shows the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, text revision, (DSM-IV-R) and the International Classification of Diseases (ICD-10) criteria for alcohol dependence and abuse syndromes (see also Appendix 2).

Table 3.3: How dependent on alcohol is your patient?

Features common to both sets of criteria	ICD-10	DSM-IV-R
Impaired control	Subjective awareness of an impaired capacity to control drinking	Drinking larger amounts or longer period than intended
Craving/compulsion	Awareness of a strong desire or sense of compulsion to drink craving	Persistent desire or unsuccessful attempts to cut down
Drinking 'taking over' life	Preoccupation with drinking to the neglect of other responsibilities or interests	Much time spent seeking alcohol, drinking, or getting over alcohol's effects Important social or work activities reduced or given up
Tolerance	Tolerance – increased amounts of alcohol are required in order to achieve the desired effects	Increased drinking to achieve the same effect
Withdrawals or withdrawal relief	Withdrawal symptoms on cessation or reduction of alcohol intake; or using alcohol to relieve or prevent these	Withdrawal signs or symptoms, or drinking to relieve or prevent these
Persistent use despite harm	Persistence of alcohol use despite clear evidence of overtly harmful consequences	Use despite physical or psychological consequences

Notes: Dependence is indicated if three or more criteria are met. IDC-10 – International Classification of Diseases; DSM-IV-R – *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, text revision.

Source: Reproduced by permission of Oxford University Press, Table 4.4 (p. 78) from chapter 'Alcohol' in Latt, N, Conigrave, K, Marshall, J, Saunders, J & Nutt, D (eds) 2009, Addiction Medicine, Oxford University Press.

Explore the patient's experiences of dependence, tolerance and withdrawal by asking the patient to describe the last two or three occasions on which they reached intoxication and the last two or three occasions when they did not become intoxicated. (Assessment of withdrawal is discussed in Chapter 5).

Three of the several questionnaires that measure alcohol dependence are included in Appendix 1, as are the shortened version of the Severity of Alcohol Dependence Questionnaire (SADQ-C), the Short Alcohol Dependence Data (SADD) questionnaire, the Severity of Dependence Scale (SDS) and the Alcohol Dependence Scale (ADS) (see also Review of the Evidence). These questionnaires can either serve as a checklist to help organise the clinician's questions or the patient can complete them during assessment.

Consequences of drinking

The clinician should assess the range of problems the patient has encountered as a result of their drinking. In addition to physical and mental health, the patient's drinking may have led to family problems, detrimentally affected work performance, social relations or financial stability (Table 3.3). Alcohol-related offences such as drink–driving are also relevant. A specific crisis in one of these areas may have been the impetus for seeking help, and this should be explored.

Discussion of the 'less good things' about drinking can enhance the patient's readiness for change (see Chapter 6). Alcohol harms are usually assessed using unstructured clinical interviewing. The Alcohol Problems Questionnaire (APQ) is a reliable instrument that covers eight domains – friends, money, police, physical, affective, marital, children and work.

Recommendation	Strength of recommendation	Level of evidence
3.13 Assessment of the patient's alcohol-related problems, diagnosis and severity of dependence should be recorded.	S	–

Previous experiences of abstinence and treatment

It is important to characterise previous periods of abstinence or reduced alcohol use, whether they were voluntary or imposed, whether they were self-initiated or the result of treatment, whether the patient felt better as a consequence, and how those periods ended.

In parallel, it is important to understand previous treatment exposure as it helps plan future treatment, both in terms of what worked and what did not, as well as to clarify the patient's experiences and tolerances.

Assessing physical wellbeing

According to the professional background and skills of the health professional, all patients' physical health should be assessed, including:

- medical history
- current physical symptoms
- use of medication
- current features of withdrawal or intoxication
- previous or current health problems related to drinking.

If any active medical issues are evident, it is appropriate to encourage the patient to see their general or other medical practitioner.

If no significant symptoms are evident, but alcohol history places the patient at risk of medical illness, medical referral for physical examination and blood tests should also be recommended. Medical practitioners should conduct a thorough medical assessment, including history, examination and clinical investigations. Physical examination should at least assess signs of intoxication or withdrawal, signs of liver disease, vital signs (temperature, blood pressure, pulse) and screen for organic brain damage.

The value of telling the patient the results of their medical examination and any clinical investigations cannot be over-emphasised. Discussion about the implications of abnormal liver function tests has been shown to reduce subsequent alcohol consumption. The advantages of feedback are less clear when medical tests show normal results. However, the assessment should allow patients to accurately consider the degree of their alcohol-related problems and normal medical results should not detract from this endeavour. Normal results can be examined within the context of a clinical interaction and is further discussed in Chapter 6.

Recommendation	Strength of recommendation	Level of evidence
3.14 Assessment for alcohol-related physical health problems should be routinely conducted. A medical practitioner should assess patients at risk of physical health problems.	S	–

Assessing psychological and psychiatric disorders

Psychological problems and psychiatric comorbidity – most commonly depression and anxiety – are more prevalent among alcohol-dependent people than the general population. It is essential to discover if psychiatric comorbidity and/or psychological problems are present in alcohol-dependent patients. Such problems can include:

- anxiety, depression, post traumatic stress disorder, psychosis
- suicidal ideations and past history of suicide attempts
- childhood issues, including sexual and physical abuse.

The presence of psychological problems requires mental-state examination by suitably trained clinicians and clinical assessment of mental symptoms. A targeted risk assessment of the possibility of harm to self and/or others, including children, should be performed. It is important that all clinicians in this area develop basic mental health skills and links with other relevant services to help manage these disorders.

Patients need to be reassessed at regular intervals, for example after 3 or 4 weeks of treatment to reduce alcohol consumption, and a final psychiatric diagnosis will be delayed until this time. It is likely that many mental symptoms are reactions to the chaos and disarray in the patient's life that are associated with the drinking problem, or to the neurological effects of alcohol. Some of these symptoms resolve, without formal therapy, when the drinking ceases or decreases. The drinking problem may also be causing the anxiety, rather than the reverse, but serious anxiety disorders may be present and may precipitate relapse.

A high percentage of alcohol-dependent women in treatment have had some experience of physical and/or sexual abuse. Questions about sexual abuse should be framed in a non-threatening way so the patient can choose whether to discuss the issue. Women with a history of child sexual abuse who are pressured to discuss the issue with non-specialist counsellors may endure negative treatment outcomes. Based on these trends, and drawing on clinical expertise, it has been argued that if child sexual abuse is an issue, the patient should be offered referral for specialist intervention. Many patients will not wish to pursue the issue.

Although caution should be exercised in addressing child sexual abuse, clinicians need to discuss it without seeming tentative or fearful. In some jurisdictions, training in dealing with child sexual abuse is now available for alcohol and drug counsellors. A number of jurisdictions have established services for treating victims of child sexual abuse but resources are limited.

A variety of scales are used in clinical and research settings for assessing mental health conditions (see Table 3.4). They are variously used according to clinician preference, treatment setting and patient population. For example, the Kessler 10 Symptom Scale is reasonably widely used in the public sector. In general, these instruments have not been validated in alcohol-dependent populations.

Table 3.4: Mental health assessment scales

Instrument	Description
Beck Depression Inventory (BDI)	Measures depression and its symptoms
Beck Hopelessness Scale	Measures hopelessness and negative views about the future, and is an indicator of suicide attempts.
Depression, Anxiety and Stress Scale (DASS) *	Measures symptoms of depression, anxiety and stress. Australian population data have been published.
General Health Questionnaire (GHQ) *	Designed as a screening instrument to identify likely non-psychotic psychiatric cases in general health settings.
Kessler-10 Symptom Scale *	A scale of psychological distress, suitable for use as an outcome measure in people with anxiety and depressive disorders. It has become the standard scale for use by Australian general practitioners and mental health workers.
Modified PTSD Symptom Scale *	A brief (17-item) measure of post-traumatic stress disorder symptoms.
Short Form 12 (SF-12) *	Assesses possible limitations in both physical and mental health, with age and gender matched population norms.
Social Anxiety Interaction Scale and Social Phobia Scale *	Useful for assessing social phobia.
Spielberger State Trait Anxiety Scale	Measures current anxiety (state anxiety) and a more enduring personality characteristic (trait anxiety).

Note: * all in the public domain, the others need to be purchased.

Recommendation	Strength of recommendation	Level of evidence
3.15 Assessment for mental health problems, such as anxiety, depressive symptoms and suicidal risk, should be routine, including mental stage examination. Referral for further specialist assessment may be needed if significant mental problems are suspected.	S	–

Assessing cognitive functioning

Health professionals must be aware of the possibility of alcohol-related brain damage and be watchful for signs of it in the clinical interview. Since there is a high prevalence of cognitive dysfunction among people with alcohol problems (see Review of the Evidence), drug and alcohol workers should screen for deficits in cognitive function (see Chapter 8).

Wernicke–Korsakoff's syndrome is one of the forms of alcohol-related cognitive deficit, and has high prevalence in alcohol dependent people. It is a potentially fatal neurological disorder caused by thiamine (Vitamin B1) deficiency (see Chapter 5).

Other medical causes of cognitive impairment include:

- cerebrovascular disease
- dementia
- Alzheimer's disease
- chronic subdural haematoma
- cerebral neoplasm
- syphilis
- HIV/AIDS.

If cognitive impairment is suspected, an appropriate medical practitioner should assess the patient. In most cases, if abstinence is achieved, cognitive function improves considerably over the subsequent 2 to 4 weeks. Formal cognitive assessment should therefore be deferred until the patient has achieved 6 weeks of abstinence.

Screening instruments for cognitive impairment

The most widely used screening approach in clinical practice is a clinical assessment for orientation, short- and long-term memory as part of the mental state examination.

The mini-mental state examination can be used for a quick screening for cognitive dysfunction. However, it should be used with caution. The use of age- and education-specific cut-off scores may improve sensitivity without affecting specificity. The test may have limited sensitivity to subtle deficits.

The Clock Drawing Test (see Appendix 1) is another widely used screening test for cognitive dysfunction that can be recommended but to achieve optimal performance, caution needs to be applied to ensure testing is not conducted while the patient is intoxicated or undergoing detoxification, or while affected by benzodiazepines or other sedatives. As well, the clinician must be aware of other factors, such as concomitant anxiety or depression, when interpreting tests of cognitive dysfunction.

Recommendation		Strength of recommendation	Level of evidence
3.16	Screening for cognitive dysfunction should be conducted if the clinician suspects the patient has cognitive impairment. Referral to a clinical psychologist or neuropsychologist for further testing may be appropriate. The need for formal cognitive assessment is generally deferred until the patient has achieved several weeks of abstinence.	S	–

Gathering collateral information

Many patients may be reluctant to acknowledge their excessive alcohol use and its consequences because of the stigma attached to such behaviour. Collateral interviews can, therefore, play a central role where the patient does not self-report their problem with alcohol. Collateral information is particularly needed where a discrepancy appears likely; for example, a patient may say he has reduced his drinking but his liver tests remain elevated. The patient's spouse or other close family members are often aware of drinking and may be more aware of alcohol-related problems than the patient. Work colleagues may provide evidence of impairment or intoxication while on duty. Reports from other clinicians or hospital records may also be revealing.

Significant barriers limit access to collateral reports. Privacy legislation limits the distribution of personal information without consent. It may also be unethical to pursue such enquiries without patient consent. Even if legally, ethically and clinically appropriate, the patient may object to such enquiries. In such cases, the therapeutic relationship may be disrupted. Finally, it is time-consuming and at times costly to pursue these enquiries.

Many people freely acknowledge their use of alcohol and its consequences; in which case, there may be little to be gained from interviewing others. Indeed, unnecessary collateral interviews in this setting can undermine an evolving therapeutic relationship.

Recommendation		Strength of recommendation	Level of evidence
3.17	Collateral reports should be incorporated in the assessment where inconsistencies appear likely, with the patient's permission where possible, and subject to legal and ethical boundaries.	S	–

Family factors

Patients should be encouraged to explore relevant family issues during assessment. Such issues may include relationships with their spouse or partner, their parents, their children, and other significant people in their lives, and attributions about the effects of the patient's drinking.

Domestic violence and sexual abuse, either as perpetrator or victim, are common and serious problems associated with alcohol and other substance use. Because of the sensitivity of these issues, it may not be appropriate to raise them in the first contact session unless the clinician believes there may be a current safety risk. It is important to determine whether the patient wishes to discuss these issues. Specialist assessment and intervention is typically needed.

Enquire into the family's role in convincing the patient to seek help. A patient who is self-referred may be responding to family pressure and this is important information when assessing the patient's motivations and ambivalence. When it is possible the clinician should interview the spouse and/or family members. The interview should provide family members with the opportunity to discuss:

- Their observations about the drinker's behaviour.
- The problems they have had in coping with the drinking behaviour. The clinician will need to evaluate the levels of distress within the family, feelings of isolation and confusion, specific crises preceding help seeking, and who feels responsible for solving the family problems.
- Expectations family members have about treatment. If the spouse or partner is going to be involved in the alcohol treatment, the clinician needs to assess whether the couple has adequate communication to enable mutual problem solving (see Chapter 6).
- What happens before and after drinking episodes, so particular dynamics relevant to the drinking can be identified. If the spouse's role in therapy is aimed at selectively reinforcing certain behaviours in their partner, the clinician should be sure that does not threaten the spouse's wellbeing by reinforcing the notion that she or he is responsible for the partner's drinking.

The family interview is an opportunity for family members to ask questions and to voice their concerns. It is also a good time to help the family put the drinking problem into perspective. For instance, family members should be advised that achieving abstinence or moderation does not necessarily resolve family problems, and that their personal health and wellbeing does not necessarily depend upon resolution of the drinker's problem. The attitude of the clinician should permit the partner to help him or her self rather than feeling obligated to help the drinker.

While this kind of complex information is best obtained by clinical interview, the Alcohol Problems Questionnaire has a subscale assessing family problems and one assessing marital/relationship problems (see Appendix 1).

Child protection

Clinicians should determine if the patient cares for any children under the age of 16. A child or young person can be at risk of harm because:

- their 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
- they have been, or are at risk of being physically or sexually abused or ill-treated
- they are 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, and/or
- 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.

In many jurisdictions it is mandatory for police, teachers, health workers and other people who work with children to notify relevant authorities if they believe a child is being abused or neglected. Clinicians should act according to jurisdictional guidelines if they are concerned about a child's welfare.

Recommendation		Strength of recommendation	Level of evidence
3.18	The social support for the patient should be assessed and this information should be incorporated into the management plan.	S	–
3.19	Clinicians should determine if the patient cares for any children under the age of 16, and act according to jurisdictional guidelines if there are any concerns about child welfare	S	–

Assessing risk

Full risk assessment involves assessment of a number of aspects of safety of the patient or others, including suicide risk, violence risk, physical safety (for example, self-care, risk of accidental injury), child care, driving and workplace safety. Detailed considerations of full risk assessment are beyond the scope of these guidelines. In many cases, intervention to help the patient abstain from alcohol will substantially reduce many risks. However, where concern about safety of the patient or others remains, specialist consultation should be advised.

Recommendation		Strength of recommendation	Level of evidence
3.20	In the event of suspected or continuing concerns over safety of the patient or others, specialist consultation is advised.	S	–

Treatment planning

When developing a treatment care plan it is important to identify suitable interventions, set goals, and plan long-term follow-up aftercare to prevent relapse.

Identifying suitable interventions and developing treatment care plans

Treatment is only one factor in promoting change in individuals but it can help patients change by teaching them to act and think differently about drinking. Sometimes the act of seeking help from a health professional can be an important first step for people to start changing their drinking patterns.

The cumulative evidence from large-scale treatment trials, such as Project MATCH (Project MATCH Research Group 1993) and the United Kingdom Alcohol Treatment Trial (UKATT Research Team 2005) suggests that:

- there is a range of effective interventions and treatment approaches for alcohol disorders
- no single intervention is effective for all people with alcohol problems
- there may be treatments that reduce the likelihood of finding large differential effects between empirically supported interventions.

These treatments provide a framework for clinical responses to people with alcohol-related problems.

Assessment and feedback

A comprehensive assessment is fundamental in treatment planning (see 'Comprehensive clinical assessment' above).

Sharing assessment information with patients in plain, non-judgemental language should be standard practice in a collaborative and motivationally-oriented approach to treatment, and can increase the patient's motivation to change as well as his understanding of and engagement in the treatment.

Recommendation	Strength of recommendation	Level of evidence
3.21 Assessment should lead to a clear, mutually acceptable comprehensive treatment plan that structures specific interventions to meet the patient's needs.	D	IV

Engaging the patient in treatment

Patient engagement may be viewed in terms of intensity and duration of treatment participation. High levels of engagement are predictive of positive treatment outcomes but are contingent upon patient, clinician and clinic characteristics, namely:

- **Patient characteristics** include pre-treatment motivation, severity of disorder, previous treatment experiences, strength of therapeutic relationship, and perception of helpfulness of the treatment services.
- **Clinician characteristics** include degree of empathy, therapeutic relationship, adequate time and interest, and counselling skills. Basic counselling 'micro skills' including warmth and optimism, and strong interpersonal skills are associated with better retention in treatment and indirectly with better treatment outcomes.
- **Clinic characteristics** include removal of practical access barriers such as transportation, fees, hours, physical surroundings, and perceptions about other patients of the service.

Treatment adherence and completion are prominent issues in alcohol and other drug treatment and the factors that improve it are not yet well understood. A focus in early interactions with patients should be on maximising engagement with the professional and the service and fostering a sense of collaboration. Central to provision of any intervention is a strong bond and therapeutic alliance between patient and clinician.

In addition to identifying clinical disorders and effective interventions, negotiation of treatment goals requires clarification of the patient's insight, values and expectation. Evidence shows that providing the patient with a choice of treatment options improves treatment retention.

Goal setting: abstinence, moderation and reduced drinking

Identifying and agreeing upon treatment goals regarding alcohol consumption is an important step for many patients.

Patients with no or low levels of dependence who are not experiencing significant or irreversible alcohol-related harms may be able to achieve a goal of moderation. Consumption within NHMRC guidelines can be recommended, as it is associated with less than 1 per cent risk of serious alcohol-related harms.

The most realistic drinking goal for patients with severe alcohol dependence and/or those presenting with associated problems (such as organ damage, cognitive impairment and co-existing mental health problems) is likely to be abstinence. For many such patients, achieving abstinence will be accompanied by the risk of alcohol withdrawal syndrome. If this is the case, it should be managed before longer-term abstinence or reduced drinking can be achieved (see Chapter 5).

In clinical practice, patients often present with firm ideas about their drinking goal. They may wish to drink at levels that can continue to cause harm, or may not be realistically sustained. Several options can be considered when a patient's expressed preference for moderation is at odds with clinician advice. When serious consequences from continued alcohol use are highly likely, options include:

- declining assistance and explaining that it would be unethical for you to support such a goal; this approach is unlikely to engage or retain the patient in treatment
- accepting the goal provisionally and for a stipulated period
- negotiating a period of abstinence (for example, 1 to 3 months) to allow the patient to get through withdrawal (if relevant), provide some recovery from the effects of alcohol, and provide time to acquire new skills, such as controlled drinking strategies
- agreeing to gradually reduce drinking to achieve abstinence, setting realistic, intermediate goals and monitoring the number of drinks consumed daily
- negotiating a period of trial moderation, include daily drink monitoring and controlled drinking strategies (coping skills training).

Ongoing review and monitoring of drinking against identified goals is central to successful intervention. If the goals are too difficult to achieve, abstinence may seem a more reasonable goal; this should be clearly identified and agreed upon with the patient from the outset. Some interventions require protracted but important negotiations for goal setting. For strategies to manage patients who continue to drink at harmful levels, see Chapter 11.

Recommendation	Strength of recommendation	Level of evidence
3.22 Patients should be involved in goal setting and treatment planning.	A	I

Development of treatment care plan

Information the clinician obtains at patient assessment is used to develop a case formulation that entails a shared understanding of alcohol and other drug problems, co-existing health and social problems and other concerns, and to formulate hypotheses about their development, maintenance and inter-relationships. The case formulation, which continues to be refined as more is learned about the patient, is used to guide treatment planning.

The choice of interventions for addressing alcohol use disorders will depend on a number of factors, including the patient's presenting problems, pattern of alcohol and other drug use, medical and psychiatric comorbidity, motivation and treatment preferences, and social circumstances, as well as available resources.

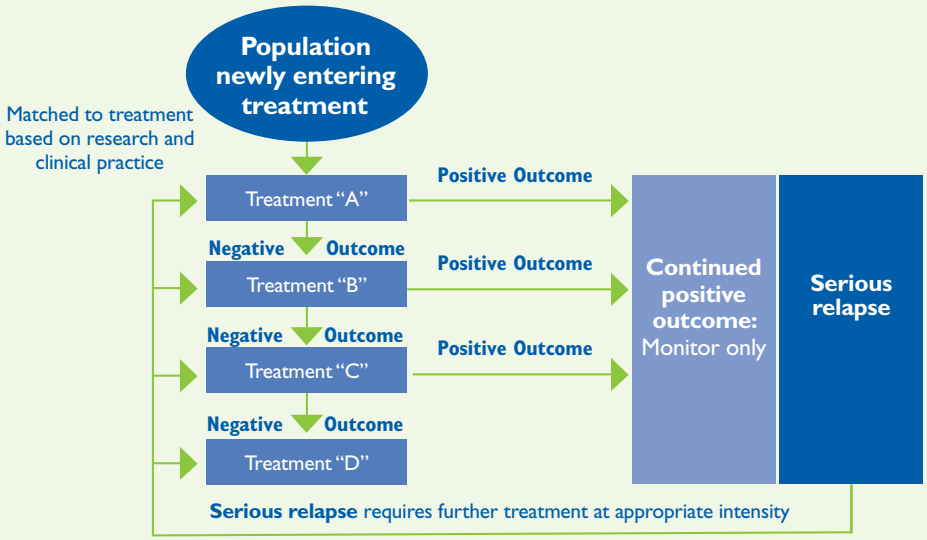
Any treatment plan must address the patient's presenting problem. Often the presenting problem is alcohol-related (for example, liver disease, depression, domestic violence) so it will be necessary to also address the patient's alcohol use in order to effect comprehensive longer-term change. However, the sequence of interventions is often determined by immediate needs (for example, hospitalisation for hepatic failure or suicide attempt, emergency shelter to avoid further violence).

Treatment options should be discussed with patients (and their families or carers, as relevant) to identify what is involved with each treatment approach and the likely outcomes (including potential adverse outcomes) and to give the patient an opportunity to ask questions or raise concerns.

As in any health care intervention, informed consent is essential.

A stepped care approach (see Figure 3.2), which serves as a guide to clinical decision-making and treatment planning, is proposed. Stepped care identifies that patients should first be offered the intervention most appropriate to their presentation; if that proves insufficient to achieve the patient's agreed treatment goals, the next level of intensity of treatment should be offered until the desired treatment goals are achieved. This approach requires continuous reassessment of the patient, their response to treatment and any changes in their presentation.

Figure 3.2: Stepped care approach for delivering health care services



Source: Sobell, MB & Sobell, LC 2000, 'Stepped care as a heuristic approach to the treatment of alcohol problems', *Journal of Consulting and Clinical Psychology*, vol. 68, no. 4, pp. 573–79.

People with chronic heavy alcohol use often have a range of medical, psychiatric, social and legal problems that are usually beyond the scope of a single service provider to address. It is crucial in such cases to develop a treatment plan that involves multiple services as well as a case manager to coordinate close communication between service providers and to ensure long-term follow-up. Complex cases may be best managed by comprehensive multi-skilled clinical services.

Recommendation	Strength of recommendation	Level of evidence
3.23 Treatment plans should be modified according to reassessment and response to interventions (stepped care approach).	S	–
3.24 Evidence-based treatment should be offered in a clinical setting with the appropriate resources based on the patient's needs.	S	–

Relapse prevention, aftercare and long-term follow-up

Relapse is a common problem in alcohol treatment; approximately 60 per cent of patients relapse to problematic drinking within the first month of treatment.

Specific situations or mood states are associated with relapse, including:

- negative emotional states (such as frustration, anxiety, depression or anger)
- interpersonal conflict (such as relationships with partner, work colleagues, friends)
- direct or indirect social pressure to drink.

Relapse prevention intervention is a set of strategies that aim to help the patient maintain treatment gains (see Chapter 6). Relapse prevention teaches patients cognitive and behavioural strategies that help prevent lapses becoming relapses. It addresses itself to maintenance of change and development of self-efficacy and coping skills.

Relapse prevention can be assisted through use of medication (including alcohol pharmacotherapies such as naltrexone, acamprosate, disulfiram) for reducing alcohol use or medication for addressing psychological problems, such as anxiety or depression.

Aftercare refers to the period immediately following intensive treatment (see Chapter 11). Aftercare acknowledges that severe alcohol problems are prone to reoccur and that to maintain change patients may need ongoing monitoring and assistance beyond the active phase of initial treatment. Aftercare is particularly suited to people with severe dependence whose likelihood of relapse is great. It consists of planned telephone or face-to-face contact following after treatment to discuss progress and any problems that may have arisen since the end of active treatment. Structured clinician-driven aftercare is more effective than unstructured patient-initiated aftercare.

Clinicians may use referral to self-help programs (such as Alcoholics Anonymous and SMART Recovery) as forms of continuing care but aftercare generally refers to contact with the treating clinician or service with the goal of maintaining treatment gains. Often primary care workers (such as general practitioners) can provide this function through ongoing follow-up of other health issues.

Given the nature of alcohol dependence, long-term follow-up is an important part of a comprehensive treatment plan.

Recommendation		Strength of recommendation	Level of evidence
3.25	Alcohol dependence is a chronic and relapsing disorder such that long-term care is generally appropriate through self-help programs, primary care or other interventions that are acceptable to the patient.	S	–

Figure 3.3: Assessment and treatment planning

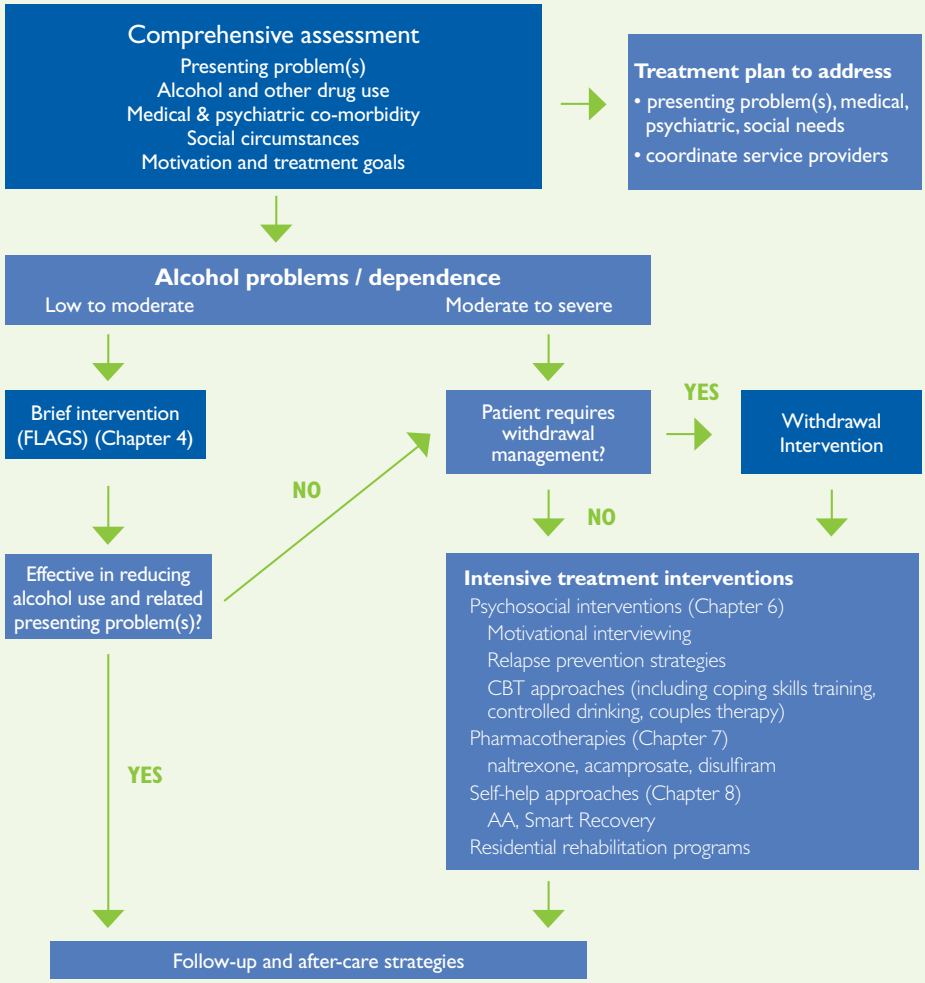


Figure 3.3 summarises the major points of comprehensive assessment and treatment planning for alcohol use disorders.

Chapter 4. Brief interventions

4. Brief interventions

This chapter provides a description of brief interventions and their role in addressing risky or harmful patterns of alcohol use. It also explains how to deliver brief interventions, who the appropriate candidates are for brief interventions, and suitable settings for brief interventions.

Brief interventions are clinical interventions that include screening and assessment, and provide information and advice designed to achieve a reduction in risky alcohol consumption and/or alcohol-related problems. They are recognised as an important part of the overall approach to responding to people with risky drinking patterns, who may or may not have experienced alcohol-related harms. Significant reductions of up to 30 per cent in alcohol consumption have been achieved in a variety of health care settings, including hospitals and general practice. Brief interventions in primary care are also cost-effective.

Brief interventions are delivered in a time-limited way, ranging from one to four sessions of between 5 and 30 minutes. They usually involve a combination of motivational interviewing and counselling techniques (see Chapter 6).

Opportunistic brief interventions are offered to people who have not sought treatment or assistance but have been identified through routine screening as drinking at risky levels. Such interventions aim to inform people that they are drinking at levels that increase their risk of developing abuse or dependence disorders, and to encourage them to decrease consumption to reduce that risk. Such interventions have the potential to prevent harm and should be more cost effective than other harm reduction strategies.

Who to target for brief interventions

People who can be considered prime targets for brief interventions are usually those who:

- are drinking beyond recommended limits, often identified through screening procedures or clinical history, such as AUDIT questionnaire – see Chapter 3
- present to services with alcohol-related problems, but do not have a diagnosis of alcohol dependence.

Scientific evidence strongly supports the view that brief interventions effectively reduce levels of alcohol intake in people who drink above recommended levels and are at risk of developing alcohol-related problems, but who do not seek treatment. A number of meta-analyses have examined the effectiveness of brief interventions in these patient populations. Results from all these meta-analyses have been consistent in suggesting that opportunistic brief interventions, compared to no intervention, effectively reduce levels of alcohol consumption.

Brief interventions are not usually effective in people who have developed dependence, or who are experiencing severe alcohol-related harms. For these people, more intensive treatment interventions are recommended.

If a patient returns to the same setting and is still drinking to excess, the clinician should recommend a more intensive treatment program in an effort to reduce alcohol use and related problems. This may involve referral to a specialist alcohol and drug treatment service.

Recommendation		Strength of recommendation	Level of evidence
4.1	Brief interventions are effective in reducing alcohol use in people with risky pattern of alcohol use and in non-dependent drinkers experiencing alcohol-related harms and should be routinely offered to these populations.	A	Ia
4.2	Brief interventions are not recommended for people with more severe alcohol-related problems or alcohol dependence.	A	Ib

How to deliver brief interventions

As a general rule, brief interventions should include at least the five components which can be summarised in the acronym FLAGS (see Table 4.1), the two most crucial of which are feedback and advice. Alternative acronyms, such as FRAMES (feedback, responsibility, advice, menu, empathy, self-efficacy) and 5As (ask, advise, assess, assist, arrange) with comparable structures for guiding an intervention, can be used.

Table 4.1: FLAGS brief intervention structure

Feedback	• Provide individualised feedback about the risks associated with continued drinking, based on current drinking patterns, problem indicators, and health status. • Discuss the potential health problems that can arise from risky alcohol use.
Listen	• Listen to the patient's response. • This should spark a discussion of the patient's consumption level and how it relates to general population consumption and any false beliefs held by the patient.
Advice	• Give clear advice about the importance of changing current drinking patterns and a recommended level of consumption. • A typical five to 10 minute brief intervention should involve advice on reducing consumption in a persuasive but non-judgemental way. • Advice can be supported by self-help materials, which provide information about the potential harms of risky alcohol consumption and can provide additional motivation to change.
Goals	• Discuss the safe drinking limits and assist the patient to set specific goals for changing patterns of consumption. • Instil optimism in the patient that his or her chosen goals can be achieved. • It is in this step, in particular, that motivation-enhancing techniques are used to encourage patients to develop, implement and commit to plans to stop drinking.
Strategies	• Ask the patient to suggest some strategies for achieving these goals. • This approach emphasises the individual's choice to reduce drinking patterns and allows them to choose the approach best suited to their own situation. • The individual might consider setting a specific limit on alcohol consumption, learning to recognise the antecedents of drinking, and developing skills to avoid drinking in high-risk situations, pacing one's drinking and learning to cope with everyday problems that lead to drinking.

Brief interventions are usually motivational. Although some patients who are identified as drinking at risky levels do not perceive change as necessary, providing them with advice and information about the potential consequences of continued use may help them recognise that their consumption of alcohol is excessive. Other patients may acknowledge that they are

drinking too much and be aware that risky alcohol use can be harmful. Brief intervention can be particularly successful for this group, as the clinician provides encouragement and support.

However, for people who drink above recommended levels but are not experiencing alcohol-related harm, brief advice may be sufficient.

Recommendation		Strength of recommendation	Level of evidence
4.3	Brief interventions may consist of the five components of the FLAGS acronym: feedback, listening, advice, goals, and strategies (or equivalent).	A	Ia
4.4	Brief advice may be sufficient for those drinking above NHMRC recommendations but not experiencing harm.	S	–

Who can deliver brief interventions?

Any health professional or treatment provider with adequate training can deliver brief interventions. Generalist health professionals can be successfully trained to deliver brief interventions within a one-hour training program.

Where should brief interventions be delivered?

Brief interventions can be delivered in a variety of settings, including general practice and other primary care, emergency departments and trauma centres, general hospital wards and outpatient clinics, community counselling and welfare services, and the workplace.

General practice and other primary care settings

Routine screening in general practice can identify excessive drinkers suitable for brief interventions, as about 85 per cent of the population visits their general practitioner at least once each year.

Current data suggest that about 25 per cent of patients who are drinking at risky levels are likely to remain undetected when presenting to general practitioners in Australia. General practitioners have the resources and skills to offer a brief intervention and therefore have the ability and potential to substantially reduce risky levels of drinking.

The level of evidence for effectiveness of brief interventions in this setting is strong, especially for male patients.

Routine screening for excessive alcohol consumption, and brief interventions are recommended for general practice settings.

Recommendation		Strength of recommendation	Level of evidence
4.5	Brief interventions should be implemented in general practice and other primary care settings.	A	Ia

Emergency departments and trauma centres

People attending accident and emergency departments exhibit a high rate – 1.5 to 3 times that seen in primary care – of alcohol-related injuries and conditions. Data suggest that recent trauma or a life-threatening experience increases patient receptivity to intervention, thus increasing the likelihood that brief intervention will reduce alcohol consumption in this patient population.

Interventions in emergency departments have proved effective in reducing subsequent alcohol-related injuries, risky levels of alcohol intake, and binge drinking episodes within 6 to 12 months of the intervention. Reduction of heavy alcohol consumption in the subsequent 12 months is less likely, but has been reported in some studies.

A number of studies have shown that the effect of brief intervention in this setting is not significantly different from control groups. Control patients, who do not receive a structured intervention, but are asked about their alcohol intake and/or motivation to reduce drinking, often report reductions in alcohol consumption. It would, however, be too early to disregard the usefulness of brief interventions in the emergency settings based on these findings.

Ways to increase effectiveness of brief interventions in the emergency settings have been successfully tested. For example:

- Highlighting the alcohol/injury connection as part of brief intervention appears to increase the effect of the intervention.
- Computer-aided brief interventions have demonstrated reductions in alcohol use over the subsequent 6 to 12 months, and appear a promising dissemination strategy.

Routine screening and brief interventions to reduce alcohol consumption should be implemented in emergency departments and trauma centres.

Recommendation		Strength of recommendation	Level of evidence
4.6	Brief interventions should be implemented in emergency departments and trauma centres.	A	Ia

General hospital wards and outpatient clinics

Clear associations have been found between hospital admissions for traumatic incidents or medical problems and alcohol consumption. Hospital wards accommodate a high population of problem drinkers; they are, therefore, fertile grounds in which to offer brief interventions to risky drinkers who already demonstrate or may be at risk of developing alcohol problems.

Hospital wards can also be a particularly effective setting for advice, as patients are often highly motivated and willing to change their drinking behaviours after being hospitalised. However, the evidence for the effectiveness of brief intervention in this setting is limited. Studies suggest that minimal intervention (or simply participation in a research trial) in these settings can be as successful as a more intensive intervention, or conversely, that all interventions are ineffective and the impact of hospital admittance is sufficient to effect changes in alcohol-related behaviour, including rate of consumption.

However, there seems to be more influences at work than is yet fully explored. Possibilities for negative influences include:

- low sample size
- low AUDIT score cut-off for eligibility
- length of intervention
- lack of booster session
- possible contamination of results
- patient characteristics
- social desirability bias.

It would not, however, be appropriate to dismiss the usefulness of brief intervention in hospital settings. The existence of conflicting results – some positive and some negative – indicates that the most effective combination of intervention elements has not yet been found. Routine screening for excessive alcohol consumption should be implemented in general hospital wards, outpatient clinics, and other specialist settings (see Chapter 3). Brief intervention may be effective in these environments.

Recommendation		Strength of recommendation	Level of evidence
4.7	Brief interventions should be implemented in general hospital settings.	D	IV

Community counselling and welfare services

Patients may present to community counselling services with a variety of complaints that may be related to their alcohol or other drug use, including financial, relationship, employment or parenting problems. Brief interventions may be appropriate for those drinking at risky levels.

Recommendation		Strength of recommendation	Level of evidence
4.8	Brief interventions in community health and welfare settings may be used, but should not be a sole intervention strategy.	D	IV

Workplace settings

Rates of alcohol consumption are particularly high in some workplaces. In particular, hospitality, agriculture and construction industries have been identified as having a large proportion of people drinking at levels leading to both short- and long-term risk of harm, which can lead to increased accident rates and absenteeism.

Web-based feedback, with or without motivational counselling, proved an effective way to reduce risky drinking among young employed people, although another study found challenges in getting people to access and participate in the workplace-assisted website program.

A substance misuse prevention training program designed to change work culture, combined with random workplace testing, was successful in reducing injuries in one study. For more details see Review of the Evidence.

Recommendation		Strength of recommendation	Level of evidence
4.9	Brief interventions in high-risk workplaces may be used, but should not be a sole intervention strategy.	D	IV

Limitations of brief intervention

The outcomes of a brief intervention can be perceived as modest and may discourage clinicians from routinely using this technique. The clinician often does not see beneficial results of the intervention (for example, the number needed to treat can be substantial in order to create a measurable effect). In order to get one drinker to return within recommended limits, brief intervention needs to be delivered to 10 patients (this is the number needed to treat). To identify those people one must screen 100 (the number needed to screen).

It is important to recognise, however, that if someone reduces their alcohol intake from 12 drinks a day to 9, it is still a beneficial change. As well, screening alone can raise the patients' awareness and have a similar effect to a brief intervention. Furthermore, repeated brief interventions may provide greater effect, and follow-up (by consultation, letter, telephone, SMS or email) can serve as reinforcement.

No evidence shows that brief interventions are effective among people with severe alcohol problems and dependence disorders. Typically, interventions offered to treatment-seeking populations or those with severe alcohol problems require more comprehensive treatment approaches that will usually include intensive interventions (such as detoxification) and/or extended follow-up sessions.

Services considering implementing brief interventions should address the potential barriers to effective uptake and implementation in health care settings; such barriers include:

- lack of confidence, knowledge, or skills
- difficulty in identifying risky drinkers
- uncertainty of the justification for initiating discussion about alcohol
- lack of simple guidelines
- lack of financial incentives.

Chapter 5. Alcohol withdrawal management

5. Alcohol withdrawal management

This chapter provides guidance on the role of withdrawal services in treating alcohol problems, managing patients in alcohol withdrawal, and assessing and managing heavy drinkers with severe withdrawal complications, including seizures, delirium and hallucinations.

Alcohol withdrawal syndrome: Clinical presentation

Signs and symptoms of alcohol withdrawal

The signs and symptoms of alcohol withdrawal may be grouped into three major classes – autonomic hyperactivity, gastrointestinal, and cognitive and perceptual changes – and may feature uncomplicated or complicated withdrawal (see Table 5.1).

Table 5.1: Signs and symptoms of alcohol withdrawal

	Autonomic hyperactivity	Gastrointestinal features	Cognitive and perceptual changes
Uncomplicated withdrawal features	Sweating Tachycardia Hypertension Tremor Fever (generally lower than 38°C)	Anorexia Nausea Vomiting Dyspepsia Diarrhoea	Poor concentration Anxiety Psychomotor agitation Disturbed sleep, vivid dreams
Severe withdrawal complications	Dehydration and electrolyte disturbances	–	Seizures Hallucinations or perceptual disturbances (visual, tactile, auditory) Delirium

Onset and duration of withdrawal symptoms

Onset of alcohol withdrawal is usually between six and 24 hours after the last drink. In some severely dependent drinkers, withdrawal can occur when the blood alcohol level is decreasing, even if the patient is still intoxicated or has consumed alcohol recently; a significant proportion of dependent drinkers experience the onset of withdrawal symptoms before the blood alcohol level reaches zero. Patient care should not be decided on based upon blood alcohol level alone. Alcohol withdrawal rating scales can be used to assess the patient's level of alcohol withdrawal symptoms.

While for most people the alcohol withdrawal syndrome is short-lived and inconsequential, in others it increases in severity through the first 48 to 72 hours of abstinence. The patient becomes highly vulnerable to psychological and physiological stress during this time. Psychological symptoms of alcohol withdrawal, including dysphoria, sleep disturbance and anxiety, often persist for several weeks after drinking cessation.

Other substance use, medical and psychiatric conditions can affect the onset, severity and duration of alcohol withdrawal. Use of benzodiazepines or other sedatives often delays the onset of withdrawal and diminishes its severity. It also provides guidance on prevention and treatment of Wernicke's encephalopathy in these patients.

Severe withdrawal complications

Severe withdrawal complications include seizures, delirium and hallucinations.

Alcohol withdrawal seizures

Alcohol withdrawal seizures are usually generalised (tonic-clonic) seizures. They occur as blood alcohol levels fall, typically within 6 to 48 hours after the last drink is consumed, and can occur even if the blood alcohol level is high (for example, greater than 0.10 g%) in severely dependent drinkers.

The prevalence of alcohol-withdrawal seizures is estimated at between 2 and 9 per cent of alcohol dependent people. People who have experienced an alcohol withdrawal seizure are more likely to experience further seizures in subsequent alcohol withdrawal episodes. The risk of seizure recurrence within 6 to 12 hours is estimated at between 13 and 24 per cent in untreated patients.

Alcohol withdrawal delirium

The features of alcohol withdrawal delirium (also known as delirium tremens or DTs) are disturbance of consciousness and changes in cognition or perceptual disturbance. The terms 'alcohol withdrawal delirium' and 'delirium tremens' can be used interchangeably. Alcohol withdrawal delirium is an acute organic brain syndrome characterised by confusion and disorientation, agitation, hyperactivity and tremor.

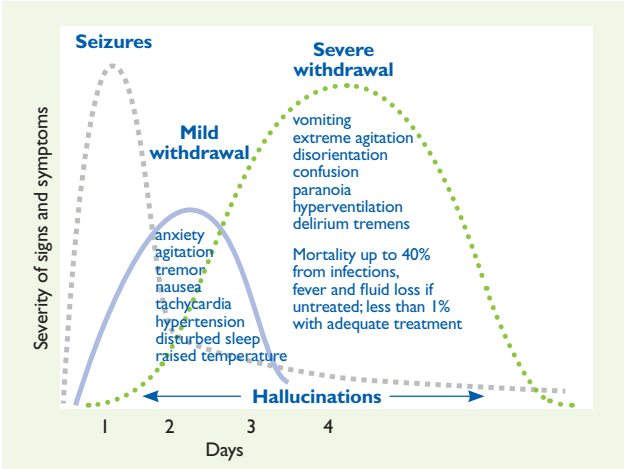
Alcohol withdrawal delirium typically commences 2 to 3 days after ceasing drinking, and usually lasts for a further 2 to 3 days, although it can persist for weeks.

The incidence of alcohol withdrawal delirium in unmedicated alcohol dependent patients averages 5 per cent, although the incidence is much lower with effective treatment of alcohol withdrawal. Early studies of delirium tremens reported mortality rates as high as 15 per cent; however, mortality rates have fallen with advances in management to less than 1 per cent.

Hallucinations

Some patients experience hallucinations or other perceptual disturbances (for example, misperceptions) at any stage of the alcohol withdrawal phase. Hallucinations may be visual, tactile or auditory, and may be accompanied by paranoid ideation or delusions, and abnormal affect (agitation, anxiety, dysphoria). Figure 5.1 outlines the alcohol withdrawal syndrome progression.

Figure 5.1: Alcohol withdrawal syndrome progression



Source: NSW Health Department 1999, New South Wales Detoxification Clinical Practice Guidelines, NSW Health Department, ISBN 0 7347 3034

Assessment and treatment matching

Assessment of patients undergoing alcohol withdrawal requires a comprehensive history, examination, investigations and collateral history (described in Chapter 3).

Predictors of withdrawal severity

Predicting the severity of alcohol withdrawal for an individual patient requires assessment of:

- **Current drinking patterns**. No studies of the minimal level of alcohol consumption needed to produce physical dependence have been undertaken. The severity of withdrawal is only moderately predicted by amounts of alcohol consumed. In general, chronic heavy alcohol consumption (for example, 150 grams of alcohol per day) is associated with greater withdrawal severity than lower levels of consumption, although people with lower levels of alcohol use (for example, 80–100 grams per day) can experience severe withdrawal and withdrawal complications.

  A predictor of increased alcohol withdrawal severity is the onset of alcohol withdrawal symptoms (such as tremor, nausea, anxiety) upon waking that are normally relieved by early morning drinking.

  Individuals with heavy but irregular (for example, 2 to 3 days per week) alcohol consumption – sometimes referred to as 'binge' drinking – generally do not experience severe withdrawal, although other conditions (such as epilepsy, anxiety) may be 'unmasked' in the period following drinking. However, patients may under-report the amount or frequency of their alcohol use. It is wise to manage such people as if they are at risk for alcohol withdrawal.

- **Past withdrawal experience**. Patients with a history of severe alcohol withdrawal syndrome (such as severe anxiety, seizures, delirium, hallucinations) are more likely to experience such complications in future withdrawal episodes.

- **Concomitant substance use**. Patients with heavy or regular use of other substances (such as benzodiazepines, stimulants, opiates) may experience more severe withdrawal features. In particular, withdrawal from both alcohol and benzodiazepines may increase the risk of withdrawal complications.

- **Concomitant medical or psychiatric conditions**. Patients with concomitant medical conditions (such as sepsis, epilepsy, severe hepatic disease, head injury, pain, nutritional depletion) or psychiatric conditions (such as anxiety, psychosis or depression) are more likely to experience severe withdrawal complications.

Given the variability of alcohol withdrawal severity, it is important to monitor all patients carefully during alcohol withdrawal, particularly those suspected of heavy alcohol use (based on self report, collateral history or clinical presentation) and those with a history of alcohol withdrawal.

Recommendation		Strength of recommendation	Level of evidence
5.1	The risk of severe alcohol withdrawal should be assessed based on current drinking patterns, past withdrawal experience, concomitant substance use, and concomitant medical or psychiatric conditions.	B	II

Objectives of alcohol withdrawal services

Alcohol withdrawal may be intended (an individual voluntarily presenting for treatment), or unplanned following unintended discontinuation of alcohol use (for example, hospitalisation or incarceration). Unplanned withdrawal tends to be most severe.

Withdrawal management should not be seen as a stand-alone treatment that is likely to result in prolonged periods of abstinence, but instead as a transitional step on the long road to abstinence. Indeed, research suggests that withdrawal treatment alone has little, if any, impact on long-term alcohol use. Unfortunately, many patients, families, friends, and health and welfare professionals hold unrealistic expectations about the outcomes of withdrawal services. Many are disappointed when people in these programs either cannot entirely give up drinking, or recommence regular drinking soon after a withdrawal attempt.

A realistic set of objectives for withdrawal services is as follows:

- **To interrupt a pattern of heavy and regular alcohol use**. Some people require the structure and support of withdrawal services in order to stop drinking. While many people have a longer-term goal of achieving abstinence, some may be seeking a temporary break from their alcohol use.
- **To alleviate withdrawal symptoms**. Palliation of the discomfort of alcohol withdrawal symptoms is an important reason for patients presenting for treatment, and one of the primary aims of withdrawal services.
- **To prevent severe withdrawal complications**. Management of alcohol withdrawal aims to prevent or manage potentially life-threatening complications such as seizures, delirium and Wernicke's encephalopathy. Furthermore, alcohol withdrawal can complicate concomitant medical or psychiatric conditions.
- **To facilitate links to ongoing treatment for alcohol dependence**. Withdrawal services are acute services with short-term outcomes. However, alcohol dependence is a chronic relapsing condition, and positive long-term outcomes are more often associated with participation in ongoing treatment such as counselling, self-help, residential rehabilitation and pharmacological approaches (see Chapters 6, 7 and 11). Managed withdrawal provides an opportunity to plan and engage in post-withdrawal treatment services.
- **To get help with any other problems**. While some people will be unwilling or unable to continue in ongoing drug treatment programs, they may benefit from establishing links with primary or specialist health services or welfare services (for example, accommodation, employment services).

Recommendation		Strength of recommendation	Level of evidence
5.2	Successful completion of alcohol withdrawal does not prevent recurrent alcohol consumption and additional interventions are needed to achieve long-term reduction in alcohol consumption.	A	Ia
5.3	Realistic goals of clinicians, patients and their carers for withdrawal services include: interrupting a pattern of heavy and regular alcohol use, alleviating withdrawal symptoms, preventing severe withdrawal complications, facilitating links to ongoing treatment for alcohol dependence, providing help with any other problems (such as accommodation, employment services).	D	IV

Settings for alcohol withdrawal

Alcohol withdrawal management can occur in a variety of settings, ranging from hospital inpatient, community residential (specialised detoxification units) to ambulatory services (outpatient or home-based detoxification services). Their characteristics are described in Table 5.2.

Table 5.2: Characteristics of ambulatory, residential and inpatient hospital withdrawal settings

Ambulatory withdrawal	Occur in the person's 'home' environment or supported accommodation (for example, hostel). Also known as outpatient or home-based detoxification services. Requires: • no medical contra-indications: a history of severe withdrawal complications (seizures, delirium, hallucinations) or significant medical or psychiatric comorbidity • a safe, alcohol-free environment • reliable support 'lay' people that can regularly monitor (at least daily during the first 3 or 4 days) and support the patient • regular monitoring by a suitably skilled health professional (such as alcohol and drug worker, nursing or medical professional). Daily review (face-to-face, telephone) for first 3 or 4 days • medication should be closely supervised (for example, daily supplies). Benzodiazepines to be withheld if the patient resumes alcohol use. • patient should have access to 24-hour telephone 'crisis' support. Ambulatory withdrawal has the advantage of no 'waiting lists'; nevertheless, it requires planning and mobilisation of the necessary supports and services. Lower completion rates are generally reported than for residential withdrawal management, but patients who stop drinking at home may be better equipped for continuing abstinence.
Community residential	Residential units exist in most urban and some regional centres. They typically: • provide a range of specialist medical, nursing and support services for managing withdrawal, and can facilitate post-withdrawal treatment options • allow for 7 to 10 day admissions • are for people: (a) with moderate to severe alcohol withdrawal or a history of withdrawal complications (seizures, delirium, hallucinations); (b) withdrawing from multiple drugs; (c) unsuitable 'home' environment for attempting ambulatory withdrawal; or (d) for those that have repeatedly failed ambulatory withdrawal • are unable to treat patients with significant medical or psychiatric comorbidity who require hospitalisation; the threshold for admission is generally equivalent to patients with medical problems eligible for outpatient management • often have waiting lists for admission • have higher completion rates than for ambulatory withdrawal.
Inpatient hospital	General or psychiatric hospital admissions are required for people with significant medical (such as delirium) or psychiatric (such as psychosis, high-risk suicidal) conditions, or when the diagnosis is unclear (for example, seizures that require investigation). Further, many patients hospitalised for medical or surgical conditions will experience unplanned and often severe withdrawal. Hospital Addiction Medicine Consultation liaison services should be accessible in hospitals to help assess, manage and plan discharge. In some circumstances, patients may be able to 'step-down' to less intensive settings to complete withdrawal once medically stable.

Selecting withdrawal settings

The choice of withdrawal setting requires a comprehensive clinical assessment and discussion with the patient (and where possible family or carers) about the advantages and disadvantages of each approach. Factors to be considered in determining the most appropriate withdrawal setting for an individual include:

- likely severity of alcohol withdrawal and occurrence of severe withdrawal complications (seizures, delirium, hallucinations)
- use of other substances: people who report heavy use of other drugs (such as benzodiazepines, psycho-stimulants, opiates), may be at increased risk of withdrawal complications and generally need close monitoring and supervision (such as community residential unit)
- concomitant medical or psychiatric conditions: patients with significant comorbidity may need hospital admission until medically cleared; patients may be able to 'step-down' to less intensive withdrawal settings to complete withdrawal once medically stable
- social circumstances, the availability of a safe environment and 'home' supports
- outcome of prior withdrawal attempts: repeated failure at ambulatory withdrawal may indicate the need for referral to a residential detoxification unit
- patient preference and availability of resources.

Table 5.3 summarises the admission criteria for different withdrawal settings.

Table 5.3: Admission criteria for different withdrawal settings

	Ambulatory	Community residential	Inpatient hospital
Predicted alcohol withdrawal severity	Mild–moderate	Moderate–severe	Moderate–severe
Likelihood of severe withdrawal complications	No	Withdrawal complications (seizures, hallucinations)	Withdrawal complications (delirium, unclear cause seizures)
Medical or psychiatric comorbidity	Minor comorbidity	Minor comorbidity	Significant comorbidity
Other substance use	No heavy drug use	Heavy or unstable use of other drugs	–
Social environment	Alcohol-free 'home' Daily monitoring by reliable support people Good access to health care service	Unsupportive home environment	–
Previous attempts	–	Repeated failure at ambulatory withdrawal	–

Some patients wish to attempt ambulatory withdrawal despite multiple failed previous attempts. Further attempts at outpatient withdrawal may be appropriate, however clinicians should identify how this attempt will be different to previous attempts (for example, increased home supports and monitoring), and negotiate with the patient mutually agreed criteria to be met in order to continue with the withdrawal attempt (for example, no alcohol use in first 2 days).

Patients on waiting lists for residential withdrawal units may need support to maintain motivation and avoid high-risk activities until admission.

It is not recommended that benzodiazepines be prescribed in an attempt to alleviate withdrawal symptoms before admission as this may increase the risk of adverse events from the combination of alcohol and benzodiazepines.

Recommendation		Strength of recommendation	Level of evidence
5.4	Ambulatory withdrawal is appropriate for those with mild to moderate predicted withdrawal severity, a safe 'home' environment and social supports, no history of severe withdrawal complications, and no severe concomitant medical, psychiatric or other substance use disorders.	A	IV
5.5	Community residential withdrawal is appropriate for those with predicted moderate to severe withdrawal, a history of severe withdrawal complications, withdrawing from multiple substances, no safe environment or social supports, repeated failed ambulatory withdrawal attempts, and with no severe medical or psychiatric comorbidity.	D	IV
5.6	Inpatient hospital treatment is appropriate for those with severe withdrawal complications (such as delirium or seizures of unknown cause), and/or severe medical or psychiatric comorbidity.	S	–
5.7	Hospital addiction medicine consultation liaison services should be accessible in hospitals to aid assessment, management and discharge planning.	S	–

Monitoring during alcohol withdrawal

All patients in alcohol withdrawal, or who are considered at risk of alcohol withdrawal, should be monitored regularly for:

- **Physical signs**. This includes level of hydration, pulse rate, blood pressure, temperature and level of consciousness (especially if medicated).
- **Severity of alcohol withdrawal**. It is beneficial to use an alcohol withdrawal rating scale to assess the severity of withdrawal, to guide treatment, and to help clinicians communicate more objectively about the severity and management of alcohol withdrawal. Alcohol withdrawal scales are described below; see Appendix 3 for the instruments.
- **General progress during withdrawal episode**. This includes ongoing level of motivation, alcohol and other drug use during ambulatory withdrawal (breathalyser readings and/or urine drug screens may be clinically indicated), response to any medication(s), and patient concerns or difficulties.

Clinical Institute Withdrawal Assessment for Alcohol

The Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar) revised is a 10-item, validated scale. CIWA-Ar scores below 10 are considered mild withdrawal; between 10 and 20 are moderate withdrawal, and above 20 are considered severe withdrawal. Patients with CIWA-Ar scores of more than 10 are considered to be at high risk of developing withdrawal complications if not medicated.

Frequency of CIWA-Ar monitoring depends upon treatment setting and clinical condition of the patient. Patients with CIWA-Ar scores of more than 10 need frequent monitoring (at least 4 hourly), and patients with severe withdrawal (CIWA-Ar score of more than 20) should be monitored every 2 hours.

Alcohol Withdrawal Symptoms – Rating Scale

An alternative scale is the Alcohol Withdrawal Symptoms – Rating Scale (AWS) (see Appendix 3). Validation of the AWS has not been published; however it has been widely used in Australian conditions and is considered acceptable for use. An AWS score of up to 4 indicates mild withdrawal, 5 to 7 moderate withdrawal, 8 to 14 severe withdrawal, and 15 or more very severe withdrawal. Close monitoring is advised at least every 4 hours for those with mild withdrawal, and every 2 hours for severe withdrawal.

Short Alcohol Withdrawal Scale

The Short Alcohol Withdrawal Scale (SAWS) is a self-completion scale used once a day, and is suited to ambulatory withdrawal settings (see Appendix 3. Other validated scales may be used according to local preference.

Limitations of withdrawal scales

Alcohol withdrawal rating scales are not to be used as diagnostic tools as many other conditions may produce similar signs and symptoms, for example:

- medical conditions (such as sepsis, hepatic encephalopathy, severe pain, other causes of tremor)
- psychiatric conditions (such as anxiety disorder)
- other drug withdrawal syndromes (such as benzodiazepine, stimulant or opiate withdrawal).

Using alcohol withdrawal rating scales in these cases can lead to inappropriate diagnosis of alcohol withdrawal and its severity.

They should not be used to direct medication (for example, symptom-triggered regimens) in patients with these conditions, including most hospitalised patients. Alcohol withdrawal scales have a limited role under these circumstances, and health professionals should consult a specialist drug and alcohol clinician about monitoring and management needs.

Scoring of alcohol withdrawal scales is typically highly variable in clinical practice and often not reproducible; clinicians should review scores before making management decisions.

Recommendation		Strength of recommendation	Level of evidence
5.8	Patients withdrawing from alcohol should be regularly monitored for physical signs, severity of alcohol withdrawal and general progress during withdrawal.	S	–
5.9	Alcohol withdrawal scales (CIWA-Ar, AWS) can be used to assess withdrawal severity, to guide treatment (such as symptom-triggered medication regimens) and to aid objective communication between clinicians; but should not be used as diagnostic tools.	A	Ia
5.10	Alcohol withdrawal scales should not be used to guide treatment in patients concurrently withdrawing from other substances, or with significant medical or psychiatric comorbidity. Health professionals should consult a specialist drug and alcohol clinician about monitoring and management needs.	B	Ib
5.11	Scores on alcohol withdrawal scales are not always reproducible and should be checked before using them to make management decisions.	S	–

Supportive care

Supportive care needs to include provision of sufficient information to patients (and carers); an environment and support that is conducive to recovery; supportive counselling; adequate diet, nutrition (including supplements) and rehydration; encouragement to develop appropriate sleep and relaxation habits; and facilitation of links to other services.

Patient information

Patients (and carers) generally benefit from information about:

- the likely nature, severity and duration of symptoms during withdrawal
- strategies for coping with symptoms and cravings
- strategies to reduce high-risk situations
- the role of medication.

Patients often have limited concentration during withdrawal; consequently the clinician may have to repeat or re-phrase information before the patient can fully understand. Written information is valuable in these circumstances, and is also recommended for carers supporting patients through withdrawal. Examples of patient information are in Appendix 6.

Recommendation		Strength of recommendation	Level of evidence
5.12	Patients (and carers) should be provided with information about the likely nature and course of alcohol withdrawal, and strategies to cope with common symptoms and cravings	C	III

Environment and support

Patients attempting alcohol withdrawal should be in an environment that is quiet, non-stimulating, and non-threatening, and where alcohol and other drugs are not readily available.

A range of strategies should be used to reduce anxiety, and these are particularly important for those experiencing withdrawal delirium or hallucinations. Such strategies should include:

- employing a slow, steady, non-threatening approach
- explaining all interventions clearly
- speaking slowly and distinctly in a friendly manner
- maintaining eye contact when speaking
- avoiding confrontation and arguments
- testing the patient's reality-base and orientation repeatedly and, if necessary, re-acquainting the patient with his environment
- explaining to the patient that the unreal nature of illusions and hallucinations may cause anxiety and are likely to be part of the alcohol withdrawal syndrome
- recommending a night light to reduce the likelihood of perceptual errors and exacerbation of anxiety and psychotic phenomena during the night.

Recommendation	Strength of recommendation	Level of evidence
5.13 Treatment environment should be quiet, non-stimulating, and non-threatening, and where alcohol and other drugs are not available.	S	–

Supportive counselling

Counselling during the withdrawal episode should be aimed specifically at supporting the patient through withdrawal symptoms, maintaining motivation, and facilitating post-withdrawal links.

An important area is that of coping with cravings during withdrawal. One recommended approach particularly suitable for ambulatory withdrawal management is the Three-D method – Delay, Distract and Desist – see box.

Crisis intervention may be needed during a withdrawal episode to address adequate accommodation, food or other urgent welfare issues. Many patients will want to address a range of personal, emotional or relationship problems at the start of treatment; however, these should be deferred until after withdrawal as:

- attempting to work through such issues will almost certainly be anxiety provoking, which merely intensifies cravings and jeopardises withdrawal completion
- people in withdrawal tend to be irritable, agitated and run-down – not the optimal frame of mind in which to solve major long-standing problems.

Assure your patients that you understand that they have important issues they want to work through, explain why they are being deferred, and that there will be opportunities to address them as part of ongoing treatment after withdrawal.

Many patients undergoing ambulatory withdrawal may also benefit from 24-hour telephone counselling services for help when health professionals or regular supports are unavailable. Each state in Australia has telephone alcohol and drug services (see Appendix 6).

Recommendation	Strength of recommendation	Level of evidence
5.14 Supportive counselling should be provided to maintain motivation, provide strategies for coping with symptoms, and reduce high-risk situations.	D	III

COPING WITH CRAVINGS

'Cravings' are urges to drink alcohol. They are a normal part of any addiction and withdrawal. Cravings vary in intensity with time, and are only severe for short periods (for example, less than one hour). Cravings are often triggered by opportunities to drink, physical or psychological discomfort. Cravings generally get easier to deal with the longer a person goes without drinking.

It is important that patients are prepared for cravings. The goal is to see through the brief period of severe craving. The Three-D method has been successful for many people when they are experiencing severe cravings, specifically:

- **Delay** the decision as to whether you will drink for one hour. You may or may not drink, but that is something to be decided later (when the severity of the craving has reduced).
- **Distract** yourself with an activity during this hour that will take your mind off whether you will drink or not.
- **Desist**: After the hour, say to yourself: 'Why I don't want to drink' and 'What have I got to lose?'

By this stage the craving should have settled down – although probably not gone away. The patient should re-examine the reasons they want to stop drinking, why they are trying to withdraw, and importantly, what they will be returning to if they start drinking again.

Diet, nutrition and rehydration

Many chronic heavy drinkers suffer from nutritional deficits, and can become dehydrated during alcohol withdrawal. Patients should be assessed for dehydration, and their fluid intake and output monitored. Oral fluid intake is generally preferred, usually in excess of 2 litres per day (up to 5 litres if the patient is suffering diarrhoea, nausea or profuse sweating). Patients with severe dehydration and/or those unable to tolerate oral fluids will require hospitalisation, investigation and correction of electrolyte abnormalities intravenous fluid replacement and 24-hour fluid monitoring.

Patient's nutritional intake should be monitored. Many experience nausea and/or diarrhoea during withdrawal, and frequent, light meals are generally better tolerated in the first few days of withdrawal than infrequent, large meals (see 'Intravenous fluids and nutritional supplements' below).

Recommendation		Strength of recommendation	Level of evidence
5.15	Clinicians should ensure oral rehydration is adequate. Intravenous fluids may be necessary in severe dehydration and/or in those not tolerating oral fluids.	S	–

Thiamine and other supplements

Thiamine supplements are recommended for all people undergoing alcohol withdrawal (see 'Wernicke–Korsakoff's syndrome' below). In patients showing no clinical features of Wernicke's encephalopathy or memory impairment, thiamine is recommended as a prophylactic measure.

The dose, route and duration of thiamine administration depend on the patient's nutritional status. For example, healthy patients with good dietary intake may be administered oral thiamine 300 mg per day (100 mg three times daily for 3 to 5 days, and maintained on 100 mg oral thiamine for a further 4 to 9 days (for a total of 1 to 2 weeks of oral thiamine).

Intestinal absorption of oral thiamine supplements is slow and may be incomplete in patients with poor nutritional status, hence:

- Chronic drinkers with poor dietary intake and general poor nutritional state should be administered parenteral thiamine doses. The recommended dose of thiamine is 300 mg intramuscularly or intravenously per day for 3 to 5 days, and subsequent oral thiamine doses of 300 mg per day for several weeks.
- Alcohol is associated with coagulopathy that may render intramuscular injection unsafe.

Parenteral carbohydrates can cause rapid absorption of thiamine in peripheral tissues and precipitate Wernicke's encephalopathy.

- Thiamine (oral or intramuscular) should be given **before** any carbohydrate load (for example, intravenous glucose).

Deficiencies of other B-complex vitamins, vitamin C, zinc and magnesium are not uncommon and an oral multivitamin preparation can be given to nutritionally depleted patients for several days. Thiamine supplementation should be continued indefinitely in an alcohol-dependent patient who continues to drink alcohol.

Recommendation	Strength of recommendation	Level of evidence
5.16 Thiamine should be provided to all patients undergoing alcohol withdrawal to prevent Wernicke's encephalopathy.	D	IV
5.17 Thiamine should be given before any carbohydrate load (such as intravenous glucose) as carbohydrates can cause rapid use or depletion of thiamine and precipitate Wernicke's encephalopathy.	D	III
5.18 Healthy patients with good dietary intake should be administered oral thiamine 300 mg per day for 3 to 5 days, and maintained on 100 mg oral thiamine for a further 4 to 9 days (total of 1 to 2 weeks of thiamine).	D	IV
5.19 Chronic drinkers with poor dietary intake and general poor nutritional state should be administered parenteral (intramuscular or intravenous) thiamine doses of 300 mg per day for 3 to 5 days, with subsequent oral thiamine doses of 300 mg per day for several weeks. The intramuscular route should not be used for patients with coagulopathy.	D	Ib
5.20 Thiamine supplementation should be continued indefinitely in an alcohol-dependent patient who continues to drink alcohol.	S	–

Sleep and relaxation

Sleep disturbance is common in heavy drinkers. Many patients have poor sleep behaviours, and often have a history of relying on alcohol or medications to initiate sleep. While medication such as benzodiazepines can facilitate sleep during the first few days of withdrawal, long-term use of benzodiazepines or other sedatives for sleep following alcohol withdrawal (more than one week) should be discouraged. Most patients find that normal sleep routine can be established within weeks of stopping alcohol use, and appropriate sleep behaviours should be encouraged. Patient literature about sleep and relaxation techniques (see Appendix 6) should be provided.

Likewise, many patients experience difficulties with anxiety, irritability and even panic attacks during and after alcohol withdrawal. Benzodiazepines or other sedatives have a limited role, and behavioural approaches to relaxation and evidence-based approaches to anxiety management should be encouraged.

Recommendation	Strength of recommendation	Level of evidence
5.21 Sedatives (such as benzodiazepines) should not be continued beyond the first week of withdrawal. Behavioural approaches to management of anxiety and sleep problems should be encouraged.	D	IV

Facilitating links with other services for further treatment and support

A focus of counselling strategies during withdrawal is examining post-withdrawal treatment options, and facilitating engagement with these services. This may include:

- primary care
- counselling (for example, relapse prevention)
- residential rehabilitation
- self-help
- medications for relapse prevention.

Recommendation	Strength of recommendation	Level of evidence
5.22 Clinicians should facilitate links to post-withdrawal treatment services during withdrawal treatment.	D	III

Medications for managing alcohol withdrawal

Most people attempting alcohol withdrawal will not experience severe withdrawal symptoms or withdrawal complications (such as seizures or delirium) that require medication. Nevertheless, medication is often used to assist alcohol withdrawal as:

- it can be difficult to predict whether a particular individual will experience severe withdrawal
- there is significant morbidity and mortality associated with untreated withdrawal complications of delirium and seizures
- outcomes such as rates of withdrawal completion and symptom relief are enhanced with the use of medication
- withdrawal medication (particularly benzodiazepines) is simple to use, effective, inexpensive and has minimal adverse events.

Benzodiazepines

Benzodiazepines are anti-anxiety and sedative-hypnotic medications that enhance gamma-amino butyric acid (GABA) activity in the central nervous system. A wide variety of benzodiazepines have been used for alcohol withdrawal. In general, long-acting benzodiazepines with a rapid onset of action (particularly important in seizure prophylaxis) are most commonly recommended.

Diazepam is the benzodiazepine of choice. Diazepam is well absorbed orally, has a rapid onset of action (within one hour), and has prolonged duration of effects (up to several days), important in preventing symptom recurrence between doses. **Chlordiazepoxide**, a long-acting and rapid-onset benzodiazepine, is widely used internationally but is not registered in Australia.

In certain clinical circumstances, long-acting benzodiazepines such as diazepam may be problematic. Shorter acting benzodiazepines (such as midazolam, lorazepam, oxazepam) should be used where there is concern about prolonged sedation, such as in the elderly, recent head injury, liver failure, respiratory failure, other serious medical illness or in severely obese patients (due to accumulation of lipophilic diazepam and active metabolites). Short-acting benzodiazepines have a simpler hepatic metabolism (conjugation that is less affected by liver disease or aging) without active metabolites, and can be more easily discontinued in the event of clinical deterioration such as head injury.

- **Lorazepam** is the preferred benzodiazepine under these circumstances as it has rapid onset after oral administration (within 2 hours) and has short to medium duration of action (half life of 10 to 20 hours); 2 mg oral lorazepam is equipotent to 10 mg oral diazepam.
- **Oxazepam** has also been used in Australia under these circumstances (onset of action within 2 hours, half-life of 5 to 10 hours); 15 to 30 mg oxazepam is approximately equipotent to 5 mg diazepam.
- **Midazolam** by intravenous bolus or infusion is preferred where rapid, but easily reversible, sedation is required (for example, in patient with recent seizure and with suspected head injury).

Recommendation		Strength of recommendation	Level of evidence
5.23	Benzodiazepines are the recommended medication in managing alcohol withdrawal. In Australia, diazepam is recommended as first-line treatment because of its rapid onset of action, long half-life and evidence for effectiveness.	A	Ia
5.24	Shorter-acting benzodiazepines (lorazepam, oxazepam, midazolam) may be indicated where the clinician is concerned about accumulation and over sedation from diazepam, such as in the elderly, severe liver disease, recent head injury, respiratory failure, in obese patients, or where the diagnosis is unclear.	D	III
5.25	Benzodiazepines should not be continued beyond the first week for managing alcohol withdrawal due to the risk of rebound phenomenon and dependence.	D	III

The three most commonly used benzodiazepine regimens are symptom-triggered therapy, loading dose therapy and fixed-schedule therapy. Figure 5.2 shows a schematic for use of the different benzodiazepine regimens.

Symptom-triggered therapy

Symptom-triggered therapy administers medication only when the patient develops moderate alcohol withdrawal symptoms, and relies upon linking medication (for example, diazepam doses) with scores on a frequently administered withdrawal scale (such as CIWA-Ar or AWS; Table 5.4 shows an example of a symptom-triggered regimen). Symptom-

triggered regimens have the advantage of better tailoring medication to the needs of individuals, and have been shown – in specialist residential detoxification settings – to result in less benzodiazepine use than fixed-dose regimens. However, symptom-triggered regimens:

- are generally not suited to ambulatory withdrawal settings; they require a residential withdrawal setting
- should not be used in patients with a history of withdrawal seizures, as seizures may occur before the onset of other withdrawal features
- should not be used in patients with heavy use of other drugs or significant concomitant medical or psychiatric conditions that may invalidate use of withdrawal scales (see 'Limitations of withdrawal scales' above); this will include many people undergoing alcohol withdrawal in general or psychiatric hospital settings
- require good protocol adherence, including regular patient monitoring and staff trained in the use of scales and symptom-triggered regimens; where this cannot be guaranteed, fixed regimens are preferable.

Table 5.4: Example of symptom-triggered regimen

	CIWA-Ar	AWS	Frequency of monitoring	Oral diazepam dose using a symptom-triggered regimen*
Mild	< 10	< 4	6 hourly	No dose required
Moderate	10–20	4–7	4 hourly	5–10 mg
Severe	> 20	> 7	2 hourly	20 mg

Note: * Some patients have low tolerance of withdrawal symptoms and may need additional doses of diazepam (for example, 5 to 10 mg) or other symptomatic medication on an as-needed basis. CIWA-Ar – Clinical Institute Withdrawal Assessment for Alcohol Scale; AWS – Alcohol Withdrawal Symptoms – Rating Scale

The typical duration of diazepam treatment is 1 to 2 days. More prolonged treatment is needed for unusually severe withdrawal but the possibility of benzodiazepine dependence and/or mental comorbidity should be considered. Excessively prolonged therapy can also contribute to sedation, drug-induced delirium, and extended hospitalisation.

Recommendation		Strength of recommendation	Level of evidence
5.26	Diazepam should be administered in a symptom-triggered regimen in residential withdrawal settings for people with no concomitant medical, psychiatric or substance use disorders.	B	Ia

Loading dose therapy

Loading dose regimens (also called 'front-loading') quickly administer high doses of benzodiazepines in the early stages of alcohol withdrawal and are indicated in:

- managing patients with a history of severe withdrawal complications (seizures, delirium)
- managing patients presenting in severe alcohol withdrawal and/or severe withdrawal complications (delirium, hallucinations, following an alcohol withdrawal seizure).

A common diazepam-loading regimen under these circumstances is 20 mg orally every 2 hours until reaching 60–80 mg or the patient is sedated. Medical review should occur if the patient remains agitated after 80 mg. Other causes of agitation should be excluded, and further doses of diazepam may be needed. Specialist advice should be sought if necessary.

The dose of 80 mg diazepam will have significant sedative effects for several days, and this is generally sufficient to prevent severe withdrawal from occurring during the remainder of the withdrawal episode. While no further doses of diazepam may be needed, it is common for further doses of diazepam to be administered over the subsequent 2 to 3 days for symptomatic relief, as either a fixed reducing regimen (for example, 10 mg four times a day on day 2, 10 mg twice a day on day 3, 5 mg twice a day on day 4); or as required (for example, 5 to 10 mg 6 hourly as needed, based on clinical observation or alcohol withdrawal scale scores).

Recommendation		Strength of recommendation	Level of evidence
5.27	Diazepam should be administered in a loading regimen (20 mg 2 hourly until 60 to 80 mg or light sedation) in patients with a history of severe withdrawal complications (seizures, delirium); in patients presenting in severe alcohol withdrawal and/or severe withdrawal complications (delirium, hallucinations, following withdrawal seizure).	B	Ib

Fixed-schedule therapy

Benzodiazepines given at fixed dosing intervals are a common therapy for alcohol withdrawal management, and are well suited to ambulatory withdrawal, community residential and inpatient withdrawal settings. Fixed schedules are also appropriate for complex hospitalised patients, ideally with daily review by specialist drug and alcohol clinicians. Fixed schedule regimens typically involve reducing doses over a 3 to 6 day period, and require regular clinical review (minimum of daily) to ensure the patient is not over or under-medicated (Table 5.5 provides an example of a fixed-schedule regimen). Fixed schedule regimens may be supplemented with additional diazepam as needed for people with low tolerance of withdrawal discomfort (for example, 5 mg 6 hourly as needed, based on clinical observation or alcohol withdrawal scale scores).

Access to diazepam doses should be restricted (for example, daily dispensing) and/or doses supervised by carers for patients undertaking ambulatory withdrawal in order to prevent misuse of medication. Diazepam should not be used if the patient continues to drink alcohol.

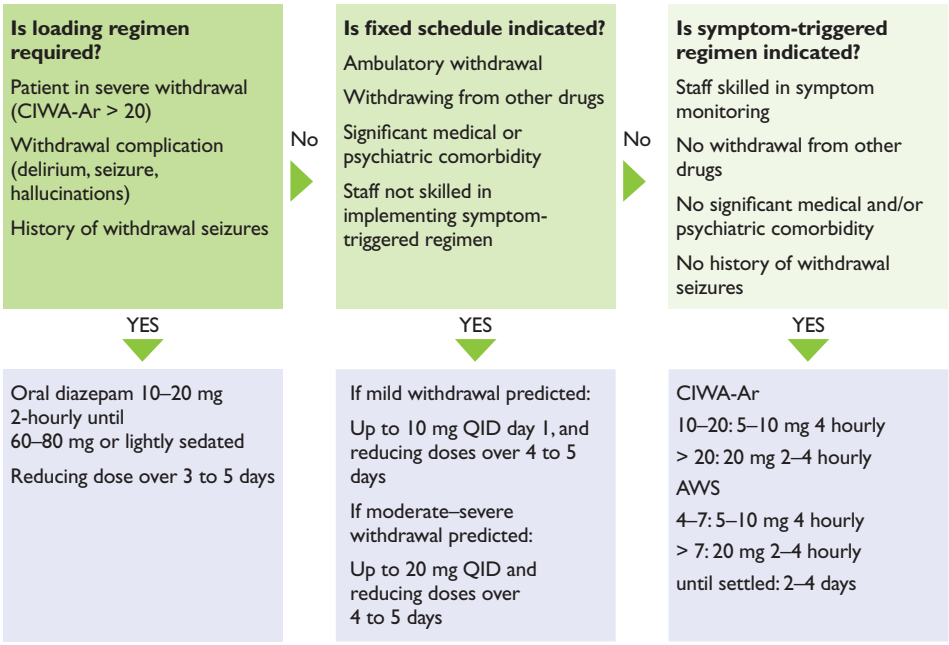
Table 5.5: Example of fixed-schedule regimen

Moderate to severe withdrawal predicted	
	Oral diazepam dose*
Day 1	20 mg four times a day
Day 2	10 mg four times a day
Day 3	10 mg twice a day
Day 4	5 mg twice a day
Day 5	5 mg 12 hourly as needed
Mild withdrawal predicted (also suitable for ambulatory alcohol withdrawal)	
	Oral diazepam dose*
Day 1	10 mg four times a day
Day 2	10 mg three times a day
Day 3	10 mg twice a day
Day 4	5 mg twice a day
Day 5	5 mg at night as needed

Note: * In practice, a hybrid approach can be recommended with fixed schedule plus an additional diazepam dose (for example, 5 mg 6 to 12 hourly as needed, based on clinical observation or alcohol withdrawal scale scores).

Recommendation		Strength of recommendation	Level of evidence
5.28	Diazepam should be administered in a fixed dose regimen in ambulatory settings, or for those with concomitant medical, psychiatric or substance use disorders.	C	Ib

Figure 5.2: Selecting benzodiazepine regimens for alcohol withdrawal



Notes: CIWA-Ar – Clinical Institute Withdrawal Assessment for Alcohol Scale; AWS – Alcohol Withdrawal Symptoms – Rating Scale; QID – four times a day

Alternative, symptomatic and other medications

Benzodiazepines are considered the first line treatment for alcohol withdrawal management. However, benzodiazepines are not recommended, or need to be used cautiously, in circumstances where they:

- have been misused or abused by patients (for example, higher doses, continued alcohol use); in which case, greater supervision of medication, such as residential withdrawal setting or limit access to benzodiazepines in ambulatory settings, is needed
- cause paradoxical reactions (such as violence, agitation) or severe alterations in mental status (such as confusion, delirium) in a minority of people; in which case, alternative medication approaches may need to be considered.

Anticonvulsants

Carbamazepine (600 to 1200 mg per day) effectively minimises alcohol withdrawal symptoms and prevents alcohol withdrawal seizures, but does not effectively prevent recurrent (further) seizures in a withdrawal episode.

Phenytoin and valproate do not effectively prevent the onset of alcohol withdrawal seizures and are not recommended. The role of other anticonvulsants (such as gabapentin,

topiramate) is yet to be demonstrated in controlled studies compared to gold standard treatment, and are not recommended at this stage.

There appears to be no advantage in adding anticonvulsants to benzodiazepines for preventing alcohol withdrawal seizures.

Patients already prescribed and regularly taking anticonvulsants should continue this medication during withdrawal. Many heavy drinkers have poor adherence to anticonvulsants while drinking, and may be at risk of seizures due to recent cessation of anticonvulsants. Measurement of anticonvulsant plasma levels should be considered before administering anticonvulsants.

See 'Treatment of severe withdrawal complications' for discussion of patient management following alcohol withdrawal seizure, including the role of anticonvulsants in preventing further seizures following withdrawal.

Recommendation	Strength of recommendation	Level of evidence
5.29 Carbamazepine is safe and effective as an alternative to benzodiazepines, although it is not effective in preventing further seizures in the same withdrawal episode.	A	Ia
5.30 Phenytoin and valproate are not effective in preventing alcohol withdrawal seizures and are not recommended.	A	Ia
5.31 Newer anticonvulsant agents (such as gabapentin) are not recommended at this stage due to limited clinical evidence.	D	IV
5.32 There is no benefit in adding anticonvulsants to benzodiazepines to manage alcohol withdrawal.	A	Ia
5.33 Anticonvulsant medications should be continued in patients who take them regularly (such as for epilepsy not related to withdrawal).	S	–

Antipsychotic medications

Antipsychotic medication (such as phenothiazines) when used alone may increase seizure risk and do not prevent the onset of delirium. They should only be used in conjunction with benzodiazepines to manage hallucinations or agitation associated with delirium that have not responded to adequate doses of benzodiazepines (for example, at least 60–80 mg diazepam loading).

No controlled trials demonstrating the superiority of different antipsychotic medications exist, and practitioners should use medications with which they are most familiar. Examples of regimens include:

- haloperidol 2.5 to 10 mg oral or intramuscular, repeated as required
- olanzapine 5 to 10 mg oral or buccal dose, repeated as required
- risperidone 1 to 5 mg, oral or intramuscular, twice daily, repeated as required.

Recommendation	Strength of recommendation	Level of evidence
5.34 Antipsychotic medications should only be used as an adjunct to adequate benzodiazepine therapy for hallucinations or agitated delirium. They should not be used as stand-alone medication for withdrawal.	A	Ia

Anti-hypertensive agents

While elevated blood pressure during alcohol withdrawal is common due to autonomic (adrenergic) hyperactivity, it generally resolves spontaneously following withdrawal, and is usually well managed by adequate doses of benzodiazepines (for example, at least 60 mg of diazepam in the preceding 24 hours). In cases where blood pressure remains markedly elevated (for example, greater than 200 mg systolic, greater than 130 diastolic) on repeated measurements, despite adequate benzodiazepine loading, a beta-blocker (such as atenolol or propranolol) is recommended.

Recommendation	Strength of recommendation	Level of evidence
5.35 Anti-hypertensive agents (beta-blockers) should be used for managing extreme hypertension that has not responded to adequate doses of diazepam for alcohol withdrawal.	D	IV

Symptomatic medication

A range of medications is commonly used to manage various symptoms of alcohol withdrawal, despite the absence of an empirical evidence base in alcohol withdrawal. Examples include:

- paracetamol up to 1 gm twice a day as needed for headache
- anti-emetics for nausea (for example, metoclopramide 10 mg 6 hourly as needed, prochlorperazine 5 mg oral or intramuscular 6 hourly)
- loperamide for diarrhoea.

Recommendation	Strength of recommendation	Level of evidence
5.36 A range of symptomatic medications may be used for addressing specific symptoms (such as paracetamol for headache, anti-emetics, anti-diarrhoeal agents).	D	IV

Electrolyte disturbances

Hypokalaemia and hypomagnesaemia should be corrected using oral supplements. Hyponatraemia is usually self-limiting and should not be aggressively corrected because of the risk of central pontine myelinolysis.

Recommendation	Strength of recommendation	Level of evidence
5.37 Electrolyte replacement may be a necessary adjunctive treatment for patients with electrolyte abnormalities (such as hypomagnesaemia, hypokalaemia). Hyponatraemia should not be aggressively corrected due to the risk of central pontine myelinolysis.	S	–

Other medications

Chlormethiazole is a short-acting sedative and anticonvulsant medication that was widely used for treating alcohol withdrawal before the advent of benzodiazepines. It is no longer recommended for managing alcohol withdrawal due to its risk of respiratory depression and death in overdose or in combination with alcohol or other sedatives.

Alcohol (ethanol), gamma-hydroxybutyric acid (GHB), barbiturates, beta-blockers., clonidine, or magnesium infusions have no role in managing alcohol withdrawal.

Baclofen, a GABA-B receptor agonist, used in clinical practice as a skeletal muscle relaxant, has been shown to suppress symptoms of alcohol withdrawal in preliminary clinical studies. It cannot be recommended for use in routine treatment of alcohol withdrawal at this stage.

Recommendation		Strength of recommendation	Level of evidence
5.38	Chlormethiazole, barbiturates, alcohol, beta-blockers, clonidine and gamma-hydroxybutyric acid (GHB) are not recommended in the routine management of alcohol withdrawal.	A	Ia

Treating severe withdrawal complications

Severe withdrawal complications include seizures, hallucinations and delirium.

Alcohol withdrawal seizures

Seizures may occur as part of the alcohol withdrawal syndrome. Alcohol acts on the brain through various mechanisms that influence seizure threshold, including calcium and chloride ion flow through glutamate ***N***-methyl D-aspartate (NMDA) and gamma-aminobutyric acid type A (GABA-A) receptors. Chronic alcohol use results in adaptive changes to the effects of alcohol, and the seizure threshold is lowered as a rebound phenomenon when alcohol intake is stopped.

Clinical presentation and prevalence

Alcohol withdrawal seizures typically occur 6 to 48 hours after the last drink is consumed (50% between 13 and 24 hours; 90% within 48 hours), and are usually generalised (tonic-clonic) seizures. New-onset alcohol withdrawal seizures are linked to heavy alcohol consumption.

Withdrawal seizures occur as blood alcohol levels fall, and in some severely dependent drinkers, seizures can occur even if the patient is still intoxicated or has consumed alcohol recently and the blood alcohol level is high (for example, greater than 0.10).

The risk of seizure recurrence within 6 to 12 hours after a seizure is estimated at between 13 and 24 per cent. While the incidence of status epilepticus is low, alcohol withdrawal is major cause of this life threatening condition.

The prevalence of alcohol withdrawal seizures is estimated at between 2 and 9 per cent of alcohol dependent people. People who have experienced an alcohol withdrawal seizure are more likely to experience further seizures in subsequent alcohol withdrawal episodes.

The prevalence of seizures (all causes) in alcohol dependent people is up to 15 per cent, estimated to be at least three times higher than the general population. It is estimated that alcohol-related seizures account for one-third of all seizure-related hospital admissions.

Other causes of seizures in heavy drinkers

Heavy alcohol use can also contribute to seizures through other conditions including:

- concurrent metabolic, infectious, traumatic, neoplastic or cerebrovascular conditions
- concomitant use of other substances (particularly benzodiazepines).

Furthermore, some literature suggests that long-term neurotoxic effects of high-level alcohol consumption may lead to epilepsy.

Seizures under these circumstances may be atypical of alcohol withdrawal seizures in onset or type (for example, partial-onset seizures). However, seizures of other causes can present clinically as alcohol withdrawal seizures.

Pharmacological approaches to preventing seizures

Systematic reviews indicate that benzodiazepines effectively prevent alcohol withdrawal seizures, and are effective in preventing recurrent (further) seizures in a withdrawal episode.

Benzodiazepines with rapid onset (such as diazepam, lorazepam) are recommended. The long duration of diazepam is generally preferred in most cases; however, a short-acting benzodiazepine (such as lorazepam, midazolam) may be preferred where the diagnosis is unclear (for example, possible head injury), or due to severe hepatic failure.

Carbamazepine effectively prevents alcohol withdrawal seizures, but is not effective in preventing recurrent (further) seizures in a withdrawal episode.

There appears to be no advantage in adding anticonvulsants to benzodiazepines for preventing alcohol withdrawal seizures.

Phenytoin and valproate do not effectively prevent the onset of alcohol withdrawal seizures and are not recommended. The role of other anticonvulsants (such as gabapentin, topiramate) is yet to be demonstrated, and while their GABAergic actions suggest they may be useful, they are not recommended at this stage.

Prevention of seizures in patients undergoing alcohol withdrawal is as follows:

- In patients with no prior seizure history and not in severe alcohol withdrawal: a symptom-triggered or fixed schedule diazepam regimen is recommended (see 'Medications for managing alcohol withdrawal' above for discussion of regimens).
- In patients with prior seizure history, or in severe alcohol withdrawal: diazepam loading is recommended (20 mg every 2 hours until 60–80 mg or patient lightly sedated), and reducing doses on subsequent days.

Assessing and managing seizures in heavy drinkers

Many heavy drinkers present to services (such as hospital, paramedic) following a seizure, and can pose a diagnostic dilemma for clinicians. The diagnosis of alcohol withdrawal seizures is one of exclusion of other causes of seizures.

An alcohol withdrawal seizure can be diagnosed if none of the following criteria are present:

- clinical features or suspicion of other causes of seizures (such as head injury, metabolic, infectious, neoplastic, cerebrovascular disorders)

- no previous seizure history
- the patient experiences two or more seizures in succession
- partial-onset (focal) seizures
- seizure occurring more than 48 hours after last drink
- no recent heavy alcohol use or other features of alcohol withdrawal.

If any of the above criteria are present, alcohol withdrawal seizures **should not** be assumed. The patient should be admitted into hospital, assessed for other causes of seizures, and monitored for at least 24 hours. Careful collateral history should be taken where possible. Table 5.6 identifies common differences between alcohol withdrawal seizures and epileptic seizures.

Table 5.6: Post-ictal signs and symptoms: comparing epilepsy and alcohol withdrawal seizures

	Epilepsy	Alcohol withdrawal seizures
Consciousness level	Post-ictal sleep/drowsy	Sleeplessness
Mood	Calm	Anxiety, agitated
Tremor	No	Yes
Sweating	No	Yes
BP, PR	Normal	Elevated
Temperature	Normal/slight fever	Fever (lower than 38.5°C)
Arterial bloods	Normal	Respiratory alkalosis
EEG	Pathology	Normal, low-amplitude

Notes: EEG – electroencephalogram; BP, PR – blood pressure, pulse rate

Source: European Federation of Neurological Societies Taskforce 2005, EFNS guideline on the diagnosis and management of alcohol-related seizures, Report of the European Federation of Neurological Societies Taskforce, available at <http://www.guideline.gov/summary/summary.aspx?doc_id=9648>.

Investigations should include:

- brain imaging (such as CT, MRI)
- biochemical investigations, including breath/blood alcohol estimates
- urine collected for drug screening (include screen for benzodiazepines, cocaine, amphetamines, tricyclic antidepressants)
- electroencephalogram (EEG) may be warranted – the typical post-ictal finding in alcohol withdrawal seizures is a normal, low-amplitude EEG recording.

While investigations are being conducted, the patient requires:

- regular monitoring , including vital signs, alcohol withdrawal scales (for example, 1 to 2 hourly) and neurological observations
- supportive management, including nursing in a quiet environment away from excessive sensory stimuli and rehydration.

Repeat seizures occur in up to one-quarter of patients who experience an alcohol withdrawal seizure. Where the **likely diagnosis** is alcohol withdrawal seizures, patients should be administered benzodiazepines to prevent further seizures. A typical regimen should include:

- diazepam loading (10–20 mg oral)
- lorazepam (1–2 mg oral) if the clinician is concerned about respiratory or neurological function, or
- midazolam (2–10 mg intravenous infusion if parenteral treatment is required and subject to close direct monitoring of response, airway and saturation.

Where the diagnosis of alcohol withdrawal seizures can be clearly **established,** the following management plan is recommended:

- admission into a supervised withdrawal setting for at least 48 to 72 hours
- regular monitoring, including vital signs, alcohol withdrawal scales and neurological observations
- thiamine administration (100 mg three times daily intramuscular or intravenous) before carbohydrate
- supportive management, including nursing in a quiet environment away from excessive sensory stimuli and rehydration
- diazepam loading to prevent further alcohol withdrawal seizures.

Diazepam (20 mg) should be administered every 2 hours, reaching a total dose of 60–80 mg diazepam over the first 6 to 8 hours, or until the patient is lightly sedated. The patient should be medically reviewed if they require more than 80 mg diazepam to ameliorate withdrawal or achieve sedation. On subsequent days, reducing doses of diazepam can be administered to lessen withdrawal discomfort (for example, 40 mg total dose on day 2; 20 mg total on day 3). If clinicians are concerned about accumulation of long-acting benzodiazepine, lorazepam (or oxazepam) can be used.

Carbamazepine effectively prevents seizures in alcohol dependent people, but it does not effectively prevent recurrent seizures or onset of alcohol withdrawal delirium, and is therefore not generally recommended.

Recommendation		Strength of recommendation	Level of evidence
5.39	Alcohol withdrawal seizure should only be assumed if the clinical presentation is typical of an alcohol withdrawal seizure, no other causes of seizure are suspected, and the patient has a history of previous alcohol withdrawal seizures. All other cases need full investigation.	B	II
5.40	Heavy drinkers with a seizure of unknown cause should be admitted to hospital and monitored for at least 24 hours. Investigations include biochemical tests and neuro-imaging, and possibly EEG.	C	III
5.41	Loading with benzodiazepines (diazepam, lorazepam) and close monitoring for at least 24 hours is recommended after an alcohol withdrawal seizure.	A	Ia
5.42	Anticonvulsants are not effective in preventing further seizures in the withdrawal episode.	A	Ia

Role of long-term anticonvulsants for patients with alcohol withdrawal seizures

Patients should not be initiated on long-term anticonvulsants unless there are other causes of seizure activity. Alcohol withdrawal seizures will not recur if the patient remains abstinent, and most patients have very poor adherence with anticonvulsants if they recommence alcohol use, and indeed may even increase the risk of seizures due to erratic anticonvulsant use.

Recommendation		Strength of recommendation	Level of evidence
5.43	Long-term anticonvulsant treatment is not recommended to prevent further alcohol withdrawal seizures..	D	IV

Hallucinations

Patients may experience hallucinations or other perceptual disturbances (such as misperceptions) at any stage of the alcohol withdrawal phase.

Clinical presentation

Hallucinations may be visual, tactile or auditory. Tactile perceptual changes include pins and needles, itching, burning, numbness, crawling sensations and 'electric fleas'.

Hallucinations may be accompanied by paranoid ideation or delusions, and abnormal affect (agitation, anxiety, dysphoria).

Hallucinations during withdrawal are a symptom that generally warrants admission into an appropriate facility (such as psychiatric or specialist detoxification unit) that can safely manage the patient.

Assessment and monitoring

Thorough psychiatric evaluation is required in order to exclude concomitant medical or psychiatric conditions. Importantly, withdrawal-related hallucinations occur as one of many features of alcohol withdrawal syndrome, and other causes should be considered if the presentation is not consistent with alcohol withdrawal (see 'Alcoholic hallucinosis' below). Where withdrawal-related hallucinations can be established, the following management plan is recommended:

- frequent monitoring (including physical parameters, withdrawal severity) and supervision is required to ensure safety of the patient from harm to self or others
- ensure adequate hydration through oral fluids (and intravenously if necessary)
- patient should be managed in a quiet room with minimal sensory stimulation (see 'Supportive care' above)

Medication

Ensure adequate diazepam doses (at least 60 to 80 mg per day) until alcohol withdrawal features are alleviated.

Antipsychotic medications should be used as an adjunct to adequate benzodiazepine doses if the patient is agitated or distressed by their hallucinations, or disruptive to others. No controlled trials have demonstrated the superiority of different antipsychotic medications; practitioners should use medications with which they are most familiar. Examples of regimens include:

- haloperidol 2.5 to 10 mg oral or intramuscular, repeated as required
- olanzapine 5 to 10 mg oral or buccal dose, repeated to 30 mg daily dose as required
- risperidone 1 to 5 mg, oral or intramuscular, twice daily, repeated as required.

Antipsychotic medication should not be used in isolation (that is, without adequate benzodiazepine loading) as they do not adequately prevent the onset of alcohol withdrawal delirium and may lower seizure threshold.

Alcoholic hallucinosis

Chronic alcohol use can result in an organic psychotic disorder, most commonly with hallucinatory features (alcoholic hallucinosis), that can be difficult to differentiate from other causes of psychosis. Hallucinosis occurs in about 25 per cent of hospitalised patients who have been drinking heavily for at least 10 years.

Unlike alcohol withdrawal delirium, the patient will have a clear sensorium during alcoholic hallucinosis; but typically they will experience auditory hallucinations (also possibly visual hallucinations or misperceptions) and persecutory delusions while they are drinking. Such hallucinations may persist during withdrawal and can be mistaken for alcohol withdrawal hallucinations.

Treatment with antipsychotic medications is recommended if the symptoms are distressing until long-term abstinence is achieved and symptoms ameliorate. The prognosis in these patents is usually good if long-term abstinence is maintained, although a minority (10–20%) will develop a chronic schizophrenia-like syndrome.

Alcohol withdrawal delirium

Alcohol withdrawal delirium is also referred to as delirium tremens or DTs and the terms can be used interchangeably.

Clinical presentation and prevalence

The features of alcohol withdrawal delirium are disturbance of consciousness and changes in cognition or perceptual disturbance (see Table 5.7). A number of medical conditions, including metabolic, infectious, toxic and traumatic causes, may cause delirium.

Table 5.7: DSM-IV-TR diagnostic criteria for substance withdrawal delirium

A	Disturbance of consciousness (that is, reduced clarity of awareness of the environment) with reduced ability to focus, sustain or shift attention
B	A change in cognition (such as memory deficit, disorientation, language disturbance) or the development of a perceptual disturbance that is not better accounted for by a preexisting, established or evolving dementia
C	The disturbance develops over a short period of time (usually hours to days) and tends to fluctuate during the course of the day
D	There is evidence from the history, physical examination or laboratory findings that the symptoms in Criteria A and B developed during, or shortly after a withdrawal syndrome.

Source: American Psychiatric Association 2000, *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition, text revised, American Psychiatric Association.

Alcohol withdrawal delirium typically commences 2 to 3 days after drinking, and usually lasts for a further 2 to 3 days, although in severe cases can persist for several weeks.

The incidence of alcohol withdrawal delirium in placebo-treated alcohol dependent patients entered into inpatient clinical trials averages 5 per cent, although with effective treatment the incidence is much lower. Early studies reported mortality rates as high as 15 per cent; however, the rate has fallen with advances in management to less than 1 per cent.

Accompanying clinical features often include autonomic hyperactivity, such as hyperpyrexia, tachycardia, hypertension and diaphoresis.

Concomitant medical conditions are common and may not be obvious or self-reported. These may include dehydration, electrolyte abnormalities, renal failure, unrecognised head trauma, infections (including meningitis), gastrointestinal haemorrhage, pancreatitis and liver failure.

Management

The initial treatment goal in patients with alcohol withdrawal delirium is control of agitation. Rapid control of agitation reduces the incidence of subsequent adverse events.

Monitoring and assessment

Thorough medical evaluation is required in order to identify complications of alcohol withdrawal delirium (such as electrolyte disturbances) and concomitant medical conditions.

Close monitoring and supervision (preferably one-to-one) may be needed to ensure safety of the patient from harm to self or others.

Vital signs (including pulse, blood pressure, temperature) should be monitored frequently.

Patient should be managed in a quiet room with minimal sensory stimulation. Good lighting and environmental cues (such as a clock and/or calendar) may reduce disorientation.

Recommendation	Strength of recommendation	Level of evidence
5.44 Alcohol withdrawal delirium requires hospitalisation, medical assessment, and close monitoring.	A	I
5.45 Patient should be managed in a quiet environment with minimal sensory stimulation.	C	III

Intravenous fluids and nutritional supplements

Dehydration should be corrected through intravenous hydration.

Electrolyte abnormalities should be corrected. In particular, hypomagnesaemia is often reported in patients with alcohol withdrawal delirium, and magnesium administration may help reduce neuromuscular activity and agitation.

Monitoring of fluid input and output may be required.

Parenteral thiamine should be administered (at least 300 mg thiamine daily, intravenously or intramuscularly), given before any intravenous glucose is administered (intravenous glucose may precipitate acute thiamine deficiency; see 'Wernicke–Korsakoff's syndrome' below).

Recommendation	Strength of recommendation	Level of evidence
5.46 Dehydration and electrolyte imbalance should be corrected.	S	–

Medication

Benzodiazepines, having fewer complications than neuroleptics, are recommended as the primary medication in managing alcohol withdrawal delirium, reducing mortality, and duration of delirium. Controlled studies about the most effective benzodiazepine or route of administration are lacking; however, the following points should guide treatment:

- Rapidly acting benzodiazepines should be used. Oral diazepam acts rapidly (within 1 hour) and is easy to administer in most treatment settings. Intravenous diazepam can also be used where agitation must be quickly controlled, without the need for an intravenous infusion (which is usually needed if using short-acting benzodiazepines such as midazolam).
- Long-acting benzodiazepines (such as diazepam) provide long duration of symptom relief with minimal breakthrough symptoms. Short-acting benzodiazepines require an intravenous infusion, and should only be used in hospital settings with the capacity for close monitoring (such as ICU, high dependency unit).
- Short-acting benzodiazepines (such as midazolam, lorazepam, oxazepam) should be used where clinicians are concerned about prolonged sedation, such as in the elderly, recent head injury, liver failure, or other serious medical illness.

From the above, it is recommended that:

- The aim of medication is to achieve and maintain light sedation (somnolence) in which the patient is awake but tends to fall asleep unless stimulated, or is asleep and is easily roused.
- Doses and regimens must be individually titrated for each patient, as there is considerable variation in medication needs.
- Benzodiazepines are the first line of treatment
  - Oral diazepam 20 mg hourly until somnolence. Doses in excess of 80 mg are typically needed. Once sedated, follow-up doses of 20 mg 6 hourly should be continued until delirium has abated.
  - Intravenous diazepam should be used if the patient is unable to take oral medications, or more rapid sedation is needed. Doses should be administered every 5 to 10 minutes until light sedation is achieved. Initial doses of 5 mg diazepam, increasing to 10 mg doses if adequate sedation is not achieved. Once sedated, patient can resume oral medications or continue intravenous diazepam 5 to 10 mg 1 to 2 hourly as required.
  - Intravenous midazolam (for example, 2 to 5 mg) should be used if the clinician is concerned about over-sedation from loading with diazepam in patients who are elderly and/or have severe medical illness, recent head injury or liver failure. Midazolam is short acting, and requires intravenous infusion under closely monitored settings (such as ICU, high dependency unit).
- Antipsychotic medications should be used as second-line medication in controlling agitation of alcohol withdrawal, as an adjunct to (not instead of) adequate benzodiazepine doses. Controlled trials demonstrating the superiority of different antipsychotic medications are lacking; practitioners should use medications with which they are most familiar. The newer antipsychotic agents (such as risperidone, olanzapine, quetiapine) have a better safety profile. Examples of regimens include:
  - haloperidol 2.5 to 10 mg oral or intramuscular, repeated as needed
  - olanzapine 5 to 10 mg oral, buccal or intramuscular dose, repeated as needed
  - risperidone 1 to 5 mg, oral or intramuscular, twice daily, repeated as needed.

Recommendation		Strength of recommendation	Level of evidence
5.47	Benzodiazepines should be used to achieve light sedation. Oral diazepam or lorazepam loading until desired effect is the treatment of choice. Intravenous diazepam or midazolam is appropriate if rapid sedation is needed.	A	Ia
5.48	Antipsychotic medications should be used to control agitation of alcohol withdrawal as an adjunct to (not instead of) adequate benzodiazepine doses.	A	Ia

Wernicke–Korsakoff's syndrome

Wernicke's encephalopathy is a form of acute brain injury resulting from a lack of thiamine (vitamin B1) that most commonly occurs in chronically alcohol dependent people. In alcohol dependent patients thiamine deficiency occurs due to poor dietary intake and/or intestinal malabsorption. It is estimated that healthy subjects absorb 4.5 per cent of an oral dose of thiamine, compared to only 1.5 per cent in alcohol-dependent subjects.

Wernicke's encephalopathy is not a withdrawal complication but it is usually identified in acute hospital presentations, including patients presenting with alcohol withdrawal. It can co-exist with and should be distinguished from acute alcohol withdrawal, hepatic encephalopathy, and other causes of confusion.

Wernicke's encephalopathy is initially reversible, but if untreated or inadequately treated can lead to Korsakoff's syndrome, a chronic and disabling condition characterised by severe short-term memory loss and impaired ability to acquire new information that often presents with compensatory lying or invention. Korsakoff's syndrome is not dementia or delirium.

Approximately one-quarter of patients with Wernicke's encephalopathy recover completely if treated appropriately, one-quarter show significant improvement, one-quarter only partially recover, and one-quarter show no improvement over time. Approximately one-quarter requires long-term institutional care. It is imperative that treatment is initiated early as delays in treatment may worsen the patient's prognosis. No effective treatment of Korsakoff's syndrome has been found.

Clinical presentation and diagnosis

The classic triad of Wernicke's encephalopathy is:

- confusion or mental impairment (estimated to occur in 80% of cases)
- ataxia (approximately 20% to 25% of cases)
- eye signs such as nystagmus or opthalmoplegia (approximately 30% of cases).

Only a minority of patients with Wernicke's encephalopathy (estimated at 10%) exhibits all three signs. In rare cases, untreated Wernicke's encephalopathy may result in hypothermia, hypotension, coma and death.

Wernicke's encephalopathy is grossly under-diagnosed:

- Post-mortem studies reveal Wernicke's encephalopathy in 12.5 per cent of heavy drinkers (compared to 1.5% of the general population), and fewer than 80 per cent are diagnosed before post-mortem.
- Clinical features of Wernicke's encephalopathy may be misinterpreted as intoxication, withdrawal, head injury, or other causes of confusion in heavy drinkers.

- While there are no specific routine diagnostic tests for Wernicke's encephalopathy, MRI can usually detect symmetric alterations in the mamillary bodies, medial thalami, tectal plate, and the periaqueductal gray area in the brain. In patients with a history of alcohol abuse, contrast media can identify mamillary body lesions typical for Wernicke's encephalopathy, even in the presence of normal unenhanced MRI.

Diagnosis of Wernicke's encephalopathy requires a high index of suspicion in heavy or chronic drinkers, especially if there are any clinical features (such as memory impairment) consistent with Wernicke's encephalopathy or Korsakoff's syndrome.

Patients with suspected Wernicke's encephalopathy or Korsakoff's syndrome should be assessed for other forms of alcohol-related brain injury, such as dementia.

Recommendation	Strength of recommendation	Level of evidence
5.49 Clinicians should consider MR contrast neuro-imaging where the diagnosis of Wernicke's encephalopathy is not clinically established.	D	III

Preventing and treating Wernicke's encephalopathy

All heavy or chronic drinkers should be considered at risk of developing Wernicke's encephalopathy. Given that so many patients with Wernicke's encephalopathy are undiagnosed and thiamine is safe and costs little, all patients undergoing alcohol withdrawal should be treated with thiamine to prevent Wernicke's encephalopathy. And given the major clinical repercussions of not treating Wernicke's encephalopathy, all patients with any features of Wernicke's encephalopathy should be treated as though Wernicke's encephalopathy is established.

Prophylaxis

In patients showing no clinical features of Wernicke's encephalopathy or memory impairment, thiamine is recommended as a prophylactic measure.

- As well-controlled trials have provided limited evidence to guide therapy, significant uncertainty exists about the required dose and duration of therapy. Clinicians agree, however, that it is important to recommend high doses of thiamine to ensure enough is being given to prevent serious neurological disease.
- Healthy patients with good dietary intake may be administered oral thiamine 300 mg per day (for example, 100 mg three times daily) for 3 to 5 days, and maintained on 100 mg oral thiamine for a further 4 to 9 days (total of 1 to 2 weeks of oral thiamine).
- Chronic drinkers with poor dietary intake and general poor nutritional state should be administered parenteral thiamine doses (due to poor intestinal absorption of oral thiamine supplements). The recommended dose of thiamine 300 mg intramuscularly or intravenously per day for 3 to 5 days, and subsequent oral thiamine doses of 300 mg per day for several weeks.
- Alcohol is associated with coagulopathy that may render intramuscular injection unsafe.
- Thiamine should be given **before** any carbohydrate load (such as intravenous glucose) as carbohydrates can cause rapid utilisation of thiamine and precipitate Wernicke's encephalopathy.
- Correct any electrolyte disturbances, including hypomagnesaemia.

Treatment

It is imperative that treatment is initiated early as delays in treatment may worsen the patient's prognosis. All heavy drinkers displaying any features of Wernicke's encephalopathy (such as confusion, ataxia, eye signs, coma, memory impairment, hypothermia with hypotension, or delirium tremens) should be treated as though Wernicke's encephalopathy is established (even if intoxicated).

- Thiamine should be given **before** any carbohydrate load (for example, intravenous glucose).
- Parenteral doses of at least 500 mg per day thiamine (intramuscular or intravenous diluted in saline over 30 minutes) should be administered daily for at least 3 to 5 days, and subsequent doses of at least 300 mg (oral or parenteral) per day for 1 to 2 weeks. The intramuscular route should not be used for patients with coagulopathy.
- Correct any electrolyte disturbances, including hypomagnesaemia

Recommendation		Strength of recommendation	Level of evidence
5.50	All patients exhibiting any features of Wernicke's encephalopathy should be treated as though Wernicke's encephalopathy is established.	D	III
5.51	All patients suspected of Wernicke's encephalopathy should be treated with high-dose parenteral thiamine (at least 500 mg daily) for at least 3 to 5 days. The intramuscular route should not be used for patients with coagulopathy. Subsequent oral thiamine doses of 300 mg per day for several weeks.	D	III
5.52	Patients suspected of Wernicke's encephalopathy should have hypomagnesaemia corrected in order for thiamine supplements to be effective.	D	III

Long-term thiamine use in persistent drinkers

Oral thiamine (for example, 100 mg daily) should be maintained until long-term abstinence has been achieved. Persistent drinkers should be maintained on oral thiamine supplements.

Chapter 6. Psychosocial interventions for alcohol use disorders

6. Psychosocial interventions for alcohol use disorders

This chapter describes, and provides the rationale for, the most widely used, empirically supported psychosocial approaches employed to treat alcohol problems. It also presents a general framework to guide choice of psychosocial treatment with recommendations for strategies that are expected to increase treatment effectiveness.

Overview of psychosocial interventions

Psychosocial interventions or treatment encompass a wide range of non-pharmacological approaches commonly used to treat alcohol and other drug use disorders.

These interventions generally focus on the individual (their beliefs, feelings and behaviour), their social context, including family, community and cultural factors and the interaction between these two domains.

Psychosocial interventions encompass:

- **treatment content** (that is, the skills, strategies and theoretical orientation of treatment)
- **treatment process** (that is, the interaction between the clinician and patient, which includes the strength of engagement, interpersonal interactions and ability to work on shared treatment goals).

Psychosocial treatment researchers increasingly support the view that effective treatment outcome requires sound integration of treatment content and process.

Many psychosocial interventions derive from social learning theory. They share the basic tenet that, although biological and genetic factors play a significant role in the aetiology of substance use disorders, problematic patterns of alcohol and other drug use are learned in a social environment and can, therefore, be replaced by new, more adaptive learned behaviour.

Effective psychosocial interventions help patients address their drinking problems by engaging their motivation and other resources and effecting cognitive, behavioural and social changes with respect to drinking. Where alcohol and other substance use are conceptualised as maladaptive attempts to cope with stress, distress or other negative emotional states, psychosocial interventions can be particularly useful in teaching more functional coping skills.

The most widely used psychosocial approaches that have received consistent empirical support are:

- brief interventions (see Chapter 4)
- motivational approaches
- various forms of cognitive behavioural therapy, including coping skills training, behavioural self-management (controlled drinking), relapse prevention and behavioural couples therapy.

A psychosocial intervention can be used as a stand-alone treatment, or in conjunction with pharmacotherapy. Consistent evidence shows that people who receive these interventions benefit substantially, and at follow-up show clinically significant reductions in their alcohol consumption, increases in number of days abstinent, and improvements in overall functioning.

When to use psychosocial interventions

Psychosocial interventions are used to engage a person's interest and commitment to change and to teach the requisite skills to maintain that change. They can be used by a range of health workers in a variety of treatment settings. They can be implemented individually or in groups. Some clinicians prefer to use motivational strategies in the early stages of therapy, to increase preparation for change, supplementing with more cognitive behavioural or other specialised therapy as appropriate. Clinicians who use these approaches **must** be appropriately trained and competent in their application.

Psychosocial interventions vary in intensity, from brief to intensive and specialised (for example, cognitive behavioural therapy, couples therapy). Brief interventions are most suited for non-dependent drinkers (see Chapter 4). More intensive psychosocial interventions, described in this chapter, are appropriate for people with more established alcohol problems for whom brief interventions are not sufficient.

In general, low intensity psychosocial interventions are indicated for people with low dependence, increasing the level of intensity for those with more severe dependence and co-existing mental health concerns. A model – a stepped care approach – to help clinicians make decisions about appropriate interventions is presented below.

Choosing psychosocial interventions: a stepped care approach

The choice of intervention for alcohol use disorder, whether psychosocial or pharmacological, will depend on the patient's presentation and needs, and available resources. People presenting to alcohol and other drug clinics may have different treatment needs from those presenting to primary care settings.

Principles of treatment selection and care planning are described in Chapter 3. Important components of treatment interventions for problem drinkers includes:

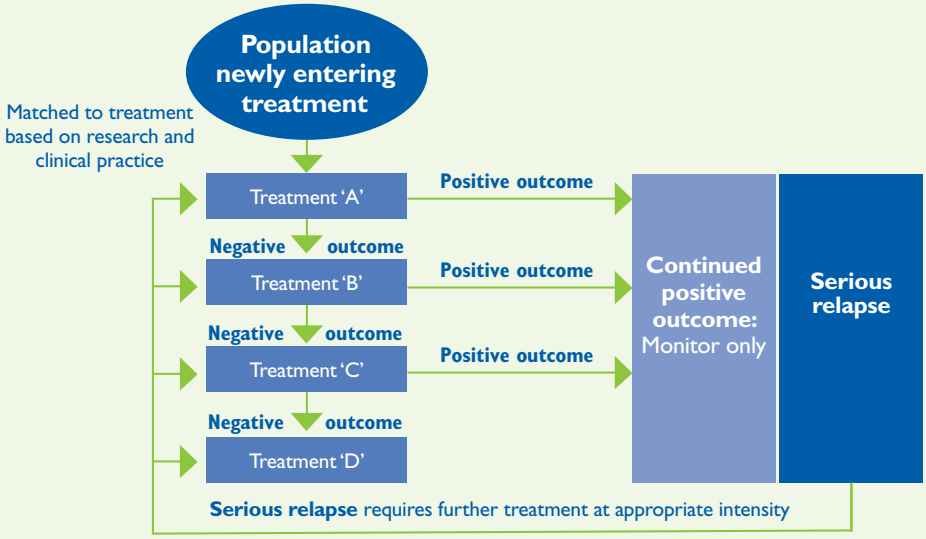
- assessment and feedback
- goal setting: abstinence, moderation and reduced drinking
- case formulation and treatment plan
- therapeutic alliance, engagement and retention in treatment
- relapse prevention
- follow-up and aftercare.

Basic counselling 'micro-skills', including warmth, empathy and optimism, and strong interpersonal skills are associated with better retention in treatment and indirectly with better treatment retention. Central to provision of any counselling intervention is a strong bond and therapeutic alliance between the patient and clinician.

Within this context, a stepped care model is proposed as a practical approach to implementing interventions. The main components of stepped care include thorough assessment, monitoring, implementation of a treatment plan based upon patient presentation and goals, regular review of progress and re-evaluation in the absence of a positive response to treatment.

Derived from other areas of health care, stepped care stipulates that patients should be offered the least restrictive intervention appropriate to their presentation. In primary care settings, this might be a brief intervention of education and advice. In treatment settings, the least restrictive intervention might be outpatient psychosocial treatment. The model (see Figure 6.1) suggests that, should the first intervention prove insufficiently beneficial to the patient, the next level of intensity of treatment may be offered. This could take the form of more intensive psychological treatment, such as cognitive behavioural therapy or pharmacotherapy, or a combination of both. Residential treatment, in the stepped care model, would be viewed as more intensive and restrictive and to be pursued only when other less restrictive interventions have proven ineffective or the individual presentation clearly requires this level of intensity of treatment.

Figure 6.1: Stepped care approach for delivering health care services



Source: Sobell, MB & Sobell, LC 2000, 'Stepped care as a heuristic approach to the treatment of alcohol problems', *Journal of Consulting and Clinical Psychology*, vol. 68, no. 4, pp. 573–79.

According to the stepped care model, determining the level of intervention the individual needs is based on a thorough assessment and sound clinical judgement (See Chapter 3). The appropriate level of intensity of treatment is commenced and the patient's progress is monitored and reviewed. The patient's response to treatment determines the next step, which could be either continued monitoring of progress or, in the absence of clear benefit, stepped up intensity of treatment.

While limited evidence supports application of the stepped care approach, it has sound 'face validity' in selecting treatment approaches and is an efficient use of resources. At present, there is limited evidence to support 'patient–treatment' matching based upon patient characteristics. The stepped care model is proposed here as an adjunct to decision-making and does not replace clinical judgement and expert advice. The decision-making process is described in the clinical vignette 'Case scenario: Stepped care approach to selecting psychosocial interventions' (see box).

CASE SCENARIO: STEPPED CARE APPROACH TO SELECTING PSYCHOSOCIAL INTERVENTIONS

John, a 45-year-old man, presents to his general practitioner complaining of feeling tired most Mondays (with occasional absenteeism), and with a background of high blood pressure. On questioning, he admits to drinking between four and six 375 ml cans of full strength beer (6 to 10 standard drinks) most days and more on weekends (often 12 cans per day) when he goes out with friends. He has no history of treatment for his drinking or for other mental health concerns, and does not describe alcohol withdrawal symptoms. The general practitioner explains that his alcohol use may be contributing to his high blood pressure, and mild 'hangovers' experienced on Monday mornings. She advises him to cut down (brief intervention). At his next appointment one month later, John reports no change in his drinking. She suggests a course of naltrexone, which he commences but ceases after two days.

His general practitioner refers him to the Community Health Centre for counselling. John attends his appointment at the clinic where he is assessed and is offered a few sessions of motivational interviewing and a controlled drinking program with the drug and alcohol worker. John engages well with his counsellor, improves temporarily (drinking two cans per day) but then, after attending a social function, relapses and seems unable to resume moderation. During their discussion of his relapse, the counsellor points out a pattern of excessive alcohol use in social situations. She refers him to the clinic's psychologist for assessment of his social anxiety and for cognitive behavioural therapy. After completing 10 sessions of cognitive behavioural therapy for excessive alcohol use and social anxiety, John looks better and claims to feel better. His drinking is down to two to three cans two to three times per week; he monitors and paces his drinking; he knows how to plan for and manage risky social situations and has learned other ways of coping with his social anxiety. Apart from several telephone calls for follow-up to discuss his progress, John needs no further treatment. His blood pressure had returned to normal, and he now no longer misses work on Mondays.

John had low alcohol dependence and social anxiety but no other serious co-existing problems. The brief intervention was stepped up when it was apparent that he needed more intensive treatment (motivational interviewing and controlled drinking program, followed by cognitive behavioural therapy addressing coping skills and social anxiety). A person who presents with severe alcohol dependence and poor mental health, on the other hand, would clearly need more intensive treatment, perhaps treatment for alcohol withdrawal and monitoring of mental health concerns followed by more intensive psychosocial and medication approaches.

Recommendation		Strength of recommendation	Level of evidence
6.1	A stepped care approach is recommended as a framework for selecting psychosocial interventions, incorporating assessment, monitoring, implementation of a treatment plan, regular review of progress, and increasing intervention intensity in the absence of a positive response to treatment.	D	IV

Motivational interviewing

Motivational interviewing is a style of counselling that focuses on helping the individual explore and resolve ambivalence about change. The patient's own reasons for change are elicited and used to motivate movement towards action and behaviour change. Motivational interviewing is directive in that it guides the person towards resolution of ambivalence and towards change. The term 'interviewing' was chosen to reflect the therapist's enquiring, non-confrontational approach. The therapist is not viewed as an expert but rather as a facilitator.

Motivational interviewing and its derived manual-guided motivation enhancement therapy are effective, empirically supported psychosocial interventions. They can be used as a first-line or stand-alone treatment, or as an adjunct to other psychosocial or pharmacological treatment modalities, and aim to address patient ambivalence to changing their drinking or other behaviours. The principles underpinning motivational interviewing are:

- **collaboration** – the therapist and patient pursue change together; there is no coercion, rather facilitation of exploration and discovery
- **evocation** – the patient is believed to possess the intrinsic goals and resources for change, which the therapist elicits
- **autonomy** – the therapist respects the patient's right and capacity for self-direction and facilitates informed choice.

The guiding concepts of motivational interviewing are:

- ### Express empathy

  In expressing empathy, the therapist listens non-judgmentally and conveys acceptance of the patient. Reluctance to change problematic behaviour is viewed as an understandable and normal part of human experience. The basic premises are that acceptance facilitates change, skilful reflective listening is fundamental, and ambivalence is normal.

- ### Develop discrepancy

  Discrepancy and tension is created empathically between the patient's present behaviour and their broader goals and values. This requires an exploration and understanding of the patient's goals and values as well as an understanding of their current concerns. A discrepancy between these two sets of circumstances will reflect the importance of change to the patient. If change is important, then eliciting reasons for change should not be difficult. If change is not important to the patient, behaviour change may be difficult to achieve and maintain.

- ### Roll with resistance

  Resistance in motivational interviewing is viewed as an interpersonal phenomenon between patient and therapist. The therapist avoids argument. A resistant response from the patient is a sign that the therapist's style may be too confronting or insistent and that a different approach is needed. Engagement with resistance is expected to increase resistance. New perspectives are invited but not imposed. The patient is viewed as the source of new answers and solutions. The therapist's role is to facilitate exploration of options.

- ### Support self-efficacy

  Self-efficacy refers to a person's belief in their ability to carry out and succeed with a specific task. Self-efficacy is a key element in motivation for change and is a reasonable predictor of change. A therapist's own expectations about a patient's likelihood of change can have a powerful effect on the outcome.

Recommendation	Strength of recommendation	Level of evidence
6.2 Motivational interviewing approaches can be used as a first-line or stand-alone treatment, or as an adjunct to other treatment modalities in addressing patient's ambivalence to change their drinking or other behaviours.	A	Ia

Cognitive behavioural interventions

Cognitive behavioural interventions are empirically supported and comprise a range of approaches broadly based on learning principles and the idea that cognitive processes influence behaviour. The most prominent of these approaches are:

- behavioural self-management or self-control: controlled drinking programs
- coping skills training
- cue exposure
- behavioural couples therapy.

Behavioural self-management or self-control: Controlled drinking programs

Identifying and agreeing upon treatment goals is an important process for many patients (see also Chapter 3). For patients with no or low levels of alcohol dependence, and who are not experiencing significant or irreversible alcohol-related harms, a goal of moderation may be achievable. Consumption within current NHMRC guidelines can be recommended either immediately or as a medium-term target.

For patients with severe alcohol dependence, and/or those presenting with associated problems such as organ damage, cognitive impairment and co-existing mental health problems, the most realistic drinking goal is likely to be abstinence. For many such patients, achieving abstinence is associated with a risk of alcohol withdrawal syndrome. If so, this should be managed before longer-term abstinence or reduced drinking can be achieved (see Chapter 5). Limited evidence indicates that people with moderate to severe dependence can successfully moderate their alcohol use in the immediate term, and a period of abstinence (at least 3 to 6 months) is generally recommended before attempting controlled drinking programs. See Chapter 3 for treatment planning and how to work with patients who identify unrealistic treatment goals.

The behavioural self-management approach (also called controlled drinking programs) teaches people to reduce their alcohol consumption, and is suitable for people at the less severe end of the dependence spectrum. Behavioural self-management includes:

- goal setting
  - setting the number of drinks to be consumed per day or week
  - setting the circumstances in which drinking will occur
- self-monitoring of daily drinking, including
  - time, place, and people with whom they drink
  - number of drinks consumed
  - how they felt at the time

- controlling the rate of drinking
  - timing each drink and spacing drinks
  - alternating between alcoholic and non-alcoholic drinks
  - eating during sessions
- identifying problematic drinking situations and triggers to drinking.

Various self-help booklets and resources are available to help patients attempting controlled drinking programs (see Appendix 5).

Recommendation		Strength of recommendation	Level of evidence
6.3	Behavioural self-management (controlled drinking program) can be recommended as a treatment strategy for people with no or low level dependence and for when patient and clinician agree that moderation is an appropriate goal.	A	Ib

Coping skills training

Coping skills training is one of the best-established and empirically supported interventions for alcohol use disorder. Skills training assumes that developing effective coping skills can help people deal with stressful social situations that are linked to their alcohol use.

Examples of coping skills include assertiveness, communication, drink refusal, problem solving, anger management and coping with urges. Skills training is most beneficial to people who appear to lack the relevant skills to achieve and maintain abstinence; it is generally delivered by therapists with specific training in this approach.

Recommendation		Strength of recommendation	Level of evidence
6.4	Coping skills training is recommended for people who appear to lack the relevant skills to achieve and remain abstinent.	A	Ib

Cue exposure

Cue exposure is an empirically supported treatment method that derives from learning theory. It assumes that people, places or events that regularly precede drinking become associated with the pleasant effects of alcohol, and alcohol consumption becomes a conditioned response to these cues.

Cue exposure can be applied with a treatment goal of either abstinence or moderation with moderately good results. The goal of cue exposure is to decrease the likelihood of a relapse to drinking by either decreasing the strength of the association between alcohol-related cues and the urge to drink, or increasing the use and effectiveness of coping skills when confronted with alcohol-related cues in daily life.

Cue exposure therapy usually consists of six to 12 sessions, each of 50 to 90 minutes duration. Sessions can be run daily or less frequently. Cue exposure is a specialist treatment intervention and should only be offered by qualified professionals.

Recommendation		Strength of recommendation	Level of evidence
6.5	Cue exposure in conjunction with other psychosocial interventions can be an effective intervention for treating alcohol dependence.	A	Ib

Behavioural couples therapy

Alcohol problems have a far-reaching effect on partners and families. Little systematic information is available on effective family therapy approaches, that is, approaches that involve the entire family in treatment. However, therapy with couples or partners – especially behaviourally oriented therapy – has received considerable empirical support and has been shown to be more effective than individual treatment. Therapy with problem drinkers and their partners can be conducted in several ways, namely:

- The first approach – therapy with the partner of a problem drinker – can focus on improving the partner's coping skills and increasing the problem drinker's readiness for treatment. In this approach, the partner is taught specific skills to reduce conflict over drinking, reinforce reduced consumption or abstinence, and encourage attendance for treatment.
- The second and more specialised approach – behavioural couples therapy – focuses on both individuals and their communication and social context. It teaches the drinker self-management skills and the partner, coping skills. It teaches communication and problem solving skills to reduce conflict and ways of consolidating social support for changes in alcohol use.
- The third approach is also a behaviourally based couples (marital) therapy but includes use of alcohol pharmacotherapy, usually disulfiram. It involves both partners in treatment, focuses on improving the relationship, resolving conflict and problems, and introduces spouse-supervised disulfiram use. This approach has been shown to improve drinking outcomes and maintain marital stability and satisfaction.

Clinicians interested in delivering couples therapy should be appropriately trained to deliver this specialised intervention. Work with couples can be very challenging especially when problems are longstanding and conflict is well established.

Recommendation		Strength of recommendation	Level of evidence
6.6	**Behavioural couples therapy, which focuses on drinking behaviour as the problem, can improve drinking outcomes following treatment and should be delivered by an appropriately trained clinician.**	A	Ia

Other counselling strategies

Contingency management is a strategy that uses positive reinforcement to improve treatment outcomes by providing incentives to encourage behavioural changes. Withholding incentives when desirable behaviour is not maintained (that is, negative reinforcement) may also be used. While evidence has shown that contingency management is effective in research settings, it has not been routinely translated into clinical practice largely due to resourcing problems.

A number of other approaches are being increasingly used in counselling settings, including for patients with alcohol problems. Examples include:

- solution-focused approaches (such as solution-focus brief therapy)
- mindfulness-based stress reduction
- psychodynamic therapy
- narrative therapy.

These counselling approaches are not supported by a strong evidence base so are not yet widely recommended.

Relapse prevention strategies

Relapse is a common problem in alcohol treatment. Most dependent drinkers relapse to problematic drinking within the first few months (often weeks) of treatment. This is consistent with the chronic relapsing–remitting nature of alcohol dependence, and should be addressed in treatment planning, rather than seen as a failure of treatment.

Specific situations or mood states are often associated with relapse, including:

- negative emotional states (frustration, anger, anxiety, depression or anger)
- interpersonal conflict (relationships with partner, work colleagues, friends)
- direct or indirect social pressure to drink.

Relapse prevention is not so much a specific intervention but rather a set of strategies that aim to help the patient maintain treatment gains. Such strategies may include a number of cognitive and behavioural approaches that help prevent lapses becoming relapses, such as:

- learning to identify situations that have been associated with excessive drinking and to use appropriate cognitive and behavioural strategies to cope effectively
- constructively appraising lapses, thereby reducing fear of failure, guilt, shame and hopelessness and preventing a lapse from becoming a relapse
- learning, through careful forward planning, to avoid unnecessary risk and deal positively and confidently with inevitable risk.

All moderately and severely alcohol dependent patients should be offered the opportunity to learn relapse-prevention strategies. These are best discussed after acute withdrawal symptoms have subsided. Relapse prevention addresses itself to maintaining change and to developing self-efficacy and coping skills.

Relapse prevention may also incorporate medications for reducing alcohol use (such as naltrexone, disulfiram, acamprosate) and/or address concomitant conditions linked to relapse (such as anxiety, depression, sleep disorder, chronic pain).

Recommendation		Strength of recommendation	Level of evidence
6.7	Psychosocial relapse prevention strategies are recommended for use with all moderately to severely alcohol-dependent patients.	A	Ib
6.8	Psychosocial relapse prevention strategies are best delivered as soon as acute withdrawal symptoms have subsided.	C	III

Residential rehabilitation programs

Residential rehabilitation programs (sometimes called therapeutic communities) are usually long-term programs where people live and work in a community of other substance users, ex-users and professional staff. Programs can last anywhere between 1 and 24 months (or more). The aim of residential rehabilitation programs is to help people develop the skills and attitudes to make long-term changes towards an alcohol- and drug-free lifestyle. Programs usually include activities such as employment, education and skills training, life skills training (such as budgeting and cooking), counselling, group work, relapse prevention, and a 're-entry' phase where people are helped return to their community. Some programs are based on

12-step Alcoholics Anonymous (AA) approaches (see Chapter 8). An extended period of abstinence can be beneficial in reversing cognitive and physical harm arising from chronic heavy alcohol use.

Residential rehabilitation programs can be effective for people needing structured long-term support, and are more attractive to those with moderate to severe dependence, and limited social supports.

Recommendation		Strength of recommendation	Level of evidence
6.9	Residential rehabilitation programs can be effective for patients with moderate to severe dependence who need structured residential treatment settings.	D	IV

Chapter 7. Pharmacotherapies for alcohol dependence

7. Pharmacotherapies for alcohol dependence

This chapter provides a description of empirically supported pharmacological approaches for preventing relapse in alcohol dependence.

Three medications – naltrexone, acamprosate and disulfiram – are licensed in Australia for the treatment of alcohol dependence. Prescribers are referred to the MIMS Annual for detailed information about naltrexone, acamprosate and disulfiram (listed and marketed respectively as ReVia®, Campral® and Antabuse®).

Pharmacotherapy should be considered for all alcohol-dependent patients following detoxification. They are best used in association with psychosocial supports as part of an after-care treatment plan. For some, medication is associated with a critical period of sobriety, during which the patient can learn to maintain abstinence or reduced alcohol consumption. Specifically:

- **Naltrexone** and **acamprosate** have been shown to improve treatment outcomes when combined with psychosocial intervention. For patients who are motivated to take the medication, both are potential tools for reducing alcohol use and the core symptoms of alcohol dependence.
- The evidence for **disulfiram** is weaker, but the drug remains an option for relapse prevention in certain circumstances, and can be effective as part of a comprehensive treatment approach.

Despite evidence of their efficacy in reducing alcohol relapse following detoxification, these medications remain under-used in Australia.

Recommendation		Strength of recommendation	Level of evidence
7.1	Pharmacotherapy should be considered for all alcohol-dependent patients, in association with psychosocial supports.	A	Ia

Naltrexone

Naltrexone is an orally active opioid receptor antagonist. By blocking μ-opioid receptors, naltrexone reduces levels of dopamine (the major reward neurotransmitter in the brain) in response to alcohol use, reducing the rewarding effects of alcohol. Naltrexone reduces the rate of relapse to heavy drinking and increases the number of abstinence days in alcohol dependent patients. Meta-analyses suggest that compared to placebo, naltrexone reduced the relative risk ratio for relapse to heavy alcohol use by 36 per cent; the number needed to treat is seven, suggesting a moderate effect size for maintaining abstinence.

However, naltrexone has been shown to reduce the rewarding effects of alcohol, reduce craving and decrease the amount and frequency of drinking when relapse occurred. It has been shown to be more effective in reducing rate and severity of relapse rather than in maintaining abstinence. While most controlled studies of naltrexone treatment have been in conjunction with intensive psychosocial services (such as counselling), it has nevertheless also been effective in physician-led treatment with regular monitoring.

Naltrexone is licensed in Australia as an oral tablet preparation. No long-acting naltrexone products are currently licensed in Australia. A long-acting (monthly) depot intramuscular injection of naltrexone has been developed and is licensed in the United States. This agent looks promising and avoids problems of poor adherence, however it is not yet available for use in Australia.

Suitability for naltrexone

While little evidence is available to directly inform decisions about what patient populations are most suited to naltrexone treatment, some evidence and clinical expertise suggests:

- Success can be achieved with patients who are alcohol dependent and are medically stable
- Naltrexone may be more effective for preventing relapse to heavy or problem drinking and reducing high levels alcohol consumption than for maintaining abstinence from alcohol.
- Patients currently using opioids or who require opiate-based pain relief are not suitable candidates for naltrexone use.
- Naltrexone is contraindicated for people with acute hepatitis or severe liver failure, or with a history of sensitivity to naltrexone. It can be prescribed to patients with moderate elevation of liver function tests (up to approximately five times the normal values).
- No well-controlled studies of the safety of naltrexone during pregnancy or lactation have been done.
- The safety of using naltrexone for patients younger than 18 years old has not been established.
- Some reports show that patients with significant depression or more severe alcohol dependence respond less well to naltrexone treatment. Regular monitoring for depression is recommended.

Recommendation		Strength of recommendation	Level of evidence
7.2	Naltrexone is recommended as relapse prevention for alcohol-dependent patients.	A	Ia

Interaction with other drugs

Naltrexone induces precipitated opiate withdrawal in patients who are currently opiate dependent. It is contraindicated in patients with current or recent use of opioid medication (such as codeine, morphine, oxycodone, methadone).

Naltrexone is a long-acting drug and will block the effects of opioids when they are used after commencement of naltrexone treatment. Naltrexone should be discontinued 48 to 72 hours before any situation where opioid analgesia may be needed (such as in patients undergoing elective surgery).

Naltrexone does not appear to alter the absorption or metabolism of alcohol; however, some patients have reported nausea after drinking alcohol while taking naltrexone.

The interaction of naltrexone and most other medications has not been tested. However, caution should be exercised when combining naltrexone with other drugs known to have hepatotoxicity. For example, it is not recommended to combine naltrexone and disulfiram.

Concurrent administration of naltrexone with antidepressants appears to be safe.

Recommendation		Strength of recommendation	Level of evidence
7.3	Naltrexone is not suitable for people who are opioid dependent or who have pain disorders needing opioid analgesia.	S	–

Starting treatment

It is not known whether patients with a diagnosis of alcohol dependence achieve better outcomes if abstinent before taking naltrexone. However, some period of abstinence (at least three days) was the requirement of most clinical trials investigating the effectiveness of naltrexone. Recommending such a period of abstinence (three to seven days after the patient's last drink) will allow resolution of major acute withdrawal symptoms before starting treatment.

A medical history should be taken (see Chapter 2) and should include assessment for signs of chronic liver disease and hepatic failure. The assessment of hepatic insufficiency is done through clinical examination and liver function tests.

Once assessment is complete, discuss treatment goals and plan with the patient. Provide patient education about how the medication works, the side effects and realistic expectations about cravings. Arrange for a follow-up visit within one week, as early dropout is common.

Recommendation		Strength of recommendation	Level of evidence
7.4	Naltrexone should be started as soon as possible after completion of withdrawal (usually 3 to 7 days after last drink).	A	Ib

Dosage

Naltrexone is formulated in tablets of 50 mg; the recommended dose is 50 mg (one tablet per day, orally) with meals. It may be preferable to start with half a tablet (25 mg per day) for several days, and increase to 50 mg after any adverse effects have subsided.

Adverse effects and their management

Naltrexone is usually well tolerated. Common adverse effects include nausea, headache, dizziness, fatigue, nervousness, insomnia, vomiting, and anxiety in about 10 per cent of patients. These generally subside with time (usually days). Depression and dysphoria have also been reported as side effects of naltrexone.

The following strategies are recommended:

- educate the patient about expected side effects and duration
- establish a routine for timing doses – should ideally be taken in the morning with food or split between morning and evening
- introduce medication gradually (25 mg for one to two days)
- consider dose reduction (half tablets at 25 mg per day), slow titration, and stopping the medication for three to four days before reintroducing it at a lower dose
- distinguish between prolonged alcohol withdrawal symptoms and side effects of naltrexone by beginning treatment once the major features of alcohol withdrawal have subsided (generally three to 5 days after drinking cessation).

Treatment duration

The most appropriate duration of treatment continuation in alcohol-dependent patients is not yet known.

The usual treatment period is at least 3 to 6 months, but the decision on treatment duration should be made on a case-by-case basis between the patient and doctor, based on side effects, history of relapse, social and family circumstances, and other factors known to affect the patient.

Recommendation		Strength of recommendation	Level of evidence
7.5	Naltrexone is usually taken for at least 3 to 6 months.	D	IV

Clinical considerations during treatment

Treatment should continue even if the patient lapses; psychosocial relapse prevention techniques should be used to deal with the lapse or relapse (see Chapter 6).

It is also important to monitor and attend to the patient's physical and mental health.

Ending naltrexone therapy

No evidence of a withdrawal syndrome or development of dependence following use of naltrexone exists. Psychosocial relapse prevention should continue beyond the end of pharmacotherapy.

Acamprosate

Acamprosate is thought to reduce drinking by modulating the brain GABA and glutamate function, which is implicated in withdrawal symptoms. The drug only reaches desired levels in the brain after 1 to 2 weeks.

Meta-analyses of randomised controlled trials indicate that acamprosate is effective in maintaining abstinence from alcohol following withdrawal in dependent drinkers; the relative risk ratio is 1.3 to 1.5 in the first 6 months, and the number needed to treat is 7.5 over placebo.

Suitability for acamprosate

Little evidence exists to directly inform decisions about what patient populations are most suited to acamprosate treatment. However, some evidence and clinical expertise suggests that:

- acamprosate may be effective for patients who are alcohol dependent and are medically stable; as well as for those willing to comply with the dosing regimen
- acamprosate may be most effective for patients with an abstinence goal, rather than preventing excessive drinking in non-abstinent patients
- acamprosate is contraindicated in patients with a known hypersensitivity to the drug, renal insufficiency or severe hepatic failure
- the safety of acamprosate in pregnancy or lactation has not been established, so it should not be administered to women who are pregnant or breastfeeding.

Recommendation		Strength of recommendation	Level of evidence
7.6	Acamprosate is recommended as relapse prevention for alcohol-dependent patients.	A	Ia

Interaction with other drugs

Acamprosate does not interact with alcohol.

The calcium component in acamprosate may render tetracycline inactive.

Starting treatment

Acamprosate dosing is recommended to begin three to seven days after the patient's last drink and after resolution of any acute withdrawal symptoms. Acamprosate could be safely initiated during alcohol withdrawal, but starting acamprosate at the beginning of detoxification compared to after detoxification has not been shown to improve treatment outcomes.

Medical history should be taken (see Chapter 3). Physical examination may include assessment for signs of chronic liver disease and hepatic failure. The assessment of hepatic insufficiency is done through clinical examination and liver function tests. Investigations may include liver function tests and, since 90 per cent of acamprosate is excreted through the kidney, tests of kidney function (urea and electrolytes).

Once assessment is complete, discuss treatment goals and plan with the patient. Provide patient education about how the medication works, the side effects and realistic expectations about cravings. Arrange for a follow-up visit within one week, as early dropout is common.

Recommendation		Strength of recommendation	Level of evidence
7.7	Acamprosate should be started as soon as possible after completion of withdrawal (usually 3 to 7 days after last drink).	A	Ib

Dosage

Acamprosate is formulated in oral tablets of 333 mg; the recommended dose for adults is 1998 mg with meals (6 tablets per day – 2 tablets in three doses). Adults under 60 kg should take 1332 mg/day (4 tablets per day in 3 doses: 2, 1, 1).

Adverse effects and their management

Acamprosate is usually well tolerated. Its predominantly gastrointestinal adverse effects, commonly diarrhoea, usually resolve spontaneously within days. Mild abdominal pain, rash or isolated pruritus, parasthesiae, altered libido and confusion have been reported at low frequencies.

The clinician should educate the patient about expected side effects and duration; and should distinguish between prolonged alcohol withdrawal symptoms and side effects of acamprosate by beginning treatment once the more pronounced features of withdrawal have subsided (after first 3 to 5 days).

Treatment duration

The usual treatment period is 3 to 6 months. However, the decision on the duration of treatment should be made on a case-by-case basis between the patient and doctor, taking into account side effects, history of relapse, social and family circumstances and other individual factors.

Recommendation		Strength of recommendation	Level of evidence
7.8	Acamprosate is usually taken for at least 3 to 6 months.	D	IV

Clinical considerations during treatment

Treatment should continue even if the patient lapses; the clinician should use psychosocial relapse prevention techniques to deal with the lapse or relapse (see Chapter 6).

The clinician should regularly monitor the patient's progress and attend to any physical, mental health and social issues the patient may be facing.

As some patients will find it difficult to adhere to a medication regimen that involves taking tablets three times a day for long periods, the clinician should devise strategies to increase the likelihood of patients taking their medication (see 'Increasing medication adherence' below).

Ending acamprosate therapy

No evidence exists of a withdrawal syndrome following use of acamprosate or of developing dependence. Psychosocial relapse prevention interventions should continue beyond the end of pharmacotherapy.

Combined acamprosate and naltrexone

Given the different theoretical approaches of acamprosate and naltrexone in reducing alcohol consumption, some clinicians administer both medications concurrently. Studies have found this to be a safe and promising approach. Most evidence suggests that while combined acamprosate and naltrexone may be more effective than acamprosate alone, it is no more effective than naltrexone alone.

Disulfiram

Disulfiram primarily works by inhibiting the action of aldehyde dehydrogenase, an enzyme involved in the second step in the metabolism of alcohol, namely the conversion of acetaldehyde to acetate. This leads to accumulation of acetaldehyde following consumption of alcohol. The resulting unpleasant symptoms – flushing, dizziness, nausea and vomiting, irregular heartbeat, breathlessness and headache – are due to the toxicity of accumulated acetaldehyde.

Disulfiram acts as a deterrent to drinking because the patient expects to experience these negative consequences. Evidence indicates that disulfiram is most effective when the medication is provided to the patient under supervision.

Suitability for disulfiram

Disulfiram is an appropriate medication for patients who:

- are motivated to abstain from alcohol
- accept the need for external control of their drinking and are prepared to be supervised in their daily medication use
- have a spouse, family member or friend willing to supervise and monitor medication use
- have no medical or psychosocial contraindications.

The treating clinician should undertake a risk–benefit analysis of using disulfiram to discover any **medical or psychosocial contraindications before recommending use of this treatment**. Monitoring of cardiac and liver condition is recommended. The intensity of the disulfiram–alcohol reaction varies among patients and in rare cases may result in cardiovascular collapse, myocardial infarction, respiratory depression, convulsion and death. Accordingly, treatment is contraindicated for patients with significant cardiovascular, hepatic or pulmonary disease. Some patients most suited to disulfiram in other respects may suffer from these problems.

The enzyme that metabolizes dopamine into norepinephrine and epinephrine is inhibited by disulfiram, which may result in exacerbation of psychosis. Nonetheless, a trial in a psychotic population did not reveal significant problems.

Disulfiram treatment is best suited to people with social supports, such as family, who will help **supervise medication adherence**. Supervision has a marked effect on adherence and greatly improves the effectiveness of this intervention.

A written 'disulfiram agreement' should be considered between a carer and patient (see Appendix 7). While a spouse or partner can be an obvious choice to supervise medication adherence, it is important to stress that the spouse cannot be expected to control their partner's drinking. However, a disulfiram agreement is an important part of effective disulfiram treatment. The agreement should include an outline of the likely effects of drinking and products that may need to be avoided (such as some mouthwashes), recognition that the patient will allow the medication to be supervised, that the carer will be the supervisor and that the supervisory role includes contacting the health professional if medication compliance becomes a problem.

Recommendation		Strength of recommendation	Level of evidence
7.9	Disulfiram is recommended in closely supervised alcohol-dependent patients motivated for abstinence and with no contraindication	A	Ib

Interaction with other drugs

The basis of disulfiram's therapeutic effect is that is interacts with the metabolism of alcohol.

It increases the blood concentration of benzodiazepines, caffeine, phenytoin, tetrahydrocannabinol, isoniazid, barbiturates, anticoagulants, tricyclic agents and paraldehyde.

Disulfiram should not be given concomitantly with paraldehyde because paraldehyde is metabolized to acetaldehyde in the liver.

Starting treatment

Treatment should begin after detoxification, approximately 3 to 7 days after drinking cessation.

The clinician should take the patient's medical history (see Chapter 3), and discuss the effects of the drug when alcohol is taken. This is an important part of the therapeutic strategy, as the patient's anticipation of its effects will greatly enhance the drug's effectiveness as a deterrent against drinking.

Discuss motivation, supervision, and the role of a treatment contract with the patient.

Disulfiram should be seen as an aid that does not detract from the patient's own responsibility in maintaining abstinence.

Dosage

Disulfiram is formulated in tablets of 200 mg; the recommended dose is 200 to 400 mg (1 to 2 tablets per day orally). Some patients can continue to drink on 200 to 400 mg without significant adverse effects, and the dose should be increased. The maintenance dose should generally not exceed 600 mg a day. In many patients, two or three doses per week may be sufficient, and this approach may be more practical and easier to schedule with supervision.

Adverse effects and their management

Some of the common adverse effects of disulfiram include drowsiness, nausea, headache and fatigue. Some patients may report taste disturbance (metallic or garlic-like). Rarely, jaundice, hepatitis (sometimes fatal), peripheral neuropathy, psychosis, confusion, optic neuritis, blood dyscrasias and rash may occur.

Clinicians should educate patients about expected side effects and duration; and should distinguish between prolonged alcohol withdrawal symptoms and side effects of disulfiram by beginning treatment once the more pronounced features of withdrawal have subsided (after the first 3 to 5 days). Patients should be advised to stop taking disulfiram at once and tell their doctor if they notice yellowing of the whites of their eyes, dark urine or pale bowel motions.

Even very small amounts of alcohol may cause unpleasant effects. Clinicians should advise patients to avoid using alcohol in cooking and choose skin and oral hygiene products (such as perfumes, body lotions, mouth washes) that do not contain alcohol. Some medicines contain alcohol and should also be avoided. However, the strength of the alcohol–disulfiram interaction varies between individuals. Some patients react to very small amounts of alcohol, others have little reaction when consuming large quantities of alcohol.

Treatment duration

Disulfiram is likely to be a useful treatment for the first 3 to 6 months of treatment. Longer-term studies are not available, however there are anecdotal reports of long-term (years) of successful disulfiram treatment in some patients. The decision on treatment duration should be made on a case-by-case basis between the patient and doctor, based on side effects, history of relapse, social and family circumstances and other individual factors.

Clinical considerations during treatment

Treatment should be suspended if the patient lapses; psychosocial relapse prevention techniques should be used to deal with the lapse or relapse (see Chapter 6). Disulfiram may be recommenced after 48 hours abstinence.

Recommendation		Strength of recommendation	Level of evidence
7.10	Disulfiram is usually taken for at least 3 to 6 months.	D	IV

Ending disulfiram therapy

Alcohol metabolism returns to normal between 7 and 10 days (sometimes three weeks) after stopping disulfiram, as new enzymes must be synthesised. Patients may experience adverse reaction if they drink alcohol within 7 days after stopping treatment. Psychosocial relapse prevention interventions should continue beyond the end of pharmacotherapy.

Other medications

Several new agents are emerging in the literature. These include **anticonvulsants**, such as gabapentin and topiramate; **antipsychotic medications**, such as olanzapine and aripiprazole; and baclofen, a **skeletal muscle relaxant**.

While these medications appear promising as agents in reducing alcohol relapse, the need for further controlled trials and the cost of these agents means they cannot be recommended for use as first-line treatments for alcohol dependence.

While some patients commonly seek **benzodiazepines,** no studies support their efficacy in reducing alcohol use beyond the immediate withdrawal period, and indeed there may be adverse effects of benzodiazepine dependence and interaction with alcohol.

Antidepressants are not recommended as relapse prevention agents in alcohol dependence.

Minimal evidence exists for the efficacy of **serotonergic agents** (such as selective serotonin reuptake inhibitors [SSRIs], buspirone and ondansetron) for treating the main symptoms of alcohol dependence. However, these agents may have a role in certain patients who have concomitant symptoms of anxiety or depression; evidence suggests they are effective for these symptoms in the presence of alcohol use (see Chapter 9 and Chapter 10).

Recommendation		Strength of recommendation	Level of evidence
7.11	A range of medications appear promising agents in reducing alcohol relapse (such as topiramate, gabapentin, baclofen, aripiprazole); however, need further research and are not recommended as first-line options at this stage.	B	II
7.12	Benzodiazepines and antidepressants are not recommended as relapse prevention agents in alcohol dependence.	B	II

Integration with psychosocial treatments

Treatment is significantly more successful when the patient is receiving concurrent psychosocial treatment. Referral to specialist counselling or drug and alcohol services may be appropriate (see also Chapter 6), and should include close communication between service providers. Pharmacotherapy for relapse prevention should be accompanied by close follow-up by the prescribing clinician.

Increasing medication adherence

Alcohol pharmacotherapy has been shown to be more effective than placebo among highly compliant participants. However, adherence rates of alcohol dependent patients are generally low, consistent with many chronic health conditions.

Poor medication adherence may be due to relapse to heavy drinking, adverse side effects, stigma attached to taking medication for an alcohol use disorder, no immediate reward for complying with these pharmacotherapies, and/or fears about the safety and side effects of the medication.

Adherence to pharmacotherapies may be assisted by:

- Eliciting the patient's thoughts and concerns about taking medication and using cognitive restructuring techniques to help them change unhelpful or maladaptive thoughts about taking medication.
- Providing the patient with a realistic view of the way in which the medication can help, its side effects, and any risks associated with its use.
- Using motivational interviewing techniques to help the patient to identify their personal costs and benefits of taking the medication.
- Providing the patient (and carers) with some take-home reading material about the medication.
- Tailoring the psychosocial intervention according to the patient's drinking goal: some studies show that coping skills training combined with naltrexone is better for helping patients cope with lapses and relapses, whereas supportive therapy is more effective in helping patients maintain abstinence.
- Following up patients who miss appointments.

Compliance therapy, based on these cognitive behavioural and motivational interviewing techniques, has demonstrated effectiveness in increasing medication compliance in alcohol dependent patients. Adherence may also be a problem in patients who suffer cognitive impairment from chronic drinking. Aids to enhance adherence in such instances include family supervision, medication calendars, special containers, dispensing systems, reminders and follow-up monitoring from health professionals.

Recommendation		Strength of recommendation	Level of evidence
7.13	Medication compliance can be improved with use of adherence enhancing strategies.	B	Ia

Selecting medications for individual patients

Available evidence does not enable clear recommendations as to which medication is best suited to individual patients. Deciding on choice of medication includes consideration of:

- **Available evidence**: the general conclusions from various meta-analyses suggest that acamprosate and disulfiram appear better suited to those seeking to achieve complete abstinence from alcohol, whereas naltrexone seems better directed at treatments where reduced or controlled drinking is the goal.
- **Individual patient factors**: such as side effects, prior experience with medications, treatment goals, capacity to adhere to treatment regimen, concomitant medical conditions.
- **Resource factors**: the cost of some medications (for example, topiramate, gabapentin, aripiprazole) will be prohibitive for some patients. Disulfiram treatment is best suited to people with social supports (such as family) that will help supervise medication adherence.

Chapter 8. Self help programs

8. Self-help programs

This chapter provides an overview of self-help approaches for patients, including Alcoholics Anonymous and Smart Recovery®, and their families, and how they can be incorporated into treatment.

Alcoholics Anonymous

Alcoholics Anonymous (AA) is a peer-based self-help organisation that aims to help members achieve and maintain sobriety. Although not intrinsically a form of treatment, it is readily available in Australia, cost-effective and easily accessible, and may play a useful role in an extended care plan.

Research suggests that patients who attend AA as part of a structured treatment program, in addition to individual outpatient sessions, and who begin attendance early in their treatment, demonstrate better outcomes than people attending either AA or treatment alone.

Established in the United States in 1935, over 100,000 AA groups exist worldwide with a total membership of approximately two million. In Australia, about 1700 groups operate in all states and territories, making AA the most widely available program for alcohol-dependent people in Australia. For those unable to access physical groups, a number of groups run online at <http://www.aa.org.au>.

How Alcoholics Anonymous works

AA is founded on the assumption that shared experience and mutual support are necessary for recovery from addiction. In particular, AA proposes that sobriety is only possible by first acknowledging one's inability to control the drinking habit, committing to a comprehensive overhaul of one's identity and lifestyle, and assisting new members in their recovery. AA, as the prototype for many self-help groups, uses a core program based around 12 steps (see box) that promote increased self-awareness and heighten a sense of meaning in life. Several studies have also suggested that AA-facilitated abstinence is partly due to an increase in self-efficacy, which arises from its recovery.

THE 12 STEPS OF ALCOHOLICS ANONYMOUS

1. We admitted we were powerless over alcohol – that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God, as we understood Him.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed, and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God, as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs.

AA encourages new members to attend 90 meetings in 90 days, and many long-time members (10 years or more) still attend daily. Such meetings form the core of recovery by providing a non-judgemental environment that facilitates the open discussion of members' difficulties and vulnerabilities. Generally, after attending several meetings the new AA member is assigned a sponsor (mentor) who helps them work through the 12 steps. The sponsor has been through the AA recovery program and maintained sobriety for at least one year (usually much longer); the new member is also encouraged to contact their sponsor whenever necessary if additional support is needed between meetings.

The program itself can be broken down into three main stages, namely:

- First, the member must recognise that they are unable to control their addiction, and that they require help from a source greater than themselves to overcome the problem (Steps 1 to 3). It is important to note that the concept of God or a 'higher power' includes anything of a transpersonal nature that can be drawn on for strength, including the AA group.

- The second phase develops self-awareness by asking the member to conduct an in-depth 'moral inventory', which is then used as the basis for 'making amends' (Step 8). This helps the member work through situations that could potentially trigger a relapse (Steps 4 to 10).
- Finally, the member is encouraged to develop a sense of spirituality (Step 11) and purpose by assisting others achieve sobriety (Step 12).

Evidence for Alcoholics Anonymous' effectiveness

Over the past 50 years, hundreds of studies have examined the effectiveness of AA, however the evidence base is difficult to interpret: very few randomised controlled trials exist, most participants have had exposure to other treatment programs in addition to AA, and naturalistic studies only include participants who have elected to attend treatment (suggesting a higher degree of motivation to change). Nevertheless, there is sufficient evidence to indicate:

- involvement in AA plays a major role in improving a variety of long-term physiological and psychological outcomes, including abstinence rates, employment status, interpersonal functioning and overall wellbeing
- members who engage more fully with the AA program tend to benefit more than those who simply attend meetings; there is a clear association between the level of involvement in AA and better patient outcomes
- clinicians using assertive referral practices (such as twelve-step facilitation therapy) to encourage AA involvement deepen their patient's commitment to using AA as part of an extended care plan, resulting in improved abstinence rates and greater treatment retention
- patients who attend AA alongside outpatient treatment show better long-term outcomes than those who attend either treatment or AA alone.

Recommendation		Strength of recommendation	Level of evidence
8.1	Long-term participation in Alcoholics Anonymous can be an effective strategy to maintain abstinence from alcohol for some patients.	B	II

For whom is Alcoholics Anonymous appropriate?

The only requirement for membership of AA is a desire to stop drinking. Members are able to attend as many meetings as they wish, at no cost. Patients who demonstrate a higher level of symptom severity are more likely to affiliate with AA. It is probable that AA's adherence to the disease model of alcoholism enables the dependent individual to relinquish the belief that controlled drinking is possible in their situation.

AA also provides a new social network supportive of abstinence; for the patient who lacks such support in their home environment, this aspect of AA involvement plays an important role in relapse prevention.

A common misconception concerning AA is that members need to be religious to benefit from the program. In a large-scale study, people involved with AA demonstrated improved outcomes whether or not they identified with a particular religious or spiritual belief system.

The efficacy of AA for patients with mental health comorbidities depends on the type of comorbidity they are suffering. For example, depressed patients require more intensive outpatient support, particularly in the early stages of aftercare treatment, to facilitate the social elements of AA involvement (including finding an appropriate sponsor) and to reduce the likelihood of dropping out of the program.

A longer duration of AA attendance in the first year of treatment and sustained involvement across 2 to 8 years has been linked to better long-term outcomes, so continued AA participation should form part of any extended care plan. This will ensure the patient maintains a social network supportive of abstinence once formal treatment is over, and is particularly important for patients who have severe symptoms or have high levels of support for drinking outside the therapeutic environment.

Referring to Alcoholics Anonymous

Assertive referral practices can improve AA meeting attendance and involvement, and is associated with better long-term outcomes. Strategies clinicians can practice include:

- providing meeting schedules and public transport timetables
- organising AA volunteers to accompany the patient to meetings
- using a 'meeting journal' (signed off by the AA meeting convener) to record attendance and reactions to the meeting
- organising a temporary sponsor.

Recommendation		Strength of recommendation	Level of evidence
8.2	Assertive referral practices to Alcoholics Anonymous increase participation and improves outcome.	A	I

SMART Recovery®

An alternative to the AA self-help approach is Self Management and Recovery Training (SMART), a not-for-profit mutual-aid group aimed at facilitating recovery from any addictive behaviour. Although relatively new to Australia, over 50 groups are currently operating across most states.

SMART Recovery® adopts a cognitive behavioural therapy framework, and diverges from AA in that it eliminates the focus on spirituality inherent to the AA 12-step approach.

It uses a four-point recovery program (see Table 8.1) designed to enhance members' motivation and teach techniques that help manage lifestyle and behavioural difficulties. Skills training involves exposure to (among other things) cost–benefit analyses, identifying and rectifying irrational thoughts, and role-playing.

Table 8.1: The SMART Recovery® 4-Point Program™

Point 1	Enhancing and maintaining motivation to abstain
Point 2	Coping with urges
Point 3	Problem solving (managing thoughts, feelings and behaviours)
Point 4	Lifestyle balance (balancing momentary and enduring satisfactions)

Source: Smart Recovery®, available at <http://www.smartrecoveryaustralia.com.au/>.

People who are uncomfortable with AA's spiritual focus may find the more secular approach of SMART Recovery® a useful self-help alternative.

Recommendation		Strength of recommendation	Level of evidence
8.3	SMART Recovery® may be an effective self-help alternative to Alcoholics Anonymous for reducing alcohol consumption.	D	IV

Self-help for families

Several groups based on the AA model are available in Australia for the families of recovering alcoholics.

These include Al-Anon and Alateen – a group specifically designed for teens (see <http://www.al-anon.alateen.org/>). Local meeting schedules can be obtained from <http://www.al-anon.alateen.org/australia/>.

A 12-step support group called Adult Children of Alcoholics also operates an online forum that may prove helpful for some people (see <http://www.adultchildren.org/>).

Family members may also benefit from counselling sessions to help them deal with the difficulties of supporting an alcoholic during recovery.

Recommendation		Strength of recommendation	Level of evidence
8.4	Self-help groups for families may provide support for those affected by people with alcohol dependence.	D	IV

Chapter 9. Specific populations

9. Specific populations

This chapter provides an overview of management of alcohol problems in adolescents and young people, pregnant and breastfeeding women, Aboriginal and Torres Strait Islander Australians as well as people from other cultures, older people and cognitively impaired patients.

Adolescents and young people

The media continues to reflect society's considerable concern, both in Australia and overseas, about youth alcohol consumption, especially 'binge' drinking. The young adult age group in Australia is most at risk of drinking at levels associated with long-term harm.

The adolescent years are a period for experimentation and socialisation with peers, and often include engaging in high-risk substance abuse behaviours. Experimentation is much more common than progression to long-term regular use. Binge drinking and deliberate drinking to become intoxicated is common.

The 2002 national survey on the use of alcohol by Australian secondary school students (White & Hayman 2004) found that experience with alcohol was high. Alcohol consumption became more common as age increased:

- by age 14, around 90 per cent of students had tried alcohol
- by age 17, around 70 per cent of students had consumed alcohol in the month before the survey
- the proportion of students drinking in the week before the survey increased with age, from 19 per cent of 12-year-olds to 50 per cent of 17-year-olds (White & Hayman 2004).

Rates of drinking above the NHMRC 2001 guideline levels among 14- to 19-year-olds were similar to the rates for the general population – about 9 per cent for alcohol-related disease risk (long-term harm) and 39 per cent for accident and injury risk (short-term harm). People aged 20 to 29 showed the riskiest drinking profile. About 60 per cent of this group drank above the guideline levels for accidents and injuries and about 16 per cent drank above the guideline levels for alcohol-related diseases (AIHW 2008).

Children and young people under 18 years of age are at greater risk of harm from drinking than adults, due to:

- a lower alcohol tolerance than adults
- their propensity for risky behaviour
- the high risks of alcohol-related injury in this age group
- the likely effects of alcohol on developing brains.

Neurodevelopment, especially in regions linked to regulation of behaviour and emotion, is not complete until well into adulthood. Regular, heavy alcohol or other drug use frequently inhibits adolescent development, especially impairing cognitive maturation and reducing educational achievement.

Polydrug use is common among young people in addition to alcohol. Around 16 per cent of 14 to 19 year olds smoke cigarettes. Uptake of cannabis use usually peaks around the age of 16 to 17 years. Around 25 per cent of 14 to 19 year olds and 54 per cent of 20 to 29 year olds report using cannabis in their lifetime. Weekly use occurs in 20 per cent of 14 to 29 year olds and daily use in 10 to 15 per cent.

Excessive alcohol use in adolescence is also associated with a wide range of other co-existing problems, including:

- difficulty with relationships (especially with parents)
- homelessness
- poor school performance
- low employment prospects.

Early alcohol use also increases the likelihood of alcohol abuse and alcohol dependence continuing into adulthood; the risk highest appears associated with heavy alcohol consumption before 16 years. Early intervention with adolescents at risk of alcohol problems is therefore very important. The NHMRC (2009) recommends that children and young people under the age of 18 not drink alcohol at all (see Guideline 3 in Chapter 2).

Recommendation		Strength of recommendation	Level of evidence
9.1	NHMRC guidelines recommend that not drinking alcohol is the safest option for children and young people under 18 years of age.	D	IV

Screening, assessment and engagement

Assessing substance use

Problem drinking in young people is variably defined and may refer to quantity of alcohol consumed, frequency of drinking and/or to adverse outcomes attributable to drinking. Adolescent alcohol problems commonly constitute recurrent binge drinking, and related short-term adverse consequences, including trauma, assault and memory loss. Adverse outcomes related to alcohol consumption in young people are highly correlated to males and to conduct disorder.

DSM-IV criteria for alcohol use disorders have limitations when used with adolescents. This is because some of the criteria, such as withdrawal, repeated efforts to cut down, and alcohol-related medical problems, generally emerge only after several years of heavy drinking and have a low prevalence in adolescents. Other DSM-IV criteria for alcohol disorders have different implications in adolescents when compared to adults. For example, while tolerance is often considered to have high specificity in alcohol dependent adults, it has low specificity in adolescents. Further, some young people satisfy a clinically present rating for at least one DSM-IV alcohol disorder symptom but not within the period specified by the DSM-IV.

Polydrug use is very common among adolescent problem drinkers, therefore screening and intervention for tobacco and other drug use should occur routinely. Use of validated screening instruments for multiple drugs (for example, ASSIST) can be incorporated into screening approaches (see Chapter 10 and Appendix 1).

If the young person presents intoxicated at the time of the consultation, a risk assessment is usually needed. Where risk is assessed as low, it is usually appropriate to reschedule the appointment. Where risk is assessed as high, more detailed assessment (for example, for acute suicidal intention, psychosis) is needed.

Bio-psychosocial assessment

A broad medical and psychosocial history, rather than a substance use history, is needed to work effectively with young people. Screening for mental health problems is also important because most mental disorders begin during adolescence and young adulthood, and conditions, such as depression, suicidal ideation, anxiety, history of sexual abuse and antisocial behaviour, are common in young people with alcohol problems.

A psychosocial history includes information about the social, cultural, educational and vocational background of the adolescent. A range of tools, such as HEADSS (see box), provides a framework for gathering psychosocial history from adolescents.

THE HEADSS ASSESSMENT

The HEADSS mnemonic forms the basis for an assessment that provides a 'psychosocial biopsy', an opportunity to develop rapport, assess risk and provide a guide to any necessary interventions.

H – Home environment

Where do you live? Who lives with you? How does each member get along?

Who could you go to if you needed help with a problem?

Parent(s) jobs? Recent moves? Wanted to run away? Are there new people at home?

E – Education/employment

What do you like/not like about school/work?

What can you do well/what areas would you like to improve on?

How do you get along with teachers/other students?

How are your grades; any suspensions? Changes?

Many young people experience bullying at school – have you ever had to put up with this?

E – Eating/exercise

Do you have meals with your family? Who cooks at home?

Are you worried about your weight? Do you think you are too thin or too fat?

Sometimes when people are stressed they can over eat/under eat. Have you ever experienced either of these? In general, what is your diet like?

In screening more specifically for eating disorders, you may ask about body image, the use of laxatives, diuretics, vomiting or excessive exercise and rigid dietary restrictions to control weight.

A – Activities and peer relationships

With peers? (What do you do for fun? Where? When?) With family?

Sports - regular exercise? Hobbies? Tell me about the parties you go to. Do you belong to any clubs?

How much TV would you watch a night? Favourite music?

Any trouble? Crimes? Arrests?

D – Drugs/cigarettes/alcohol

Many people at your age are starting to experiment with cigarettes/alcohol. Have any of your friends tried these or maybe other drugs like marijuana, snorting or injecting drugs, etc? How about you, have you tried any?

What effects have you found? Do you have any regrets? How much are you taking, how often and has frequency increased recently?

S – Sexuality

Some people are getting involved in sexual relationships. Have you had a sexual experience with a guy or a girl, or both?

Degree and types of sexual experience? Number of partners?

Masturbation/contraception? Knowledge about STDs

Has anyone ever touched you in a way that's made you feel uncomfortable or forced you into a sexual relationship? (History of sexual or physical abuse?)

How do you feel about relationships in general/about your own sexuality?

S – Suicide/depression/mood screen

How do you feel about yourself at the moment on a scale of 1 to 10?

What sort of things do you do if you are feeling sad/angry/hurt?

Is there anyone you can talk to? Do you feel this way often?

Some people who feel really down often feel like hurting themselves or even killing themselves. Have you ever felt this way?

Have you ever tried to hurt yourself or take your own life? What have you tried? What prevented you from doing so? Do you feel the same way now? Have you a plan, etc.?

S – Safety

Sun protection, immunisation, carrying weapons; for example, have you ever needed to carry a weapon to protect yourself?

Have you ever driven a car or driven with someone who was 'over the limit' or high on anything?

S – Spirituality

Beliefs, religion, music, what helps them relax, etc. What are you best at?
Do you believe in another higher power? Does your family have any religious beliefs?
Do you agree with them?

Source: Adapted from Goldenring, J & Cohen, E 1988, 'Getting into adolescent heads', *Contemporary Paediatrics*, vol. 5, pp. 75–90.

The differences between adult and adolescent problem drinkers have important implications for treatment. Apart from shorter drinking histories, adolescents engage in more polydrug use than adults. Also specific to adolescence are the rapid social and physical changes they experience, the range of co-existing life problems such as poor performance at school, difficult parental relationships, low employment prospects and accommodation difficulties, including homelessness.

A familial history of heavy alcohol and drug use also affects adolescents. Social and environmental factors, such as being exposed to a family culture that accepts heavy drinking, may contribute to development of dependence in the children of heavy drinkers. Genetic factors play a very important role in the complex interaction between an individual and his or her response to alcohol, including how alcohol is metabolised, its propensity to cause liver damage, and an individual's susceptibility to developing alcohol dependence. See also Chapter 3 for more information about assessment methods and instruments.

Recommendation		Strength of recommendation	Level of evidence
9.2	Screening and brief intervention for tobacco, alcohol and other drug use should occur routinely. Binge drinking and polydrug use are common among adolescent problem drinkers.	D	IV
9.3	A broad medical and psychosocial history is needed to work effectively with young people.	S	–

Treatment

Engaging adolescents in treatment is a critical issue. The principles are similar to treatment of other chronic disorders in young people.

Just as with adults, working effectively with young people experiencing difficulties with alcohol requires establishment of good rapport. Barriers to effective consultation with adolescents have been extensively described in the past two decades and can be classified into four broad categories: availability, accessibility, acceptability and equity of health services. Concerns about confidentiality have been identified as a particularly significant barrier to young people seeking professional assistance. A non-judgemental approach is needed that encourages the young person to be honest about reporting ongoing difficulties with alcohol.

Young people are influenced by the 'here and now' rather than any future benefits of changing current drinking patterns; young people are more interested in achieving the goals of adolescence than in focusing on improving their health. Given this, treatment goals need to be framed as 'relevant' to young people. Approaches should include examining how alcohol affects their appearance; their reputation among their peers; their ability to socialise; their ability to achieve in recreational, sporting, educational and employment arenas; and their finances.

The clinician needs to conduct these discussions at a level that is developmentally and cognitively appropriate to the age of the young person. Working with the young person to develop concrete short-term (weeks to months) goals is recommended. Encouraging the young person to participate in negotiation of treatment plans facilitates engagement in treatment and empowers change.

Families are an important part of the treatment of young people with alcohol problems. Where young people are still closely engaged with family it is important to gauge the parental perspective. However, this should not be at the expense of seeing the young person alone for most of the consultation.

In some cases, the young person may have become disengaged from the family as a result of heavy drinking and other drug use. Families are an integral part of the adolescent's world and it is therefore important to try to help the young person rebuild the connection. Depending on the circumstance this may be through mediation by the health professional, or more formally, with family counsellors.

Where adolescents are not engaging well with alcohol or drug services, use of specific outreach and proactive services that cater appropriately for their developmental stage, and incorporate consideration of their cultural background, lifestyle and, in many cases, their family, will be needed.

Recommendation		Strength of recommendation	Level of evidence
9.4	Engagement and therapeutic relationships require an understanding of adolescent development and a cognitively and developmentally appropriate approach.	S	–

Treatment approaches

Management of substance use disorders in adolescents requires a multi-pronged approach that takes into account the adolescent's stage of development and includes behavioural strategies, intervention for mental health and wellbeing and in some cases medication.

Early intervention for alcohol problems in young people is important. Alcohol and other substance use interferes with normal adolescent brain development, and neurodevelopment, especially in regions linked to regulation of behaviour and emotion, is not complete until early adulthood. Once young people have developed an alcohol use disorder, abstinence appears an unlikely outcome of treatment.

Brief interventions suit some adolescent drinkers who are in early stages of their drinking 'career', and can be a critical part of reducing the risk of ongoing alcohol and other drug problems. However, many young people will do better by forming ongoing relationships with counsellors or health care professionals. They need to be encouraged to return when they want or need to.

More intensive treatment interventions, such as motivational interviewing, cognitive behavioural therapies and family therapies in general, have been shown to be of benefit, especially in conferring improved knowledge about alcohol-related harms and at least a short-term reduction in alcohol and other drug use. Few differences in outcome have been found when comparing treatment settings and types of adolescents, although as with adult services, longer treatment retention is associated with better outcomes. Studies of longer-term outcomes from inpatient and outpatient treatment settings are less readily available.

Certain pre-treatment factors predict outcomes. A poorer prognosis is associated with more severe alcohol problems at the outset and with other drug use problems. Poor psychosocial functioning pre-treatment and lack of longer-term engagement in health services are also associated with negative outcomes. Abstinent peers in a young person's social network, on the other hand, increase the odds of remaining abstinent four-fold.

The evidence base for pharmacotherapy (naltrexone, acamprosate and disulfiram) for alcohol use disorders in young people remains limited, as few controlled trials have been conducted.

Recommendation		Strength of recommendation	Level of evidence
9.5	Brief interventions may suit some young people drinking excessively and/or experiencing alcohol-related harms.	A	Ia
9.6	Motivational interviewing, cognitive behavioural and family therapies have been shown to be of benefit in reducing alcohol and other drug use and related harms.	A	Ia
9.7	Limited evidence exists on the role of pharmacotherapies in reducing alcohol use in adolescents.	B	II

Addressing comorbidity

While controversy about which comes first (temporal primacy) exists, the comorbidity of mental health disorders and alcohol problems is very strong. Treatment of young people with alcohol problems must, therefore, include screening for a history of sexual abuse and screening and management of common mental health disorders especially depression, suicidal ideation, anxiety, and antisocial behaviour. Reduced substance use has been noted when comorbid mental conditions are appropriately treated.

Adolescent drinkers may experience a range of psychosocial crises. In these cases, outreach and crisis interventions that cater appropriately for their developmental stage and incorporate consideration of their cultural background, lifestyle and in many cases their family, should be engaged.

Recommendation		Strength of recommendation	Level of evidence
9.8	Adolescent drinkers may experience a range of psychosocial crises. In these cases, outreach and crisis interventions should be engaged.	D	IV
9.9	Mental health disorders, including depression, suicidal ideation, anxiety, sexual abuse and antisocial behaviour, are common in young people with alcohol and other drug problems, and should be addressed in the treatment plan.	D	IV

Pregnant and breastfeeding women

Limitations in the available evidence make it impossible to set a 'safe' or 'no-risk' drinking level for women to avoid harm to their unborn children or during breastfeeding. A conservative, public health approach is therefore needed when recommending that not drinking alcohol is the safest option for pregnant women, those who may soon become pregnant and those who are breastfeeding.

NHMRC guidelines and advice about pregnancy and breastfeeding

Based on available evidence, the NHMRC (2009) provides guidance and advice on alcohol use during pregnancy and breastfeeding (see Guideline 4 in Chapter 2).

Pregnancy

The evidence from systematic reviews of the literature and prospective cohort studies suggests that exposing the foetus to alcohol may result in adverse effects, ranging from mild to severe and affecting child's cognitive, behavioural and physical development. In addition, alcohol exposure is a strong predictor of premature or preterm birth, and low birth weight for gestational age.

The NHMRC (2009) gives the following advice about alcohol consumption during pregnancy:

- Not drinking alcohol is the safest option.
- The risk of harm to the foetus is highest when there is high, frequent maternal alcohol intake.
- The risk of harm to the foetus is likely to be low if a woman has consumed only small amounts of alcohol before she knew she was pregnant or during pregnancy.
- The level of risk to the individual foetus is influenced by maternal and foetal characteristics and is hard to predict.

However, women who have consumed alcohol during pregnancy can be reassured that the risk to their unborn child is likely to be low if they consumed alcohol at low risk levels (that is, less than seven standard drinks over a week and no more than two standard drinks on any one day). Women who drink alcohol sparingly (less than one standard drink per drinking day without intoxication) may be reassured that there is no consistent evidence this is harmful to their unborn child. Women who remain concerned should seek specialist medical advice.

Recommendation	Strength of recommendation	Level of evidence
9.10 Women who are or may become pregnant should be advised of new NHMRC guidelines that recommend abstinence. Clinicians who provide advice to pregnant women should familiarise themselves with the risk analysis described in those guidelines. Women who drink alcohol sparingly (less than one standard drink per drinking day without intoxication) may be reassured that there is no consistent evidence this is harmful.	S	–

Breastfeeding

Existing evidence suggests that consumption of two standard drinks or more per day may adversely affect lactation, infant behaviour (for example, feeding, sleep–arousal cycle), and psychomotor development of the breastfed baby. However, the lack of high quality research makes it difficult to give definitive advice on safe levels.

The NHMRC (2009) gives the following advice about breastfeeding mothers consuming alcohol:

- Not drinking alcohol is the safest option.
- Women should avoid drinking alcohol in the first month after delivery until breastfeeding is well established.
- After that:
  - alcohol intake should be limited to no more than two standard drinks a day
  - women should avoid drinking immediately before breastfeeding
  - women who wish to drink alcohol should consider expressing milk in advance.

If a woman wishes to drink, it is recommended that she breastfeeds before drinking. Otherwise, wait until blood alcohol returns to zero (one hour per standard drink consumed) before resuming breastfeeding. It is not necessary to express or discard milk before this time.

The risk of accidental injury and/or harm to mother and infant if the mother is intoxicated while breastfeeding is high. For example she may fall, trip or become drowsy and accidentally drop or smother her baby. A breastfeeding mother needs to be advised to have a 'safety plan' for when she does drink alcohol that includes not sleeping in the same bed and/or having another trusted partner, family member, or friend who has not been drinking care for the baby (including when it sleeps) until she is sober and able to manage safely herself.

Recommendation	Strength of recommendation	Level of evidence
9.11 Breastfeeding women should be advised of current NHMRC guidelines that recommend abstinence from drinking. If a woman wishes to drink, it is recommended that she breastfeeds before drinking. Otherwise, wait until the blood alcohol returns to zero (one hour per standard drink consumed) before resuming breastfeeding. It is not necessary to express or discard milk before this time.	S	–

Screening and brief interventions

In pregnant women, quantity–frequency estimation is recommended to detect any consumption of alcohol (see Chapter 3).

The T-ACE and TWEAK screening tests were designed for use with pregnant women and are adequately sensitive for detecting high-risk levels of consumption; in this the T-ACE performs better than TWEAK. T-ACE and TWEAK questionnaires may be used in this

population to detect consumption at levels likely to place the foetus at significant risk of alcohol-related harm (see Chapter 3 and Appendix 1). Neither instrument is designed to detect unproblematic low-level use of alcohol.

Brief interventions (see also Chapter 4) are effective in reducing drinking in pregnancy by non-alcohol dependent women and should be provided to all pregnant women and those contemplating pregnancy.

Partner participation significantly increases the effectiveness of brief interventions.

It has been demonstrated that brief interventions in this population result in:

- increased rates of abstinence before conception and during pregnancy
- significant reduction of both daily and binge drinking
- reduced foetal mortality rate
- higher birth weight and birth length in the newborn.

Recommendation		Strength of recommendation	Level of evidence
9.12	Brief interventions are recommended for use during pregnancy, including the partner where relevant. Follow-up evaluation of response to the intervention is important.	B	II

Impact of alcohol consumption on mother during pregnancy

It is recognised that drinking alcohol during pregnancy can pose serious risks not only to the developing baby but also to the mother. It is important, therefore, for women in their childbearing years to be well educated about the toxicity of alcohol to themselves.

It is essential that women who have consumed or continue to drink alcohol during their pregnancy, at whatever level, see this as a health concern for themselves, as well as their foetus, but are not made to feel guilty. They need to feel supported in receiving the best obstetric and social care possible, and practical assistance in giving up or more safely managing their drinking.

Serious medical complications that a pregnant woman who drinks may experience include:

- miscarriage
- stillbirth
- premature birth
- injuries due to intoxication
- alcohol withdrawal during pregnancy, labour or post delivery
- excessive vomiting
- dehydration
- poor nutrition
- hypertension
- hypoglycaemia
- gestational diabetes
- reduced immune system function.

Alcohol intoxication during pregnancy

Alcohol intoxication is a serious risk to a pregnant woman as well as to her foetus.

A pregnant woman with acute alcohol intoxication is at immediate risk of overdose, vomiting and choking, injury, miscarriage or premature labour. The progress of her pregnancy and her wellbeing therefore needs to be assessed immediately, preferably by an experienced midwife in consultation with the medical/obstetric team. She must be closely observed and nursed in a safe environment.

If possible undertake an initial assessment of the foetus by listening to its heartbeat.

If available undertake a cardiotocograph for electronic foetal monitoring, and follow up with an ultrasound if appropriate. Hospital admission is recommended for close monitoring, possible medical intervention, and a safe environment to prevent accidental injury.

Arrange for further assessment and follow-up throughout her pregnancy for problems with alcohol, general health and nutrition, psychological wellbeing, mental health problems, and social issues such as domestic violence.

Recommendation		Strength of recommendation	Level of evidence
9.13	If a woman presents intoxicated during pregnancy, hospital admission is recommended to assess foetal safety, maternal safety, and for comprehensive assessment and care planning.	D	IV

Alcohol withdrawal during pregnancy

A pregnant woman at risk of withdrawal is typically drinking six standard drinks or more on most days. Physiological tolerance/dependence has occurred and she almost certainly meets the criteria for alcohol dependence syndrome (addiction).

If a woman is drinking at these levels and she significantly reduces or stops drinking she may undergo acute alcohol withdrawal. This can occur anytime during her pregnancy as well as during labour and after delivery.

As her blood alcohol concentration drops, onset of withdrawal can occur from 6 to 12 hours after her last drink. Alcohol withdrawal can be life threatening.

If the woman has been drinking heavily shortly before delivery or has undergone withdrawal during labour or delivery, the newborn is at risk of acute alcohol withdrawal. Onset of withdrawal for the newborn may begin 24 to 48 hours after delivery, depending on the time of the mother's last drink.

Caring for a pregnant woman in acute withdrawal

A pregnant woman at risk of alcohol withdrawal needs to be hospitalised, at any stage of gestation, as alcohol withdrawal alone is potentially fatal, and there are additional risks to her health and that of her foetus at this time. Ideally her antenatal care plan will mean that her baby will be delivered in a hospital where both she and baby can receive specialised midwifery and medical care, as well as longer-term health and social support.

The mother needs close observation and careful monitoring, generally using a withdrawal scale (see Chapter 5) and supportive nursing and medical care to reduce risk of complications for her and baby. NSW Health and SA Health recently published Australian management guidelines for this setting (NSW Health & SA Health 2006).

Guidelines for treating a pregnant patient at risk of withdrawal include:

- If she starts withdrawing, she needs immediate specialist medical and nursing care in a well-equipped hospital.
- She needs to be closely observed and monitored for any progression of signs and symptoms, and medically treated to prevent and manage any complications to her and the foetus.
- She will need medical and nursing care for at least 5 days after the onset of withdrawal and, depending on any other factors or co-existing medical conditions, perhaps longer.
- It is important to inform the receiving clinical team about her drinking history, the time of her last drink, her blood alcohol concentration when examined, vital signs and CIWA-Ar scores (see Chapter 5 and Appendix 3).

It is particularly important to report any history of alcohol withdrawal complications such as seizures or hallucinations, or delirium tremens, and risk of thiamine deficiency leading to Wernicke's encephalopathy.

Urgent consideration should be given to starting nutritional assessment and management. Parenteral **thiamine** supplementation should be commenced before administration of any glucose (see Chapter 5). **Folate** supplementation should be given (also parenterally, if doubts about likely absorption of oral tablets), given that alcohol misuse is associated with folate deficiency, which is a well-documented factor in neural tube defects. Other vitamin deficiencies should be considered as well as overall protein and calorie status. These deficiencies typically respond well to availability of a balanced diet in hospital once withdrawal has resolved, but may necessitate a longer hospital admission.

Once she has recovered from acute withdrawal and is willing, she should undergo a full drinking history and comprehensive assessment, including assessment of her family and any other children in the home. A comprehensive care plan should be developed.

The specialist medical and nursing team need to ensure the woman's general practitioner, obstetrician and/or midwife are notified immediately, and offer them clear guidelines on her assessment, stabilisation, medical, nursing and psychological management and support needs.

Recommendation		Strength of recommendation	Level of evidence
9.14	Alcohol withdrawal during pregnancy should be managed in a general hospital, ideally in a high-risk maternity unit in consultation with a specialist drugs-in-pregnancy team. Diazepam may be given as needed to control withdrawal. Nutritional intervention should be initiated, including parenteral thiamine, folate replacement and assessment for other supplementation in hospital.	S	–

Health care service policies and protocols for managing pregnant women affected by alcohol or other drugs

A pregnant woman affected by alcohol (or other drugs) who presents to a clinic or emergency service in crisis may be experiencing:

- intoxication or acute withdrawal
- thiamine deficiency
- serious mental health problems
- acute illness, overdose or injury
- homelessness, unsafe housing, violence.

Each healthcare service needs to have clear policies and clinical protocols to assess and respond to such situations so pregnant women can be humanely and effectively cared for immediately as well as in the longer-term. Having clear policies and protocols will help to support duty of care and good practice in this regard.

Key questions to ask concerning the pregnant woman in withdrawal are:

- How far away is she from the nearest hospital?
- What is her general health status?
- What stage of gestation is she?
- Is she at serious risk from physical or mental illness, injury, poor nutrition, dehydration, infection, violence?
- Is she at risk of premature labour?
- Does she have dependent children or family members who rely on her (for example, is she a sole parent or carer of others)?
- Does she need temporary childcare while she is ill?

If your service cannot assess and care for her safely she should be transferred immediately to a major medical centre with the capacity to care for her and her foetus. She is likely to need a trusted female relative or friend to accompany her and/or her partner if she wishes.

She will need close follow-up and support after discharge. She may be willing to undertake specialist treatment for her drinking as well as antenatal care and is likely to need practical assistance to take up her referral.

Recommendation		Strength of recommendation	Level of evidence
9.15	Women who present during pregnancy with serious alcohol (and/or other drug) problems should be admitted to an appropriate hospital unit for stabilisation, comprehensive assessment and care planning.	S	–
9.16	Assertive follow-up is recommended for antenatal care, substance misuse treatment, and welfare support and child protection.	S	–

Treatment of alcohol dependence during pregnancy and breastfeeding

Pregnant women and mothers who have developed or are at increased risk of alcohol dependence and related problems (such as physical, mental health and social problems) need professional advice, social support and specialist intervention for their alcohol dependence. Timely intervention is important both for their longer-term wellbeing, as well as for reducing more immediate risks of harmful alcohol effects during pregnancy and breastfeeding.

No sufficiently rigorous studies have been conducted with alcohol dependent women undergoing alcohol treatment during pregnancy to establish any evidence for particular interventions being effective.

Psychosocial treatment options should be offered (see Chapter 6), as use of pharmacotherapies for alcohol dependence cannot be recommended at this stage. Use of naltrexone, acamprosate or disulfiram during pregnancy or breastfeeding is not supported by sufficient safety data.

Recommendation	Strength of recommendation	Level of evidence
9.17 Pharmacotherapy to maintain abstinence from alcohol cannot be recommended during pregnancy due to insufficient safety data.	S	–

Health effects of alcohol on the foetus

The foetus may have significant short-term and longer lasting health problems if the mother has been drinking during pregnancy.

The harmful effects of drinking alcohol during pregnancy on the foetus seem to depend on how much alcohol the mother consumes at any time during her pregnancy. These problems range from mild to very serious. The extent of alcohol-related harm may not become evident until the child is older and behavioural and learning problems become evident.

Foetal alcohol spectrum disorders

Four known disorders (known as Foetal Alcohol Spectrum Disorders) are associated with foetal exposure to alcohol; they range from mild to severe.

The three less severe, but often more difficult to diagnose, disorders are:

- foetal alcohol effects
- foetal alcohol-related birth disorders
- alcohol-related neuro-developmental disorder.

The fourth disorder, foetal alcohol syndrome, is the most serious of these alcohol-related disorders. Babies born with foetal alcohol syndrome have particular abnormal physical features as well as any of a range of serious health and developmental problems, including:

- significant learning difficulties
- intellectual disability
- poor eye sight and hearing
- poor coordination and motor skills
- defects of the face and bones
- heart, liver and kidney defects
- slow physical growth after birth.

No blood or laboratory tests are currently available to help diagnose foetal alcohol spectrum disorders. Diagnosis therefore relies on a specialist's assessment of the child's growth and development, any characteristic facial features and physical disorders, central nervous system dysfunction (including intellectual ability), combined with confirmation that the mother did actually drink alcohol during her pregnancy.

Recommendation	Strength of recommendation	Level of evidence
9.18 Assertive antenatal care, including monitoring of foetal growth and health, is recommended.	S	–

Neonatal withdrawal

Neonatal withdrawal occurs because the flow of alcohol from the mother's bloodstream through the placenta stops suddenly after delivery.

When there is concern that a pregnant woman may be alcohol dependent or a regular excessive drinker, it is important to closely monitor the newborn for onset of alcohol withdrawal. Signs and symptoms of alcohol withdrawal in a newborn baby include:

- tremor
- irritability
- seizures
- bloated abdomen
- vomiting.

Emergency medical treatment and/or evacuation of the newborn will be needed immediately if there are signs or symptoms of alcohol withdrawal and they are not in a well-equipped hospital.

A specialist service should be consulted and arrangements made for assessment and diagnosis of foetal alcohol syndrome if such expertise is unavailable locally. It is also necessary to sensitively prepare the mother, father and family for the need for future support and assessment of any of the less recognisable foetal alcohol spectrum disorders. The details of this assessment lie outside the scope of these guidelines.

Recommendation		Strength of recommendation	Level of evidence
9.19	Management of infants with neonatal alcohol withdrawal should be undertaken in consultation with a specialist unit.	S	–
9.20	Infants born to women who have consumed alcohol regularly during pregnancy should be carefully assessed for foetal alcohol spectrum disorders by a paediatrician aware of the maternal history, with further management directed by the appropriate experts.	S	–

Providing support to mothers and babies and education to the men in their lives

Supporting pregnant women, mothers and babies

To increase the likelihood of healthy outcomes for mother and baby, women need to trust their healthcare providers and feel they receive good advice and support. Clinicians can earn this trust by being available, approachable, non-judgmental and willing to care for and support their pregnant and breastfeeding patients even if they choose to drink.

Educating fathers and other men

It is important that fathers and other men be educated about the risks associated with women drinking during pregnancy and how they can support their female partner, and any other female family members, during pregnancy and breastfeeding. In particular, fathers, brothers and uncles can best support women who are pregnant or breastfeeding by not drinking near them, or by refraining from drinking.

Fathers, brothers, uncles and other male family members have a role to play in keeping mothers and babies safe by their also choosing not to drink or, if drinking, consuming alcohol at low-risk levels. If male partners or others do drink alcohol, they need to make sure they are not intoxicated or otherwise place the pregnant woman at risk.

Recommendation	Strength of recommendation	Level of evidence
9.21 Assessment of the family unit is an essential aspect of managing substance use in women. Intervention should be directed to the whole family unit to reduce consumption of alcohol.	S	–

Cultural considerations

Beliefs about pregnancy and childbirth among women from diverse cultural backgrounds can differ between women and their healthcare providers. For example, an Indigenous woman might believe that her pregnancy is connected to her traditional Dreaming and not linked to her sexual activity. Her belief may mean that any discussions about her pregnancy and drinking alcohol may be difficult. Your health message to her about the risks of drinking, pregnancy and breastfeeding could take into account her belief that pregnancy may happen at any time, and then generalise the message of safety and risk of alcohol to 'any woman who is pregnant or breastfeeding' rather than focus directly on her (see also 'Indigenous Australians and people from other cultures' below).

For some women who hold particular cultural beliefs about pregnancy, it may be useful to help them consider not drinking any alcohol at all or only drink at very low-risk levels throughout their childbearing years.

Differing cultural beliefs may at least partially explain why some women do not present for antenatal care until late in their pregnancy. Another factor may be that they have limited access to acceptable and 'culturally safe' services.

Recommendation	Strength of recommendation	Level of evidence
9.22 Indigenous women should be offered referral to culturally appropriate clinical services.	D	IV

Alcohol and mental health problems

Pregnancy and new motherhood can be less than positive experiences for some women. Women are particularly vulnerable if they have serious mental health problems, such as depression, post-natal depression, posttraumatic stress disorder, other anxiety disorder or a psychotic illness, and for many, co-existing alcohol dependence (comorbidity/dual diagnosis). This is especially concerning for women who have:

- experienced sexual abuse or other trauma in their life
- limited access to emotional and practical support; for example, no or minimal extended family nearby, single parenthood, or relationship problems
- family separations
- significant grief and loss
- labour and delivery complications
- problems with their baby's health.

Like any pregnant or new mother, it is important that her aspirations, life skills and particular needs are acknowledged, along with her fears and challenges about her pregnancy and parenting. Her health carers and other service providers need to build a strong therapeutic relationship with her, and ensure they have collaborative relationships between themselves that can ensure her needs are well understood and responded to holistically, so she can be helped to manage her 'actual life' challenges at this time.

It is important to explore issues of guilt about the effect of substance use on the infant, and to educate each woman about the likely outcomes in her case.

Linking women with health services and birthing programs early in their pregnancy, or as soon as possible, is crucial to providing them with the mental health and alcohol comorbidity expertise and any culturally appropriate support they need.

A father may also experience depression or anxiety, or other mental health problems, and may feel isolated from his partner and her baby. Acknowledging that parenting and a change in family relationships can be stressful for fathers and mothers can be the first step in treating their mental health, and comorbidity problems, and achieve recovery. Linking mothers and fathers with appropriate services and local support groups, and/or being available for counselling or an informal chat, are therefore very important elements that can help them throughout pregnancy and parenthood.

Recommendation		Strength of recommendation	Level of evidence
9.23	Comprehensive mental health assessment is an essential component of an integrated care plan for pregnant women with alcohol problems.	S	–

Indigenous Australians and people from other cultures

This section provides guidance on managing alcohol problems among Indigenous Australians. Detailed guidelines are available in the *Alcohol Treatment Guidelines for Indigenous Australians* (Australian Government Department of Health and Ageing 2007). This section also briefly addresses approaches to patients from diverse cultural backgrounds.

Most evidence in this section is based on consultations with community, patients, clinicians, experts in the field, case studies and a few service evaluations.

Specificity of the Indigenous population

Indigenous Australians suffer a greater burden of ill health than the rest of the population. According to the Australian Bureau of Statistics and the Australian Institute of Health, the burden of disease suffered by Indigenous Australians is estimated to be 2.5 times greater than the burden of disease in the total Australian population (AIHW & ABS 2008). Indigenous Australians have lower life expectancy and lower levels of access to health services than the general population. They have higher rates of chronic and preventable illnesses, poorer self-reported health and are more likely than non-Indigenous people to be hospitalised for most diseases and conditions. Indigenous Australians are more likely to report high or very high levels of psychological distress than non-Indigenous people.

Many Indigenous people and communities are at increased risk of alcohol problems because they are marginalised, disempowered and at a social disadvantage. Unemployment, overcrowded and/or inadequate housing as well as recurrent experience of grief, trauma and loss further contribute to risk. Separation from families, sometimes with subsequent childhood physical and/or sexual abuse, is an additional major risk factor. These factors also predispose Indigenous people to poor mental and physical health, and comorbidity is common. It is important to provide quality treatment of alcohol problems which is mindful of the comorbidities and the personal and broader community situation.

Limited data exist on the patterns of drinking among Indigenous Australians. It appears that Indigenous people are less likely to be current drinkers than their non-Indigenous

counterparts, but those who do drink are significantly more likely to drink at levels that place them at risk of harm. No data on the prevalence of alcohol dependence exist.

Indigenous people may face considerable barriers to accessing mainstream services for help, resulting in late presentation, namely:

- services are typically designed for and by the majority culture and may therefore seem unapproachable and inappropriate
- shame and/or fear of a judgemental response
- unawareness of the range of services available, such as early intervention, outpatient detoxification and relapse prevention medications.

Given the late presentation of alcohol problems, active detection is important. Mainstream services need to work with Indigenous communities and agencies to improve the accessibility and appropriateness of their services. Employment of Indigenous staff (and provision of appropriate support, training and career development opportunities for them) can improve service accessibility and appropriateness.

Recommendation	Strength of recommendation	Level of evidence
9.23a Given late presentation of alcohol problems, active detection is recommended.	D	IV

Current treatment approaches and treatment accessibility

Minimal formal study has been done of the effectiveness of treatment approaches to alcohol problems when applied among Indigenous populations. As well as facing barriers to accessing mainstream services it also seems likely that Indigenous people are often not receiving access to the full range of treatment services. In particular the availability of early intervention, pharmacotherapies to reduce relapse, and quality aftercare seems to be limited or variable.

In surveys of drug and alcohol treatment service patients and of community members, many Indigenous respondents report their desire for Indigenous staff members to be part of their treatment team, in order to improve communication, understanding and trust. However, some Indigenous Australians have also reported changing their drinking habits as a result of feedback from respected non-Indigenous health professionals.

Consultation suggests the need for an increase in Indigenous-specific treatment services as well as the need for increased cultural sensitivity of mainstream services. Wherever possible, Indigenous patients should be offered access to an Indigenous staff member in mainstream health care services to more readily identify and address Indigenous spiritual and cultural needs. Some patients prefer their management to be coordinated through the local Aboriginal controlled Substance Misuse and Health Service or to attend an Indigenous-specific rehabilitation service. Some Indigenous patients do, however, prefer the relative anonymity of mainstream services, particularly for treatment of stigmatised disorders. Thus, the patient's right to choose between Indigenous and mainstream health services should be respected.

Indigenous Australians should have access to the full range of evidence-based treatment services, even while specific evidence is gathered on what approaches may be appropriate to their needs. Mainstream treatment services can strive to improve their accessibility and cultural appropriateness by employing Indigenous staff and collaborating with Aboriginal controlled Substance Misuse and Health Services.

Recommendation		Strength of recommendation	Level of evidence
9.24	Indigenous Australians, like all other Australians should have access to the full range of treatment services, including early intervention and where appropriate, relapse prevention medications.	D	IV
9.25	Indigenous Australians should be offered access to trained Indigenous health care workers and services where possible.	D	IV
9.26	Non-Indigenous clinicians should work in partnership with Indigenous health professionals and/or agencies to improve treatment access and appropriateness for communities.	D	IV

Brief intervention

Everyone who attends a health service should be periodically screened for their level of drinking, and offered opportunistic brief intervention if appropriate.

The principles of brief intervention as developed in the mainstream population (see Chapter 4) are likely to apply in Indigenous settings, if appropriately delivered, including:

- using non-judgemental style
- giving feedback on evidence of harm or risk associated with drinking and keeping in mind what is likely to be relevant to that individual
- listening to the patient's response (for example, what past attempts they may have made to change their drinking; how ready they are to consider change)
- providing specific advice about safe use of alcohol
- respecting the goals the patient is prepared to accept and helping them identify practical strategies for changing their drinking habits.

Strategies to change the consumption patterns of a dependent drinker are likely to include referral to a specialist service or clinician.

Assessing an Indigenous patient

Indigenous communities around Australia differ widely. Clinicians must avoid making assumptions, but be mindful that the patient's life-view and mode of communication may be very different from their own. Respect and a willingness to learn is a key ingredient to good communication with Indigenous people. It is important to consider the patient in the context of both family and community.

Involvement of an Indigenous health professional in assessment and treatment is likely to improve communication and hence quality of the information imparted and likelihood of engagement with treatment. Some Indigenous people consider a series of direct questions impolite and intrusive. A clinician is likely to achieve better engagement and more accurate history by taking time to introduce him or herself in an unhurried way and letting the patient tell their story; any apparent gaps in the history can be elicited with questions later if necessary.

In some remote Indigenous communities it is a sign of respect to pause and consider a question before responding. Clinicians may need to refrain from jumping in with a clarifying question. Lack of eye contact by people in more traditional Indigenous communities can easily be misinterpreted as evasiveness.

Language, including use of English words, differs across communities. It is often challenging to quantify alcohol consumption because numbering systems differ, and people in Indigenous communities usually share alcohol. Finding out how many people share the supply (for example, a case of beer) may help and frequency of drinking (for example, only on payday, or daily) will help determine the risk of withdrawal. Past withdrawal symptoms, such as 'grog shakes', are also important in predicting severity of withdrawal.

One brief screening instrument, the Indigenous Risk Impact Screen (IRIS; see Appendix 1), has been specifically validated in an Australian Indigenous setting, and screens jointly for alcohol problems, other drug problems and mental health disorders.

Australia's Indigenous population suffers a high prevalence of poor health. Medical conditions contributing to the ill health Indigenous people experience include:

- circulatory system diseases (including heart disease)
- diabetes
- respiratory diseases
- musculoskeletal conditions
- rheumatic fever and rheumatic heart disease
- kidney disease
- eye and ear problems.

As well, Indigenous adults are twice as likely to report high or very high levels of psychological distress as non-Indigenous adults.

Careful assessment of physical and psychiatric complications and comorbidities is essential.

Recommendation		Strength of recommendation	Level of evidence
9.27	A respectful, holistic and integrated approach to assessment and management is necessary, considering the patient in the context of both the family and the community.	D	IV
9.28	Indigenous cultures and customs vary. Use of language and approach to communication should be appropriate for both the individual and the community.	D	IV
9.29	Given the high prevalence of physical and mental comorbidities in the Indigenous population, clinicians should consider the possibility of physical and/or mental comorbidity in all presentations.	A	I

Managing alcohol withdrawal

The setting for elective withdrawal management should be carefully considered, based on knowledge of past withdrawal severity, frequency and amount of consumption, and of comorbidities and social setting. Any medical condition (such as diabetes or heart disease) can make withdrawal more serious, and general hospital admission may be needed for some patients (see Chapter 5).

Preventing relapse

Presentation for treatment is often late, when dependence is at an advanced stage. Residential rehabilitation may help break the cycle of drinking, particularly in the dependent drinker who has had recurrent relapses or who lives with other heavy drinkers.

If alcohol dependence is treated early in its course, the person may be able to be treated as an outpatient with psychotherapy and relapse prevention medications (see Chapters 6 and 7).

No evidence suggests that Indigenous Australians should have a biologically different response to pharmacological treatments compared to the general population. Indigenous people with alcohol dependence, as all other Australians, should be offered access to pharmacotherapies to reduce relapse in alcohol dependence, if there are no contraindications. The role of medication and of non-pharmacological treatment options should be carefully explained, where possible with the involvement of an Indigenous health professional.

Some patients may prefer the convenience of once-per-day dosing of naltrexone above three-times-daily acamprosate. Disulfiram is often contraindicated in the Indigenous population due to concurrent health problems incompatible with the significant side effects of this medication.

Quality aftercare is needed, including skilled counselling and support. It is important to take a holistic and integrated approach to management, which considers not only the alcohol use disorder, but also physical and psychiatric comorbidities, housing and financial needs, and family and community context.

Reducing harm

Both at an individual and a community level, harm reduction measures should be considered where a drinker is unable or unwilling to stop drinking. Such measures should include administration of thiamine for those who continue to drink and consideration of child protection, domestic violence and road safety needs.

Preventing and reducing alcohol problems for Indigenous communities

Clinical efforts need to combine with advocacy to successfully deploy measures to address underlying social risk factors for alcohol problems, and to support and empower communities in their efforts to reduce drinking and improve wellbeing. Communities and governments need to work together to implement a full range of evidence-based measures to reduce alcohol problems including, where appropriate, controlling supply.

Communities and individuals need culturally appropriate education on how to detect alcohol problems earlier, and on the risks of drinking above recommended limits. Education should specifically include information about the risks of alcohol-related harm to the pregnant mother, the foetus and the breastfed infant. Partnership between mainstream services and Indigenous health professionals, services and communities increases the chance of achieving reduction in alcohol problems both at the individual and at the community level.

Recommendation	Strength of recommendation	Level of evidence
9.30 The ongoing impact of colonisation should be considered and efforts to provide a range of treatment options for alcohol problems to Indigenous population should be combined with wider community measures addressing both alcohol misuse-related problems and underlying social determinants of alcohol misuse.	D	IV

Dealing with patients from diverse cultural backgrounds

People from some ethnic groups will consider certain issues personal, sensitive or irrelevant and as a result may feel offended if you try to discuss those issues directly.

You should ask the patient if they would like a family member or friend to be present when you are assessing or interviewing them. For example, a chaperone may be needed for physical examinations.

Clinicians must be sensitive to the patient's possible embarrassment or reluctance to discuss certain issues; some topics may not usually be discussed. It would also be useful to have an understanding about culturally-specific taboos or beliefs about the reason for, or perception of, the illness, including its course and treatment.

Family is very important in many cultures; the patient may wish to seek family opinion before making a decision about treatment. It is advisable to welcome and encourage family involvement in managing the problem as it may maximise compliance to treatment and support for the patient. Always check to make sure the patient correctly understands what you have said. Be aware that certain physical actions (such as pointing at someone) are offensive in some cultures.

Consider referring the patient to a clinician who comes from a similar background or who speaks their language. It is often valuable to provide support or advice to the other clinician, and to ensure he or she knows how to access other health professionals (such as counsellors) appropriate to their own community.

Older people

Older Australians (aged 65 years or more) represent approximately 13 per cent of the population but within the next 50 years they are expected to represent more than 25 per cent of the population (ABS 2007). Despite the proportional increase in the size of the older community, research on alcohol use among older Australians remains scarce, and data from older people are often aggregated in large-scale studies, making it difficult to accurately determine the prevalence of at-risk alcohol consumption across the older age group spectrum.

Based on the 2007 National Drug Strategy Household Survey (AIHW 2008) of Australians aged 60 years and older, it is estimated that:

- 15.6 per cent drank alcohol on a daily basis
- 34.6 per cent drank alcohol on a weekly basis
- 14.9 per cent of older men and 7.5 per cent of older women drank at levels that potentially put their health at risk in the short-term
- 7.4 per cent of men and 5.5 per cent of older women drank at levels that put them at risk of long-term harm.

In general, alcohol use and the prevalence of alcohol dependence usually decline with age, and are often associated with the onset of health problems. However, alcohol problems may endure throughout life and continue into older age, and in some people, alcohol use may increase later in life, typically following adverse life events such as loss of long-term partner or retirement from work. Such cases may present with challenging management problems.

Benefits of light to moderate alcohol use in older adults

A number of studies suggest that light to moderate alcohol use (1 to 2 drinks per day) may convey some health benefits to older adults, including:

- reduced bone loss
- reduced risk of cardiovascular conditions, such as heart failure, stroke and atherosclerosis
- reduced risk of cognitive impairment and dementia.

Health risks of alcohol use in older adults

Older people are potentially more vulnerable to the effects of alcohol, due to age-related physiological changes (including a higher blood alcohol concentration for a given dose due to a reduction in total body water and changes in hepatic metabolism), comorbid medical or psychiatric conditions, and interactions with medications, poor nutrition and social isolation.

Alcohol-related health risks in older people include:

- increased risk of falls
- cognitive function, and in particular memory, may be more vulnerable to the effects of alcohol in older drinkers and can impair driving ability
- increased prevalence of cancers, including breast cancer due to longer exposure to alcohol
- increased risk of suicide.

Who to target for screening and brief interventions

Diagnosis of alcohol use disorders may be difficult, as alcohol use and related disorders may be mistaken for the effects of aging or other conditions prevalent in this age group. A high index of suspicion and thorough history taking can aid early detection and appropriate management. Therefore:

- Every person over the age of 60 should be screened for their concomitant alcohol and other drug use, with a particular focus on patients taking medications for other conditions.
- As older people are unlikely to present at traditional alcohol or other drug treatment settings, it is important that opportunistic screening in mainstream and gerontology settings occur. Screening is recommended in general practice settings, general hospital wards, emergency departments and community health and welfare settings.

Older people have typically been excluded from large-scale outcome studies, but there is some evidence that brief intervention in primary care settings can effectively reduce alcohol use in older people.

Recommendation		Strength of recommendation	Level of evidence
9.31	Older Australians should be screened for alcohol use and related harms (such as trauma, exacerbation illness, drug interactions, violence or physical neglect) across a range of health and welfare settings.	D	IV
9.32	Brief interventions should be employed for older people drinking at risky levels or experiencing alcohol-related harms (such as falls, driving impairment, drug interactions).	A	Ia

Comprehensive assessment

Routine assessment for alcohol consumption among older people is recommended as older people tend not to discuss their drinking and health professionals can often mistake the effects of alcohol for a physical or mental health problem.

Clinicians should assess alcohol-related harms in this age group; these can include falls, exacerbation of medical conditions, drug interactions, violence and/or abuse. Comprehensive assessment should include physical, mental and cognitive capacity, nutrition, chronic pain, social conditions, overall general functioning, and a review of medications (see Chapter 3).

Medical practitioners should review older drinkers taking other medications, in particular those taking multiple medications or psychoactive medications (such as sedatives, anti-depressants), to assess any drug interactions (see Appendix 4).

The severity and management of concomitant physical and mental conditions should be reviewed several weeks to months after cessation of drinking and completion of withdrawal. Abstinence can be associated with marked improvements in other conditions (such as hypertension, cognitive function, mental state). Memory and executive skills appear to be resistant to recovery, or at least slower to recover with abstinence in the older dependent drinkers. Alternatively, alcohol use may have been masking underlying illness.

Recommendation		Strength of recommendation	Level of evidence
9.33	Concurrent physical or mental illness, medications, social conditions and functional limitations need to be considered when assessing older drinkers.	D	IV
9.34	Abstinence can be associated with marked physical, mental and cognitive improvements; alternatively, alcohol use may have been masking underlying illness. Consequently, the severity and management of concomitant physical and mental conditions should be reviewed several weeks to months after cessation of drinking.	D	IV

Managing withdrawal in older dependent drinkers

Older dependent drinkers attempting alcohol withdrawal should be closely monitored, generally in a supervised withdrawal setting (detoxification unit or hospital).

- Poor diet and housing, physical inactivity, and concomitant illness may make older patients more vulnerable to complications, such as dehydration, nutritional deficiency (risk of Wernicke's encephalopathy), hypertension or infections, during withdrawal.
- Older patients should receive adequate thiamine, rehydration and nutritional support, and close monitoring of other conditions (such as blood pressure, blood glucose, mental state).
- Diazepam has the potential for over-sedation due to accumulation in older people (delayed hepatic clearance of long-acting active metabolites). Shorter acting benzodiazepines, such as oxazepam or lorazepam, should be considered as first-line medication for moderate to severe alcohol withdrawal (see Chapter 5). Doses should be titrated according to clinical effect.

Recommendation	Strength of recommendation	Level of evidence
9.35 Withdrawal management of older dependent drinkers requires close monitoring, nutritional supplements, careful use of sedative medication, and management of comorbid conditions.	S	–
9.36 Caution should be exercised when prescribing medications to older drinkers. Short-acting benzodiazepines (such as oxazepam, lorazepam) are preferred for alcohol withdrawal management over long-acting benzodiazepines (such as diazepam).	D	IV

Treating dependence

Treatment is becoming increasingly important as the population ages; however, to date very few experimental studies of psychological or pharmacological treatment approaches have been conducted with the older age groups, especially those aged over 70 years. Most studies are longitudinal studies or retrospective analyses of data.

Recommendation	Strength of recommendation	Level of evidence
9.37 Psychological and pharmacological treatment approaches should be tailored to physical, cognitive and mental health of older patients.	D	IV

Cognitively impaired patients

Impaired cognitive functioning is related to poorer treatment outcome, particularly for treatments that require acquisition of new skills.

Screening, assessment and treatment planning

An assessment of cognitive functioning should be integral to any patient screening and results should be used to guide treatment planning. If significant impairment is suspected, a more thorough assessment by an appropriately qualified professional is indicated (see Chapter 3). In light of the myriad potential causes of cognitive impairment in alcohol dependent people, including frontal lobe dysfunction, such assessment should include diagnostic assessment. Issues relating to diagnosis and treatment of an acute confused state in alcohol dependent patients (Wernicke's encephalopathy, alcohol withdrawal delirium) are discussed in Chapter 5.

A formal cognitive assessment should be deferred until the patient has achieved several weeks of abstinence. Following full neuropsychological assessment, the clinician should discuss the results with the patient and provide summaries in an easily understood format.

Cognitive impairment can affect motivation, attention span, the capacity to critically evaluate situations and the ability to acquire new skills, but they can (indeed often do) improve after a period of abstinence from alcohol. Therefore, clinicians should take into account the possibility of improvement in cognitive functioning by allowing a sufficient period of abstinence from alcohol to elapse before finalising treatment planning. Establishing a routine may, however, mask cognitive impairment and if the routine is interrupted, the full extent of the deficits may again be evident.

Where severe cognitive impairment is present:

- treatment in an inpatient facility may be more effective than outpatient treatment
- treatment elements that require significant cognitive processing should not be employed as they are likely to be ineffective
- information presented to patients should be concrete and provided in more than one modality, that is, written and spoken
- patients should be given opportunities to practice behaviours taught, in various settings, with and without prompting.

Although clinicians have for some time recognised that many people who suffer from risky drinking and alcohol dependence also suffer from cognitive impairment, little evidence has been produced about which treatments are most effective. Nevertheless, level of cognitive functioning should be used to guide treatment planning. Even subtle cognitive deficits could affect treatment effectiveness in a number of ways.

People who suffer from alcohol abuse or dependence may have little insight into the nature and extent of their cognitive deficits. Due to concrete and rigid thought processes, patients with cognitive impairment may have difficulty processing all the relevant information about their problem and may be inflexible about changing their behaviour.

Clinicians must be aware, therefore, that this inflexibility results from an inability to understand the need to change, rather than denial of a problem and refusal to change behaviour. In these situations, particularly where cognitive deficits are temporary, clinicians should try different treatment approaches to engage the person in treatment (see below).

Recommendation	Strength of recommendation	Level of evidence
9.38 A brief assessment of cognitive functioning should be a routine part of assessment upon treatment entry.	S	–
9.39 More detailed diagnostic and functional assessment should be carried out where brief assessment suggests that a patient suffers from significant cognitive deficits.	S	–
9.40 The possibility of improvement in cognitive functioning should be taken into account by allowing a sufficient period of abstinence from alcohol to elapse before finalising treatment planning.	D	IV
9.41 Where cognitive impairment is confirmed, information presented to patients should be concrete and patients should be given opportunities to practice behaviours taught in treatment.	B	II

Engaging the cognitively impaired patient in treatment

While many of the strategies discussed in this section apply to all patients, they may be particularly important for engaging patients who suffer cognitive deficits. The following strategies may increase the cognitively impaired patient's engagement in treatment:

- **Provide written information to the patient about treatment** – the patient may be more likely to enter treatment if they understand what treatment will involve, the process of treatment, and what they will be required to do.
- **Discuss different treatment options with simple explanations** – although patients suffering cognitive impairment should only be offered treatment interventions that do not require complex cognitive processing, the different options available to them

should be discussed. Where the clinician judges that the patient is capable of making a decision, the patient should be involved in deciding which treatment to participate in.

- **Establish a positive relationship with the patient by:**
  - keeping information simple and structured without being patronising
  - adopting an empathetic, non-judgemental, non-authoritarian approach
  - listening carefully to what the patient has to say
  - scheduling sufficient time for consultations
  - treating patients with respect
  - respecting confidentiality, except where there is a threat to life or in cases of abuse.
- **Maintain contact** with patients with cognitive deficits. To increase the likelihood that patients will attend appointments, clinicians should:
  - telephone before a consultation to remind the patient they have an appointment
  - schedule the appointment at the same time on the same day to decrease the likelihood of forgetting
  - telephone if an appointment has been forgotten and arrange an alternative time
  - arrange for referral to aftercare before completing treatment to ensure there is no gap in continuing care. It is often this gap that leads to relapse.

Cognitive deficits can also affect treatment by limiting the patient's ability to effectively express their thoughts and feelings and to understand communication from the clinician. The clinician should keep all communication as simple as possible, and repeat information several times.

The clinician should frequently check that the patient understands what he or she is saying, and that the clinician understands what the patient is saying.

Patients with memory problems should be encouraged to record their thoughts and questions in a diary and be directed to refer to their notes as a way to ensure the memory problem does not affect potential treatment outcomes.

Some evidence suggests that cognitive impairment is associated with an increased risk of relapse. To reduce the likelihood of relapse, cognitively impaired patients should participate in psychosocial relapse prevention (see Chapter 6) or be prescribed pharmacotherapy (see Chapter 7).

Recommendation		Strength of recommendation	Level of evidence
9.42	Clinicians should engage cognitively impaired patients in treatment by providing information about treatment, discussing different treatment options and maintaining contact with the patient.	S	–
9.43	Cognitively impaired patients should be taught relapse prevention strategies.	D	IV

Managing a patient with alcohol-related cognitive impairment

Although evidence about the effect of cognitive deficits on treatment outcome is limited, available research indicates that cognitive impairment may adversely affect treatment outcome. Even less evidence shows which treatments are more or less effective. However, one viable explanation is that poor treatment outcome is caused by an inability of cognitively impaired patients to process the information imparted in therapy. Therefore, treatments that are simple, structured, and require less cognitive processing are thought to be more effective for patients with cognitive deficits.

- Screen for cognitive impairment as part of drug and alcohol assessment (see Chapter 3).
- If cognitive impairment is present, determine if it is acute (delirium) or chronic or acute on chronic (that is, acute exacerbation of a chronic condition).
- Use the mini-mental state examination if impairment is suspected, as well as bedside tests of frontal lobe dysfunction (such as the Clock Drawing Test; see Appendix 1).
- Where the patient appears to have an **acute** confused state:
  - Hospitalise where appropriate. Consider compulsory detention according to the Mental Health Act relevant to your state or territory, if behaviourally disordered and not accepting of voluntary treatment.
  - Consider Wernicke's encephalopathy. Treat urgently with parenteral thiamine (see Chapter 5).
  - Rule out and treat other causes of confusion, such as sepsis, dehydration, metabolic disturbances, subdural haematoma, post-ictal confusion, substance intoxication, ischaemia/infarction, hepatic encephalopathy. Carry out appropriate investigations: urinalysis, blood alcohol concentration, routine blood tests, x-rays, EEG, CT or MRI.
  - Orientate confused patient with familiar staff and relatives, use of calendars and clocks, bright lights at night.
  - Use benzodiazepines with or without antipsychotic medication for acute behavioural disturbance.
- Where cognitive impairment is **non-acute** or slow to resolve, consider the presence of alcohol-related frontal lobe impairment, alcoholic dementia, Korsakoff's syndrome:
  - Carry out more detailed bedside tests of cognitive function: mini-mental state examination plus bedside frontal lobe testing (such as the Clock Drawing Test, verbal fluency, alternating sequences, trailmaking, Luria's tests, abstraction).
  - If available, refer for neurocognitive assessment with clinical psychologist once the patient is abstinent for 6 weeks or more.
  - Investigate and treat other potential causes of pathology, such as Alzheimer's, dementia, neoplasm, ischaemia/infarction.
  - Rule out psychiatric comorbidity, which may present with cognitive changes, for example, major depressive disorder, severe anxiety, psychosis.
  - Conduct a risk assessment of the patient's safety to live independently in the community. Include social worker and occupational therapist in assessment.
  - Consider placement options. Meet with the family to discuss the patient's limitations and requirements for activities of daily living. Review supported accommodation options where appropriate.

- Consider the need for guardianship if the patient is significantly impaired, unsafe to live independently but has little insight about requirements for care.
- Consider the need for involuntary treatment if the patient continues to drink and refuses to engage in appropriate treatment.
- Consider selected rehabilitation options if cognitive impairment is minimal and there is some capacity to learn new material and skill. Use strategies described above to engage patient in treatment and maintain contact.
- Where possible, focus on teaching appropriate behavioural management and relapse prevention in a repetitive, relatively concrete manner.
- Consider the possibility of improvement in cognitive function after a significant period of abstinence, and adjust treatment plan accordingly.

Chapter 10. Comorbidities

10. Comorbidities

This chapter provides an overview of treatment approaches to patients with alcohol-related physical comorbidity, co-occurring mental and alcohol use disorders, and people using multiple drugs, focusing on people who are polydrug dependent.

Physical comorbidity

Alcohol-related harm may result from the intoxicating effects of alcohol. Such harm largely relates to accidents and violence associated with the central nervous system depressant effects of alcohol. Adolescents are most at risk from:

- the long-term toxicity of alcohol on many organ systems, such as the liver, brain, heart, pancreas and peripheral nerves
- related lifestyle factors associated with chronic heavy alcohol use, such as poor nutrition.

Both short- and long-term regular heavy use can lead to psychosocial harms for individual drinkers.

The extent to which alcohol use contributes to organ damage varies considerably from person to person. Alcohol metabolism, nutritional deficiencies or excess, or immunological responses to the inflammation associated with alcohol mediated tissue injury, can all influence the extent of alcohol-related organ damage. While alcohol ingestion can clearly cause organ damage, it is also clear that some people can ingest large amounts of alcohol regularly over many years without any evidence of harm, suggesting considerable genetic variation; more research is needed to define the pathogenesis of alcohol-related organ damage. Conversely, some people appear unusually sensitive to end-organ damage, in some cases associated with other pathological processes.

Recommendation		Strength of recommendation	Level of evidence
10.1	Comprehensive assessment is indicated for patients with physical comorbidity related to alcohol, as multiple pathology is the rule.	A	I

The range of medical conditions affected by alcohol use is shown in Table 10.1. As it is beyond the scope of these guidelines to review the management of these conditions, readers should refer to relevant guidelines on managing particular conditions.

People who present with alcohol-related organ toxicity tend to experience less severe alcohol use disorders. People with chronic heavy alcohol use often have multiple medical, psychiatric and social problems and frequent 'crisis' presentations. Central to the approach to working with such people is:

- Thoroughly and systematically assessing alcohol and other drug use, physical, mental health, and social circumstances, using a biopsychosocial approach.
- Explaining clearly and factually the impact of the patient's alcohol use upon their health and social functioning.

- Developing a treatment care plan addressing alcohol and other drug use, and any related medical, mental health or social problems.
- Recommending abstinence for those with physical comorbidity related to alcohol unless mild and reversible pathology is present. In particular, pancreatitis may recur after a single drink.

Good communication between all agencies involved in assessing and managing such patients is imperative. The primary care worker (for example, general practitioner) is often well placed to coordinate various clinical teams involved with the patient, and to maintain long-term follow-up.

Recommendation		Strength of recommendation	Level of evidence
10.2	Abstinence is recommended for those with physical comorbidity related to alcohol unless mild and reversible pathology is present. In particular, pancreatitis may recur after a single drink.	D	IV
10.3	Comprehensive management requires a single practitioner with a broad range of clinical skills or close coordination between an appropriate team.	S	–

Table 10.1: Alcohol use and physical complications

Gastrointestinal	Liver disease, including alcohol-related fatty liver, alcoholic hepatitis, alcohol-related cirrhosis and multiple complications of cirrhosis and portal hypertension Liver cell cancer – hepatocellular carcinoma Acute and chronic pancreatitis Parotid enlargement Gastro-oesophageal reflux Peptic ulcer, gastritis, duodenitis Oesophageal rupture from violent vomiting bouts Small bowel damage leading to malabsorption Altered bowel habit with diarrhoea predominating
Cardiovascular	Hypertension High output cardiac failure Cardiomyopathy Acute rhythm disturbances in alcohol intoxication Coronary artery disease
Neurological	Cortical atrophy Cerebellar damage (midline structures maximally affected) Peripheral neuropathy Autonomic neuropathy Wernicke's encephalopathy Wernicke–Korsakoff syndrome Central pontine myelinolysis Marchiafava–Bignami syndrome Myopathy Cerebrovascular accidents Withdrawal delirium and neuronal damage
Musculoskeletal	Rhabdomyolysis Compartment syndromes Gout Osteopaenia Osteonecrosis

Haematological	Thrombocytopaenia from bone marrow suppression Pancytopaenia from hypersplenism Haemolytic anaemia with advanced liver disease - spur cell anaemia Macrocytic anaemia Folate and B12 deficiency anaemias Coagulopathies from liver disease
Immunological	Impaired B and T cell function mediated by alcohol toxicity Autoimmune phenomena triggered by acetaldehyde adducts acting as immunogenic targets IgA nephropathy
Respiratory	Increased predisposition to respiratory infection TB as a common infection Aspiration pneumonia Sleep apnoea
Endocrine	Syndrome of inappropriate antidiuretic hormone secretion (SIADH) Altered thyroid function Altered oestrogen metabolism associated with liver damage Masculinisation in women Pseudo Cushing's disease Altered calcium and bone metabolism Hypoglycaemia Aggravation of diabetes mellitus Ketoacidosis Hypertriglyceridaemia Testicular atrophy Hypoparathyroidism
Renal	IgA nephropathy
Infectious diseases	Hepatitis C virus Pneumonia Tuberculosis Sexually transmitted diseases
Nutritional disorders	Vitamin and mineral deficiencies; B1, B6, riboflavin, niacin, calcium, phosphate, zinc, magnesium. Protein calorie malnutrition
Alcohol and malignancy	The risk of developing certain malignancies increases from base risk levels with any alcohol consumption. These include breast, oropharyngeal and oesophageal cancers. Other malignancies such as colon, pancreatic, hepatic and ovarian are more prevalent in those drinking more than 40 gm per day.

Co-occurring mental and alcohol-use disorders[1]

Co-occurrence of mental and alcohol use disorders presents special challenges in the treatment of people with alcohol problems.

Comorbid mental disorders are common among patients with alcohol problems. In Australia, of the 8841 people surveyed in 2007 for the National Survey of Mental Health and Wellbeing, 2.9 per cent met the criteria for alcohol abuse, and 1.4 per cent met the criteria for alcohol dependence. Of this latter group half (53.6%) met the criteria for an anxiety disorder and one-third (34.0%) met the criteria for an affective or mood disorder (ABS 2008). Other disorders associated with alcohol dependence include other substance use disorders. Equally, among people with mental disorders, such as depression, 34 per cent of men and 15 per cent of women have concurrent alcohol use problems. Approximately one in five patients with schizophrenia will have an alcohol use disorder at some time in his or her life.

1 The recommendations in this section should be read in conjunction with clinical practice guidelines for the separate disorders (see Appendix 8 for a list).

In discussing comorbid mental disorders, this section uses the terminology of the fourth edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR: American Psychiatric Association 2000) because it provides specific criteria that define each disorder.

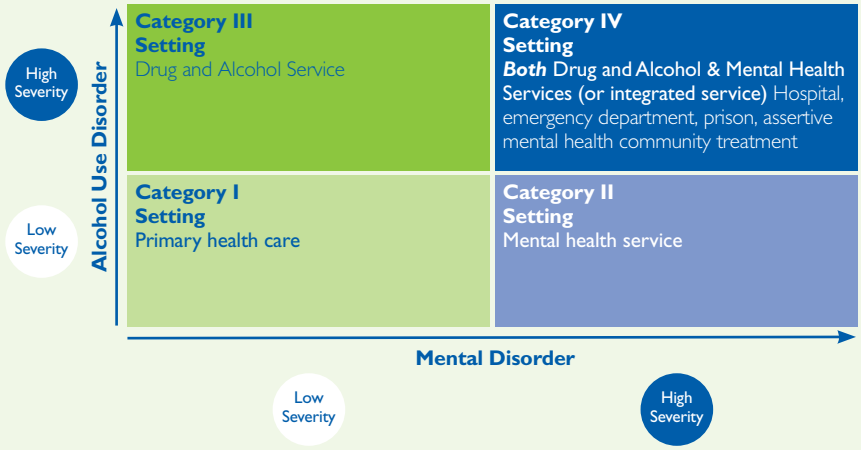
Comorbidity presents diagnostic dilemmas. Some co-occurrence appears to be a direct or withdrawal effect of alcohol, which remits with abstinence of at least 3 weeks duration. In other cases mental disorders are in parallel with alcohol use disorders. Still further cases show signs of mental disorders and alcohol interacting to cause greater problem severity, disability and poorer response to treatment. In addition mental disorders may emerge in early abstinence.

Patients with comorbid disorders of alcohol use and persisting mental comorbidity should be offered treatment for both disorders. Interventions for comorbid patients should be more intensive, as this population tends to be more disabled and carries a worse prognosis than those with single pathology.

Specialist services for people with alcohol problems need expertise in the assessment and treatment of comorbid mental disorders. While there is no direct clinical trial evidence for this recommendation, comorbidity is sufficiently common to justify integration of specialist drug and alcohol and mental health services. Patients referred from one service to another sometimes fail to take up the referral, and different services sometimes have different criteria for eligibility. Thus, to ensure the continuity of services, it is desirable to bring mental health expertise into alcohol treatment services rather than expecting patients to cope with geographic, administrative and clinical differences between services. Integration of the content of treatment is discussed in following sections.

Figure 10.1 illustrates the levels of integration of specialist drug and alcohol and mental health services. Depending on the relative severity of the patient's alcohol use disorder and mental disorder, the patient may receive care in an appropriate specialised setting or in a primary care setting.

Figure 10.1: Level of care quadrants



Source: Adapted from Center for Substance Abuse Treatment 2005, *Substance abuse treatment for persons with co-occurring disorders*, Treatment Improvement Protocol (TIP) Series 42, DHHS publication no. (SMA) 05-3922, Substance Abuse and Mental Health Services Administration, Rockville MD.

Recommendation		Strength of recommendation	Level of evidence
10.4	Patients with comorbid disorders of alcohol use and persisting mental health comorbidity should be offered treatment for both disorders.	A	Ib
10.5	More intensive interventions are needed for comorbid patients, as this population tends to be more disabled and carries a worse prognosis than those with single pathology.	B	I

Assessment and diagnosis

Assessment for comorbid mental disorders and symptoms should form part of standard assessment procedures (see Chapter 3).

It is essential that assessment of particularly common problems such as anxiety and depression is a routine part of assessment. A key issue in assessment of co-occurring mental disorders is whether they are an effect of alcohol or a separate comorbid disorder. For example, the acute effects of alcohol or withdrawal from alcohol can cause symptoms of anxiety and depression. A period of abstinence is the most widely used way to make a differential diagnosis.

A first step in assessment of comorbid alcohol and mental disorders is consideration of the separate problems and their severity. Milder symptoms of anxiety and depression may not need separate attention but more severe forms may change the focus and setting of treatment. The Kessler 10 Symptom Scale is a scale of psychological distress widely used in Australia by general practitioners and mental health workers that appears suitable for monitoring and as an outcome measure in people with anxiety and depressive disorders.

The AUDIT appears to be a suitable screening tool for identifying risky, problem and dependent alcohol consumption among psychiatric patients. The ASSIST questionnaire can be used in mental health services to assess use of and problems with substances.

An important step in managing co-occurring mental disorders for those with alcohol dependence is to achieve a period of abstinence lasting 3 weeks or more. Abstinence for 3 to 6 weeks may help to show which anxiety and depressive disorders are comorbid and require their own treatment. If attempts to achieve short-term abstinence are not successful, an integrated approach may be appropriate as would be a greater emphasis on management of the co-occurring symptoms of mental disorder.

Among the anxiety disorders, agoraphobia and social phobia often predate the onset of drinking, which may be an attempt to control the symptoms. In contrast, panic disorder and generalised anxiety disorder often show onset after initiation of drinking and may be the effect of alcohol rather than a comorbid disorder. In addition some early epidemiological data suggested that social phobia, but not panic disorder, can begin before alcohol consumption and may have a distinct genetic vulnerability.

Comorbid mood and anxiety disorders, which do not abate after a period of abstinence, should be treated with integrated/concurrent cognitive behavioural therapy for the comorbid disorder (see Treatment below).

Recommendation	Strength of recommendation	Level of evidence
10.6 AUDIT is recommended for screening psychiatric populations.	A	Ib
10.7 Assessment for comorbid disorders should take place once the patient's withdrawal syndrome has diminished, since some anxiety and depressive symptoms may abate once alcohol consumption is reduced or ceased.	B	II

Treatment

Co-occurring mental and alcohol use disorders should be managed in parallel with evidence-based treatments provided for both problems.

Comorbid mental disorders that do not abate within 3 to 6 weeks of abstinence (or significantly reduced drinking) or that emerge from such a period should be treated according to the clinical practice guidelines for those specific disorders.

Limited evidence supports integrating the content of treatment. Patient engagement in treatment planning and goal setting is particularly important in this population of patients. Adequate duration of treatment is essential to successful outcome. Clinicians should emphasise the patient's education and rising awareness of the interaction between alcohol use and symptoms of mental disorder. Patients with comorbid mood and alcohol use disorder should be regularly assessed and monitored for risk of suicide.

Little controlled research has been conducted to evaluate the effectiveness of treatment for comorbid patients, despite the knowledge that a sizeable proportion of alcohol dependent patients have a comorbid mental disorder. Several clinical trials show that typical pharmacological and psychological treatments for anxiety and mood disorders are effective in reducing anxiety and depression when they co-occur with alcohol use disorders. However, few controlled trials show that treating a comorbid mental disorder leads to reductions in drinking or delays relapse.

Recommendation	Strength of recommendation	Level of evidence
10.8 Comorbid mood and anxiety disorders that do not abate within 3 to 6 weeks after alcohol withdrawal is complete should be treated with integrated/concurrent cognitive behavioural therapy for the comorbid disorder.	B	II

Psychosocial interventions

Comorbid mental disorders that last beyond a 3 to 6 week period of abstinence (or significantly reduced drinking) or that emerge from such a period should be treated according to the clinical practice guidelines for those specific disorders. The service that provides care should be integrated, but little evidence supports use of specific packages that integrate the content of psychological interventions.

Some considerations are:

- Where possible the same health professional should provide treatment for both alcohol use and comorbid disorders.
- Any combination of specific techniques should take care not to confuse the patient. It may be that in severely alcohol-dependent patients a focus on anxiety and depression may divert attention from reducing alcohol consumption early in treatment.

Specific psychological interventions that have strong empirical support for treating non-comorbid mental disorders are cognitive behavioural therapy, behaviour therapy, cognitive therapy, and interpersonal therapy. Other psychotherapies may be effective but there is to date insufficient evidence to recommend their use.

Anxiety disorders

A recent meta-analysis summarised a disparate group of clinical trials and conclude there was no benefit in providing integrated psychological interventions for comorbid alcohol use and anxiety disorders. Some integrated interventions may produce better anxiety outcomes than interventions focused on alcohol but they may also produce worse results than focusing on alcohol alone.

Some evidence shows that the specific techniques of cognitive behavioural therapy, such as exposure to feared situations, is well tolerated by patients with substance use disorders, does not lead to relapse to drug use, and indeed contributes to reductions in anxiety.

Depression

Some benefit for a disparate collection of integrated cognitive behavioural therapy programs for comorbid major depression and alcohol use disorders compared to a focus on alcohol alone was found in a recent meta-analysis. The specific cognitive behavioural therapy packages were described such as Behavioural Activation, Cognitive Therapy and Interpersonal Therapy.

Psychosis

When managing patients with alcohol use disorders and severe mental disorders, such as psychoses, no compelling evidence supports one psychosocial treatment over another to reduce substance use or improve mental state. The Cochrane review of intervention treatment programs for people with both severe mental disorder and substance misuse, including alcohol, suggests that the evidence is poor at best with very few studies available for analysis. However, one trial demonstrated effectiveness of motivational interviewing in increasing abstinence from alcohol in this population.

Cognitive behavioural therapy also appears to be effective in treating those with comorbid psychoses. For example, integrating motivational interviewing, cognitive behavioural therapy and family intervention with routine psychiatric care has been shown to produce greater benefits for patients with comorbid schizophrenia and substance use disorders than routine psychiatric care alone. Typical benefits have included better general functioning, a reduction in positive symptoms, and an increase in the percentage of days abstinent from alcohol or drugs.

Integrating the psychosocial treatment for the mental disorder with the psychosocial treatment for alcohol use disorder may be beneficial in treatment of patients with such comorbidity. Relapse prevention strategies should take into account triggers for both alcohol use and mental disorders.

Recommendation		Strength of recommendation	Level of evidence
10.9	Cognitive behavioural therapy, behaviour therapy, cognitive therapy, and interpersonal therapy should be considered for treatment of patients with comorbid mental and alcohol use disorders because of their demonstrated effectiveness in non-comorbid cases.	B	Ib
10.10	Integrating psychosocial treatment for mood disorders and psychoses with psychosocial treatment for alcohol-use disorder may be beneficial in treating patients with such comorbidity.	D	IV

Pharmacological treatment

Pharmacological treatments have proved effective in treating anxiety, depression and psychosis in patients exhibiting co-occurring mental and alcohol use disorders.

Anxiety

Typical pharmacological treatments for anxiety and mood disorders also reduce anxiety and depression when they co-occur with alcohol use disorders. However, treating only a comorbid mental disorder usually does not lead to a reduction of alcohol consumption.

Selective serotonin reuptake inhibitors (SSRIs) reduce symptoms of anxiety in patients with comorbid anxiety and alcohol dependence. They are indicated for treatment of obsessive-compulsive disorder and panic attacks in these patients. However, little sound evidence supports their capacity to reduce alcohol intake in the longer-term in patients with comorbid anxiety disorders.

Benzodiazepines are effective anxiolytics and are used in treatment of acute alcohol withdrawal but should not be used beyond this indication. They are not recommended in treatment of comorbid anxiety due to high risk of dependence and a potential synergistic interaction with alcohol.

Buspirone (an anxiolytic) in conjunction with psychosocial therapy is better than placebo in reducing both anxiety symptoms and alcohol consumption. In one study, patients taking buspirone were more likely to remain in treatment for the 12 weeks, had reduced anxiety, a slower return to heavy alcohol consumption, and fewer drinking days during the 6 months follow-up period.

Combining pharmacological and psychosocial interventions may be beneficial, particularly when psychosocial interventions for alcohol use disorders are integrated with those for anxiety.

Depression

Meta-analyses of randomised controlled trials indicate that antidepressant medication has a modest beneficial effect for patients with combined depressive and substance-use disorders. It is not recommended as a stand-alone treatment. Concurrent treatment directly targeting the addiction is also indicated. The findings also suggest a clinical approach that begins with an evidence-based psychosocial intervention, followed by antidepressant medication if depression does not improve.

Antidepressants may help relieve depressive symptoms but have little effect on reducing alcohol consumption, unless accompanied and supported by psychosocial treatment for alcohol-use disorder.

SSRIs reduce depressive symptoms in patients with comorbid major depression and alcohol dependence; however, research results regarding their effectiveness in reducing alcohol consumption in these patients are conflicting. SSRIs should not be used as primary therapy to reduce alcohol consumption in patients with comorbid depression.

Desipramine (a tricyclic antidepressant) has been shown to reduce relapse in alcohol dependent patients diagnosed with major depression, but not in those without major depression. Some noradrenergic antidepressants show promise for reducing relapse or drinking in comorbid patients. For example, nortriptyline (a noradrenergic antidepressant) reduces drinking in patients diagnosed with antisocial personality disorder, but not in those patients with affective/anxiety disorders or those without a comorbid disorder.

Tricyclic antidepressants should be used with caution in this population due to high risk of poor treatment adherence, abuse and overdose.

Antidepressants should not be the first line of treatment in patients with comorbid alcohol use disorders, unless there is high level of suicidal ideation, severe depressive symptoms or a history of pre-existing depressive illness. Clinicians should consider heavy drinkers' potential for poor treatment compliance. Psychological treatment options should be used first, integrating approaches that are aimed at reducing alcohol consumption with those targeting depressive symptoms.

Psychosis

A qualified mental health practitioner usually provides pharmacological treatment of psychotic illness. Atypical antipsychotics appear to be the first line of treatment of comorbid psychotic illness and substance use disorders. Limited evidence shows that among schizophrenic patients, two atypical antipsychotics (risperidone and clozapine) may reduce alcohol misuse, smoking, and possibly some other substance misuse.

Addition of psychosocial support to pharmacological treatment has been shown to be effective in treatment of patients with comorbid psychosis and alcohol use disorders.

Clinicians should recognise the potential for poor medication adherence in heavy drinkers prescribed antipsychotic medications.

Recommendation	Strength of recommendation	Level of evidence
10.11 Selective serotonin reuptake inhibitor antidepressants are not recommended as primary therapy to reduce alcohol consumption in patients with comorbid mood or anxiety disorders.	B	II
10.12 Benzodiazepines are not recommended for treatment of comorbid anxiety in patients with alcohol-use disorders due to high risk of dependence and a potential synergistic interaction with alcohol.	S	–

Polydrug use and dependence

Polydrug use has become commonplace in Australia. Most Australians who drink alcohol also use other drugs such as prescription medication (opioid analgesics, benzodiazepines) or illicit drugs (cannabis, amphetamines, cocaine, ecstasy).

In Australia, among those people with alcohol use disorders, 51 per cent of those who were alcohol-dependent were regular tobacco smokers, 32 per cent had used cannabis, 15 per

cent reported other drug use, 15 per cent met the criteria for a cannabis use disorder, and 7 per cent met the criteria for another drug use disorder (Degenhardt 2003). Reasons for polydrug use include:

- combined drug effects (for example, to enhance intoxication by combining alcohol and benzodiazepines)
- to counter the effects of other drugs (for example, using a sedative such as alcohol to counter the effects of stimulants)
- use of a drug in lieu of other drug use (for example, benzodiazepines to compensate for lack of alcohol)
- dependence on multiple drugs.

Dependence on multiple drugs refers to polydrug dependence. Polydrug dependence is typically associated with greater severity of dependence, higher levels of psychiatric and physical comorbidity, greater treatment resistance with poorer clinical outcomes, and often more complicated and severe withdrawal syndromes. This is especially the case for people who have concurrent dependence upon alcohol and benzodiazepines, where withdrawal is typically more severe and protracted, requiring higher doses of medication.

Although many patients with alcohol and comorbid other substance use disorders may only see one substance as a problem, their use of other substances will often need to be addressed in order to achieve a successful outcome with respect to their primary substance of concern. It is important to address polydrug use when treating alcohol use disorders because:

- Ongoing use of other drugs by drinkers may reduce the efficacy of both psychological and pharmacological interventions, and is often associated with poorer engagement and retention in treatment.
- Polydrug use can exert significant effects upon the time course and severity of alcohol withdrawal. Early detection of other drug use and risks of withdrawal from multiple drugs may avoid potentially severe complications during withdrawal. For polydrug dependent people seeking treatment, a stepped approach to detoxification (addressing management of one withdrawal syndrome at a time) is often preferable though not always practical.
- Clinicians and patients should be aware that cessation of alcohol use may lead to changes in the pattern of other substance use. In some case these changes may be positive, especially where alcohol use may play a priming role in the use of the other substance, such as cocaine or tobacco. In other cases it may be that a reduction in alcohol use may lead to increased use of other substances. Uptake of other sedative drugs (benzodiazepines, cannabis) is most common following alcohol cessation, and may be short-term (in an attempt to manage alcohol withdrawal symptoms), but may become a longer-standing issue, especially where untreated psychiatric comorbidity (such as anxiety, depression) is present. Given the pharmacological effects and common use of benzodiazepines in managing alcohol withdrawal, the potential for increased benzodiazepine use and dependence needs particular attention. Conversely, cessation of the other drug use (such as opioids, benzodiazepines) may lead to increased alcohol consumption.

Patients should be informed of the potential impact of alcohol cessation upon other drug use. Use of other drugs should be monitored during follow-up, and patients should be provided with a range of coping strategies (sleep habits, relaxation and anxiety management techniques) to minimise their risk of developing dependence on other drugs.

Screening, assessment and treatment planning

The most common comorbidity of people diagnosed with alcohol dependence is another substance use disorder; such disorders occur seven times more frequently in this population than in the general population. The most common comorbid substance dependencies for people with alcohol dependence, other than nicotine, are other depressants (such as benzodiazepines, cannabis, opioids) and stimulants (such as cocaine). This means people presenting with alcohol use disorders must also be screened for other substance use disorders.

Quantity–frequency estimates of alcohol and other drug use must consider that use of alcohol is often related to other drug use; a person may increase their use of benzodiazepines when alcohol is not available. Clinicians need to gather a comprehensive history in order to assess the variation in drug use (see Chapter 3). Using validated screening instruments for multiple drugs (such as ASSIST: see Appendix 1) can be incorporated into screening approaches.

The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) is a screening questionnaire recommended by the World Health Organization. It is designed to detect substance use and related problems in primary and general medical care settings. ASSIST provides a valid measure of substance-related risk both for individual substances and for total substance use involvement. The test can distinguish between people who:

- are low risk substance users or abstainers
- have developed or are at risk of developing problems and/or at risk of developing dependence
- are dependent on a substance.

Clinicians should also assess the related harms and increased risk of comorbidities arising from polydrug use. These include:

- **Alcohol and central nervous system depressants: opioids, benzodiazepines, prescription drugs, GHB**. The combined use of alcohol and other depressant drugs (such as benzodiazepines, opioids, GHB; and/or sedating medications such as tricyclic antidepressants) increases the risk of impaired cognition, driving and work performance. Alcohol also enhances central and respiratory depressant effects of such drugs, potentially causing respiratory depression, coma and overdose death. Alcohol also impairs risk assessment and memory, thereby hindering the ability to safely titrate doses of other drugs, again increasing the risk of short-term harms (such as driving accidents, overdose).
- **Alcohol and stimulant drugs: cocaine, amphetamines and MDMA (also known as ecstasy)**. Alcohol is commonly used in combination with stimulant drugs. Combined use increases the risks of dehydration, thermal dysregulation, cardiac toxicity, sleep and mental health problems (such as psychosis, anxiety, depression).
- **Alcohol and cannabis**. Alcohol has synergistic effects with cannabis, markedly increasing the cognitive and psychomotor impairment seen with each substance. The combined use of alcohol and cannabis can be dangerous when engaging in any activity requiring motor skills and judgement (such as driving a motor vehicle). Both cannabis and alcohol can significantly contribute to mental health problems (such as psychosis, anxiety, depression).

Recommendation	Strength of recommendation	Level of evidence
10.13 All patients with alcohol-use disorders should be screened for other substance use using quantity–frequency estimates, or through structured screening instruments such as the ASSIST questionnaire.	D	IV
10.14 Polydrug dependence is typically associated with higher levels of physical, psychiatric and psychosocial comorbidity that should be addressed in comprehensive treatment plans.	D	IV
10.15 Use of other drugs can be affected by cessation or reduction in alcohol use, and treatment plans should address use of alcohol and other drugs together.	D	IV

Polydrug withdrawal

Polydrug withdrawal refers to the situation that arises where a person physically dependent on more than one substance ceases or significantly reduces their consumption of those substances and experiences withdrawal syndromes from more than one drug class.

Typically, withdrawal from more than one substance, in addition to alcohol, can affect the course of withdrawal in a number of ways. Many different drug withdrawal syndromes have considerable overlap in symptoms, reflecting common withdrawal changes in autonomic arousal (restlessness, elevated blood pressure, tachycardia, sweating, abdominal symptoms), mood (anxiety, dysphoria), sleep and cravings. This overlap can:

- increase severity of withdrawal and risk of withdrawal complications, such as dehydration, seizures, severe agitation, hallucinations or delirium; for example, concomitant withdrawal from alcohol and short-acting benzodiazepines like alprazolam or temazepam is likely to increase the risk of seizures and withdrawal from alcohol and opiates is likely to increase the risk of dehydration
- change the onset and duration of withdrawal; for example, stopping alcohol and long-acting benzodiazepine use may delay the onset of withdrawal symptoms and complications, such as seizures or delirium.

Managing polydrug withdrawal

Because of the potential for unexpected withdrawal severity, onset or duration, and the increased risk of withdrawal complications, clinicians should closely monitor and supervise patients undergoing withdrawal from multiple drugs. This will often require an inpatient (detoxification unit or hospital) setting.

The overlap of symptoms can complicate assessment and monitoring of withdrawal syndrome. As such alcohol or other drug withdrawal scales (such as CIWA-Ar, AWS) require careful interpretation, and should not generally be used for symptom-triggered medication regimens (such as the symptom-triggered diazepam regimen for alcohol withdrawal; see Chapter 5). Fixed diazepam dosing regimens are preferred for managing alcohol withdrawal in the context of other drug withdrawal. Clinicians need to regularly review medication regimens.

Clinicians should carefully consider the order in which withdrawal from different drugs should be managed. The driving principle in determining the order of detoxification in a polydrug dependent person is to prioritise the substance with the potential for the most problematic withdrawal. In most instances, therefore, alcohol will be the first drug from which to support withdrawal. Wherever possible, withdrawal from other drugs can be prevented or minimised by:

- using substitution medications (such as methadone or buprenorphine for opioid dependence, diazepam for benzodiazepine dependence, and nicotine replacement for tobacco dependence)
- allowing resolution of alcohol withdrawal before attempting withdrawal from other medications (with, for example, methadone or diazepam dose reduction).

This typically prolongs withdrawal. Alternatively, the treatment plan may involve longer-term stabilisation on the substitution medication (for example, methadone maintenance treatment). Table 10.2 provides information on specific polydrug withdrawal combinations and treatment plans.

Substitution medications are not available or routinely used for some polydrug combinations (such as cocaine, amphetamine, cannabis withdrawal). As well, withdrawal may be attempted in settings where substitution medications may not be readily available (such as custodial settings). Under these circumstances, patients may experience greater levels of withdrawal severity, such as agitation and sleep disturbance, that need close monitoring, increased supportive care, and increased doses of medication than would be routinely used for single drug withdrawal management.

It is important to discuss treatment plans with patients so they understand what is happening (for example, clarification that the dose of methadone will remain stable during withdrawal from alcohol). Negotiate with patients over the choice of medication. Some patients dependent upon short-acting benzodiazepines (such as alprazolam or oxazepam) may not be confident that diazepam will be efficacious in their withdrawal from both their benzodiazepine of choice and alcohol. Clinicians should regularly inform patients and carers about the likely course and nature of withdrawal symptoms.

It is important when managing polydrug withdrawal that clinicians set clear and consistent boundaries with patients who exhibit drug-seeking behaviours.

Table 10.2: Clinical profile and treatment plans for withdrawal from alcohol and other drugs

Alcohol + opiates	Alcohol + stimulants	Alcohol + cannabis	Alcohol + benzodiazepines
Clinical profile			
Alcohol use is common among opiate users and increases risk for those with hepatitis C infection. Combined withdrawal may result in increased sympathetic stimulation increased dehydration, sleep, mood and gastro-intestinal disturbances.	The combined use of alcohol and stimulant drugs often leads to high levels of consumption of both drugs. Alcohol may be used to induce insomnia and relaxation in stimulant users. More severe and protracted withdrawal may be expected, related to consumption and anorexia.	Some users report using cannabis to self-medicate anxiety or insomnia linked to alcohol withdrawal. Combined withdrawal is likely to be associated with increased mood and behavioural disturbance.	Both substances modulate GABA function; simultaneous withdrawal can increase symptom severity and risk of seizures. The more protracted withdrawal syndrome associated with benzodiazepines may delay onset of withdrawal symptoms, and prolong withdrawal.
Treatment plan			
Consider stabilisation on buprenorphine or methadone while undergoing alcohol withdrawal. Higher benzodiazepine (diazepam) doses may be needed in lieu of opioid substitution.	Higher doses of benzodiazepines (diazepam) may be needed.	Higher doses of benzodiazepines (diazepam) may be needed.	Dependent alcohol and benzodiazepine users will need higher doses of diazepam, and consider a gradual diazepam taper.

Note: All clinicians should be advised when, where and who to go to for further advice.

Recommendation	Strength of recommendation	Level of evidence
10.16 Patients undergoing polydrug withdrawal need close monitoring, increased psychosocial care, and increased medication. Consider specialist advice.	D	IV
10.17 Fixed diazepam dosing regimens are preferred for managing alcohol withdrawal in the context of other drug withdrawal, with regular review of the dosing regimen. Withdrawal scales (such as CIWA-Ar) need careful interpretation in patients withdrawing from multiple drugs, and should not be used to direct medication.	D	IV
10.18 Patients dependent on alcohol and benzodiazepines or opioids should be stabilised on substitution medications while undergoing alcohol withdrawal.	D	IV

Chapter 11. Aftercare and long-term follow-up

11. Aftercare and long-term follow-up

This chapter provides an overview of strategies to long-term patient follow-up (aftercare programs), including approaches to working with alcohol-dependent patients who resume heavy alcohol use.

Aftercare

Aftercare generally refers to contact with a clinician or service immediately following intensive treatment, and has the goal of maintaining treatment gains. The first 3 months of recovery are critical to success and are characterised by a high risk of relapse. Aftercare acknowledges that severe alcohol problems are prone to recurrence and that maintenance of change may require ongoing monitoring and assistance beyond the active phase of initial treatment.

Aftercare is an important part of a comprehensive intervention plan. It is particularly suited to people with severe dependence whose likelihood of relapse is greatest. It provides the individual with a network supportive of sobriety, reinforces skills consistent with maintaining abstinence and improving psychosocial functioning, and helps the individual negotiate unforeseen challenges.

Aftercare can consist of planned telephone or face-to-face contact following a period of treatment to discuss progress and any problems that may have arisen since the end of active treatment. Often primary care workers (such as general practitioners) can provide this function through ongoing follow-up, often as part of review of other health issues. Clinicians may use referral to self-help programs, such as Alcoholic Anonymous and SMART Recovery®, as forms of continuing care or in addition to a structured aftercare program (see Chapter 8).

Long-term follow up is an important part of a comprehensive treatment plan. Long-term goals include optimising mental and physical health and improving social functioning. If the patient continues drinking, a clinical 'harm-reduction' model is appropriate.

Recommendation		Strength of recommendation	Level of evidence
11.1	Long-term follow-up of patients following an intensive treatment program is recommended as part of a comprehensive treatment plan, reflecting the chronic relapse possibility of alcohol dependence.	D	IV

Working with the persistent problem drinker

Many people will continue to drink at excessive levels, experience alcohol-related harms, and will not be receptive or respond to the variety of treatment approaches aimed at reducing their alcohol use. The principles of clinical harm-reduction interventions recognise that some people will continue to use alcohol and/or other drugs, and aim to work with these people to nevertheless reduce alcohol-related harms. Priority is placed on immediate and achievable goals, underpinned by values of pragmatism and humanism. Such goals may include achieving a greater number of abstinence days and reducing alcohol consumption on drinking days.

Examples of clinical harm-reduction interventions or strategies include:

- Continue to encourage a reduction or cessation of alcohol intake, and regular discussion of available interventions to this end, including psychosocial interventions, self-help groups, and pharmacotherapies (such as naltrexone).
- Provide regular feedback to the patient about the effects of their alcohol use upon their lives, and include feedback from biological testing (such as liver function tests) or psychological testing (such as the mini-mental state examination).
- Minimise the harms associated with polydrug use by advising against and offering treatment for other drug problems.
- Monitor prescribed and complementary use of medications to avoid predictable drug–alcohol interactions (for example, alcohol and paracetamol, benzodiazepines, anti-coagulants, non-steriodal anti-inflammatory drugs). Alcohol and drug interactions are discussed in Appendix 4. Identify and respond to problems of poor medication adherence in heavy drinkers.
- Use strategies to enhance patient engagement. This may include the clinician attending to barriers posed by the patient's memory or other cognitive disorders, language and/or cultural issues, or physical disabilities. For example, consider using translation services, appointment reminder systems and strategies to enhance medication adherence.
- Define any specific medical and psychiatric conditions and attend to them systematically with relevant specialist medical teams that communicate regularly. Medical treatment can be of great value in reducing morbidity and mortality associated with continuing alcohol intake. More common medical complications of long-term heavy alcohol use include hypertension, cardiac damage, cerebral atrophy, cerebellar damage, peripheral neuropathy, cirrhosis, coagulopathies, peptic ulcer disease, myopathy and malignancies (breast, liver, oesophagus, colon). These are discussed in Chapter 3.
- Offer treatment to minimise the consequences of specific medical complications, such as:
  - thiamine supplements to prevent further central nervous system and peripheral nerve damage
  - antihypertensives for those whose blood pressure fails to normalise on reduction of alcohol consumption
  - beta-blocker or variceal banding for portal hypertension
  - appropriate nutritional management for advanced liver disease and other organ damaged patients
  - falls prevention management for patients with cerebellar damage and/or peripheral neuropathy.

- Engage psychosocial supports (meals-on-wheels, welfare, employment support, community and religious networks, financial or relationship counselling) to reduce family, personal and societal harms.
- Empower family and close friends to reduce availability of alcohol and to encourage further engagement with clinicians able to help with alcohol problems.
- Consider any medico-legal or ethical obligations, including driving assessment, child protection, welfare, guardianship and employment issues for patients in certain trades or professions.
- Recognise that patient's motivation to change their drinking patterns is not fixed, and can be influenced by health professionals, families and friends, and changes in circumstances. For example, an alcohol-related hospitalisation can act as a 'window of opportunity' to engage the patient in treatment for their alcohol use. Maintaining engagement, and an underlying sense of hope for the patient, is important.

However, limited evidence is available about the outcomes of the harm-reduction oriented interventions described above.

General practitioners and other health professionals are particularly well placed to maintain long-term contact and promote clinical harm-reduction interventions with people who continue to drink excessively.

Recommendation		Strength of recommendation	Level of evidence
11.2	A range of clinical strategies should be used to reduce alcohol-related harm in people who continue to drink heavily and resist treatment. These include attending to medical, psychiatric, social and medico-legal issues, maintaining social supports, and facilitating reduction in alcohol intake.	D	IV

Appendixes

Appendixes

Appendix 1
Screening and diagnostic instruments

1. Alcohol Use Disorders Identification Test (AUDIT)
2. TWEAK
3. T-ACE
4. CAGE
5. Michigan Alcohol Screening Test (MAST)
6. Severity of Alcohol Dependence Questionnaire Form-C (SADQ-C)
7. Short Alcohol Dependence Data Questionnaire (SADD)
8. Readiness to Change Questionnaire (RTCQ)
9. Stages of Change Readiness and Treatment Eagerness scale (SOCRATES)
10. The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST V3.0: WHO)
11. Mini-Mental State Examination
12. Indigenous Risk Impact Screen (IRIS)
13. Alcohol Problems Questionnaire (APQ)
14. University of Rhode Island Change Assessment (URICA)
15. The Clock Drawing Test

1. Alcohol Use Disorders Identification Test (AUDIT)

1. How often do you have a drink containing alcohol?				
Never	Monthly or less	2–4 times a month	2–3 times a week	4 or more times a week
(0)	(1)	(2)	(3)	(4)
2. How many drinks containing alcohol do you have on a typical day when you are drinking?				
1 or 2	3 or 4	5 or 6	7 to 9	10 or more
(0)	(1)	(2)	(3)	(4)
3. How often do you have six or more drinks on one occasion?				
Never	Less than monthly	Monthly	Weekly	Daily or almost daily
(0)	(1)	(2)	(3)	(4)
4. How often during the last year have you found that you were not able to stop drinking once you had started?				
Never	Less than monthly	Monthly	Weekly	Daily or almost daily
(0)	(1)	(2)	(3)	(4)
5. How often during the last year have you failed to do what was normally expected from you because of drinking?				
Never	Less than monthly	Monthly	Weekly	Daily or almost daily
(0)	(1)	(2)	(3)	(4)
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?				
Never	Less than monthly	Monthly	Weekly	Daily or almost daily
(0)	(1)	(2)	(3)	(4)
7. How often during the last year have you had a feeling of guilt or remorse after drinking?				
Never	Less than monthly	Monthly	Weekly	Daily or almost daily
(0)	(1)	(2)	(3)	(4)
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?				
Never	Less than monthly	Monthly	Weekly	Daily or almost daily
(0)	(1)	(2)	(3)	(4)
9. Have you or someone else been injured as a result of your drinking?				
No		Yes, but not in the last year		Yes, during the last year
(0)		(2)		(4)
10. Has a relative or friend or a doctor or other health worker, been concerned about your drinking or suggested you cut down?				
No		Yes, but not in the last year		Yes, during the last year
(0)		(2)		(4)

Source: Saunders, JB, Aasland, OG, Babor, TF, de la Fuente, JR & Grant, M 1993, 'Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption II', *Addiction*, vol. 88, pp. 791–804.

2. TWEAK

T	Tolerance: How many drinks can you hold?
W	Have close friends or relatives Worried or complained about your drinking in the past year?
E	Eye Opener: do you sometimes take a drink in the morning when you get up?
A	Amnesia: Has a friend or family member ever told you about things you said or did while you were drinking that you could not remember?
K(C)	Do you sometimes feel the need to Cut down on your drinking?

Source: Russell, M & Bigler, L 1979, 'Screening for alcohol-related problems in an outpatient obstetric-gynaecologic clinic', *Journal of Obstetrics and Gynaecology*, vol. 134(1), 4–12.

3. T-ACE

- T Tolerance: how many drinks does it take to make you feel high?
- A Have people Annoyed you by criticizing your drinking?
- C Have you ever felt you ought to Cut down on your drinking?
- E Eye opener: Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?

Source: Russell, M & Bigler, L 1979, 'Screening for alcohol-related problems in an outpatient obstetric–gynaecologic clinic', *Journal of Obstetrics and Gynaecology*, vol. 134(1), 4–12.

4. CAGE

C	Have you ever felt you needed to **Cut down** on your drinking?	Yes	No
A	Have people **Annoyed** you by criticizing your drinking?	Yes	No
G	Have you ever felt **Guilty** about drinking?	Yes	No
E	Have you ever felt you needed a drink first thing in the morning (**Eye-opener**) to steady your nerves or to get rid of a hangover?	Yes	No

Note: Two 'yes' responses indicate that the respondent should be investigated further.
Source: Ewing, J & Rouse, B 1970, 'Identifying the hidden alcoholic', 29th International Congress on Alcoholism and Drug Dependence, Sydney, Australia.

5. Michigan Alcohol Screening Test (MAST)

1. Do you feel you are a normal drinker? ('normal' – drink as much or less than most other people)	Yes	No
2. Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening?	Yes	No
3. Does any near relative or close friend ever worry or complain about your drinking?	Yes	No
4. Can you stop drinking without difficulty after one or two drinks?	Yes	No
5. Do you ever feel guilty about your drinking?	Yes	No
6. Have you ever attended a meeting of Alcoholics Anonymous (AA)?	Yes	No
7. Have you ever gotten into physical fights when drinking?	Yes	No
8. Has drinking ever created problems between you and a near relative or close friend?	Yes	No
9. Has any family member or close friend gone to anyone for help about your drinking?	Yes	No
10. Have you ever lost friends because of your drinking?	Yes	No
11. Have you ever gotten into trouble at work because of drinking?	Yes	No
12. Have you ever lost a job because of drinking?	Yes	No
13. Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?	Yes	No
14. Do you drink before noon fairly often?	Yes	No
15. Have you ever been told you have liver trouble such as cirrhosis?	Yes	No
16. After heavy drinking have you ever had delirium tremens (DTs), severe shaking, visual or auditory (hearing) hallucinations?	Yes	No
17. Have you ever gone to anyone for help about your drinking?	Yes	No
18. Have you ever been hospitalized because of drinking?	Yes	No
19. Has your drinking ever resulted in your being hospitalized in a psychiatric ward?	Yes	No
20. Have you ever gone to any doctor, social worker, clergyman or mental health clinic for help with any emotional problem in which drinking was part of the problem?	Yes	No
21. Have you been arrested more than once for driving under the influence of alcohol?	Yes	No
22. Have you ever been arrested, even for a few hours because of other behavior while drinking?	Yes*	No

*If yes, how many times? _____

SCORING **Please score one point if you answered the following:** **1. No** **2. Yes** **3. Yes** **4. No** **5. Yes** **6. Yes** **7 to 22: Yes**	**Add up the scores and compare to the following score card:** **0–2 – no apparent problem** **3–5 – early or middle problem drinker** **6 or more – problem drinker**

Source: Selzer, ML 1971, 'The Michigan Alcoholism Screening Test: the quest for a new diagnostic instrument', *American Journal of Psychiatry*, vol. 12, pp. 1653–58

6. Severity of Alcohol Dependence Questionnaire Form-C (SADQ-C)

The SADQ-C emphasises tolerance and withdrawal symptoms, and physical dependence generally. The impaired control items are a new inclusion, but they do not feature in the current scoring of dependence, and should not be used in reaching an overall score on the SADQ-C.

Name:			Sex: M/F
Date of birth:			Age:
Have you drunk any alcohol in the past six months?		Yes*	No
* If YES, please answer all the following questions by circling the most appropriate response.			
Section A – Impaired Control Scale (ICQ): During the past SIX MONTHS			
Answers to each question are rated on a four-point scale as follows:			
Never or almost never	Sometimes	Often	Nearly always
0	1	2	3
1. After having just one to two drinks, I felt like having a few more.			
Never or almost never	Sometimes	Often	Nearly always
2. After having two or three drinks, I could stop drinking if I had other things to do.			
Never or almost never	Sometimes	Often	Nearly always
3. When I started drinking alcohol, I found it hard to stop until I was fairly drunk.			
Never or almost never	Sometimes	Often	Nearly always
4. When I went drinking, I planned to have at least six drinks.			
Never or almost never	Sometimes	Often	Nearly always
5. When I went drinking, I planned to have no more than two or three drinks.			
Never or almost never	Sometimes	Often	Nearly always
Scoring Part 1	Low 0–5	Average 6–10	High 11–15
Section B – SADQ, Form-C: During the past SIX MONTHS			
1. The day after drinking alcohol, I woke up feeling sweaty.			
Never or almost never	Sometimes	Often	Nearly always
2. The day after drinking alcohol, my hands shook first thing in the morning.			
Never or almost never	Sometimes	Often	Nearly always
3. The day after drinking alcohol, I woke up absolutely drenched in sweat.			
Never or almost never	Sometimes	Often	Nearly always
4. The day after drinking alcohol, my whole body shook violently first thing in the morning if I didn't have a drink.			
Never or almost never	Sometimes	Often	Nearly always
5. The day after drinking alcohol, I dread waking up in the morning.			
Never or almost never	Sometimes	Often	Nearly always
6. The day after drinking alcohol, I was frightened of meeting people first thing in the morning.			
Never or almost never	Sometimes	Often	Nearly always

7. The day after drinking alcohol, I felt at the edge of despair when I awoke.			
Never or almost never	Sometimes	Often	Nearly always
8. The day after drinking alcohol, I felt very frightened when I awoke.			
Never or almost never	Sometimes	Often	Nearly always
9. The day after drinking alcohol, I liked to have a morning drink.			
Never or almost never	Sometimes	Often	Nearly always
10. The day after drinking alcohol, in the morning I always gulped my first few alcoholic drinks down as quickly as possible.			
Never or almost never	Sometimes	Often	Nearly always
11. The day after drinking alcohol, I drank more alcohol in the morning to get rid of the shakes.			
Never or almost never	Sometimes	Often	Nearly always
12. The day after drinking alcohol, I had a very strong craving for an alcoholic drink when I woke.			
Never or almost never	Sometimes	Often	Nearly always
13. I drank more than a quarter of a bottle of spirits in a day (or 1 bottle of wine or 7 middies of beer).			
Never or almost never	Sometimes	Often	Nearly always
14. I drank more than half a bottle of spirits in a day (or 2 bottles of wine or 15 middies of beer).			
Never or almost never	Sometimes	Often	Nearly always
15. I drank more than one bottle of spirits per day (or 4 bottles of wine or 30 middies of beer).			
Never or almost never	Sometimes	Often	Nearly always
16. I drank more than two bottles of spirits per day (or 8 bottles of wine or 60 middies of beer).			
Never or almost never	Sometimes	Often	Nearly always
Section C – SADQ, Form-C: Imagine the following situations			
A. You have HARDLY DRUNK ANY ALCOHOL FOR A FEW DAYS. B. You then drink VERY HEAVILY for TWO DAYS. How would you feel the MORNING AFTER those two days of heavy drinking?			
17. I would start to sweat.			
Not at all	Slightly	Moderately	Quite a lot
18. My hands would shake.			
Not at all	Slightly	Moderately	Quite a lot
19. My body would shake.			
Not at all	Slightly	Moderately	Quite a lot
20. I would be craving for a drink.			
Not at all	Slightly	Moderately	Quite a lot
Answers to each question are rated on a four-point scale as follows: 0 = almost never 1 = sometimes 2 = often 3 = nearly always			
Section B and Section C SADQ-C scores lower than or equal to 30 indicate low (zero to 20) to moderate dependence, while scores higher than 30 indicate a high-level of dependence.			

Source: Stockwell, T, Sitharthan, T, McGrath, D & Lang, E 1994, 'The measurement of alcohol dependence and impaired control in community samples', *Addiction*, vol. 89, no. 2, pp. 167–74.

7. Short Alcohol Dependence Data (SADD) questionnaire

The SADD questionnaire measures physiological and behavioural features of dependence, such as the salience of the drink-seeking behaviour. Its authors have recommended that scores of one to nine be considered low dependence, 10 to 19 equals medium dependence, and 20 or more equals high dependence, based on a four-point rating scale similar to that used in the SADQ-C.

The following questions cover a wide range of topics to do with drinking. Please read each question carefully but do not think too much about its exact meaning. Think about your **most recent** drinking habits and answer each question by placing a tick under the **most appropriate** heading. If you have any difficulties **ask for help**.

	Never	Sometimes	Often	Nearly always
1. Do you find difficulty in getting the thought of drink out of your mind?				
2. Is getting drunk more important than your next meal?				
3. Do you plan your day around when and where you can drink?				
4. Do you drink in the morning, afternoon and evening?				
5 Do you drink for the effect of alcohol without caring what the drink is?				
6. Do you drink as much as you want irrespective of what you are doing the next day?				
7. Given that many problems might be caused by alcohol, do you still drink too much?				
8. Do you know that you won't be able to stop drinking once you start?				
9. Do you try to control your drinking by giving it up completely for days or weeks at a time?				
10. The morning after a heavy drinking session do you need your first drink to get yourself going?				
11. The morning after a heavy drinking session do you wake up with a definite shakiness of your hands?				
12. After a heavy drinking session do you wake up and retch or vomit?				
13. The morning after a heavy drinking session do you go out of your way to avoid people?				
14. After a heavy drinking session do you see frightening things that later you realise were imaginary?				
15. Do you go drinking and the next day, find you have forgotten what happened the night before?				

Source: Raistrick, D, Dubar, G & Davidson, R 1983, 'Development of a questionnaire to measure alcohol dependence', *British Journal of Addiction*, vol. 78, pp. 89–95.

Suggested scores on three measures of alcohol dependence to determine treatment goal and intensity			
Scale	Low dependence Moderation goal Brief intervention	Moderate dependence Moderation/abstinence Brief or intensive intervention	High dependence Abstinence goal Intensive intervention
SADQ	0–20	21–40	41–60
SADD	0–9	10–19	20–45
ADS*	0–13	14–30	31–51

Sources: Heather, N 1989, 'Brief intervention strategies', in Hester, RK & Miller, WR (eds) 1989, *Handbook of Alcoholism Treatment Approaches,* Pergamon Press, New York. * Skinner, HA & Horn, JL 1984, *Alcohol Dependence Scale (ADS) Users Guide*, Addiction Research Foundation, Toronto.

8. Readiness to Change Questionnaire (RTCQ)

The following questionnaire is designed to identify how you feel about your drinking right now. Please think about your current situation and drinking habits, even if you have given up drinking completely. Read each question carefully, and then decide to what extent you agree or disagree with the statements.

Key: SD – Strongly Disagree; D – Disagree; U – Unsure; A – Agree; SA – Strongly Agree

	SD	D	U	A	SA
1. There is no need for me to change my drinking habits.					
2. I enjoy my drinking, but sometimes I drink too much.					
3. I have reached the stage where I should seriously think about giving up or drinking less alcohol.					
4. I am trying to stop drinking or drink less than I used to.					
5. I was drinking too much at one time, but now I've managed to cut down (or stop) my drinking.					
6. It's a waste of time thinking about my drinking because I do not have a problem.					
7. Sometimes I think I should quit or cut down on my drinking.					
8. I have decided to do something about my drinking.					
9. I know that my drinking has caused problems, and I'm now trying to correct this.					
10. I have changed my drinking habits (either cut down or quit), and I'm trying to keep it that way.					
11. There is nothing seriously wrong with my drinking.					
12. My drinking is a problem sometimes.					
13. I'm preparing to change my drinking habits (either cut down or give up completely).					
14. Anyone can talk about wanting to do something about their drinking, but I am actually doing something about it.					
15. It is important for me to hold onto the changes I've made, now that I've cut down (or quit) drinking.					
16. I am a fairly normal drinker.					
17. I am weighing up the advantages and disadvantages of my present drinking habits.					
18. I have made a plan to stop or cut down drinking, and I intend to put this plan into practice.					

Source: Rollnick, S, Heather, N, Gold, R & Hall, W 1992, 'Development of a short "Readiness to Change" Questionnaire for use in brief opportunistic interventions', *British Journal of Addiction*, vol. 87, pp. 743–54.

9. Stages of Change Readiness and Treatment Eagerness scale (SOCRATES)

Read the following statements carefully; each one describes a way that you might feel about your drinking. For each statement, circle one number to indicate how much you agree or disagree with it right now. **Circle only one number for every statement**.

	NO! Strongly disagree	No Disagree	? Undecided or unsure	Yes Agree	YES! Strongly agree
1. I really want to make changes in my drinking.	1	2	3	4	5
2. Sometimes I wonder if I am an alcoholic.	1	2	3	4	5
3. If I don't change my drinking soon, my problems are going to get worse.	1	2	3	4	5
4. I have already started making some changes in my drinking	1	2	3	4	5
5. I was drinking too much at one time, but I've managed to change my drinking.	1	2	3	4	5
6. Sometimes I wonder if my drinking is hurting other people.	1	2	3	4	5
7. I am a problem drinker.	1	2	3	4	5
8. I'm not just thinking about changing my drinking, I'm already doing something about it.	1	2	3	4	5
9. I have already changed my drinking, and I am looking for ways to keep from slipping back to my old pattern.	1	2	3	4	5
10. I have serious problems with drinking.	1	2	3	4	5
11. Sometimes I wonder if I am in control of my drinking.	1	2	3	4	5
12. My drinking is causing a lot of harm.	1	2	3	4	5
13. I am actively doing things now to cut down or stop drinking.	1	2	3	4	5
14. I want help to keep from going back to the drinking problems that I had before.	1	2	3	4	5
15. I know that I have a drinking problem.	1	2	3	4	5
16. There are times when I wonder if I drink too much.	1	2	3	4	5
17. I am an alcoholic.	1	2	3	4	5
18. I am working hard to change my drinking.	1	2	3	4	5
19. I have made some changes in my drinking, and I want some help to keep from going back to the way I used to drink.	1	2	3	4	5

SOCRATES scoring

Transfer answers from questionnaire (see note below):

Recognition	Ambivalence	Taking Steps
1 _____	2 _____	4 _____
3 _____	5 _____	
	6 _____	
7 _____		8 _____
	9_____	
10 _____	11 _____	
12 _____		13 _____
	14 _____	
15 _____	16 _____	
17 _____		18 _____
		19 _____
Totals: Re: _____	Am: _____	Ts: _____

SOCRATES Profile Sheet (19-Item Version 8A)
INSTRUCTIONS: From the SOCRATES Scoring Form (19-Item Version) transfer the total scale scores into the empty boxes at the bottom of the Profile Sheet. Then for each scale, CIRCLE the same value above it to determine the decile range.

DECILE SCORES	Recognition	Ambivalence	Taking Steps
90 (very high)		19–20	39–40
80		18	37–38
70 (high)	35	17	36
60	34	16	34–35
50 (medium)	32–33	15	33
40	31	14	31–32
30 (low)	29–30	12–13	30
20	27–28	9–11	26–29
10 (very low)	7–26	4–8	8–25
Raw scores (from scoring sheet)	**Re=_____**	**Am=_____**	**Ts=_____**

These interpretive ranges are based on a sample of 1726 adult men and women presenting for treatment of alcohol problems through Project MATCH. Note that individual scores are therefore being ranked as low, medium, or high relative to people already presenting for alcohol treatment.

Guidelines for interpreting SOCRATES-8 scores

Using the SOCRATES profile sheet, circle the client's raw score within each of the three scale columns. This provides information as to whether the client's scores are low, average, or high relative to people already seeking treatment for alcohol problems. The above table provides general guidelines for interpretation of scores, but it is wise to examine individual item responses for additional information.

Source: Miller, W & Tonigan, J 1996, 'Assessing drinkers' motivation for change: the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES)', *Psychology of Addictive Behaviors*, vol. 10, pp. 81–89.

10. ASSIST V3.0 (WHO)

Introduction (please read to patient):

Thank you for agreeing to take part in this brief interview about alcohol, tobacco products and other drugs. I am going to ask you some questions about your experience of using these substances across your lifetime and in the past three months. These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills (show drug card).

Some of the substances listed may be prescribed by a doctor (like amphetamines, sedatives, pain medications). For this interview, we will not record medications that are used as prescribed by your doctor. However, if you have taken such medications for reasons other than prescription, or taken them more frequently or at higher doses than prescribed, please let me know. While we are also interested in knowing about your use of various illicit drugs, please be assured that information on such use will be treated as strictly confidential.

Note: Before asking questions, give ASSIST response card to patient (see page 185).

Question 1 (if completing follow-up, please cross check the patient's answers with the answers given for Q1 at baseline. Any differences on this question should be queried)		
In your life, which of the following substances have you ever used? (non-medical use only)		
	No	**Yes**
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	3
d. Cocaine (coke, crack, etc.)	0	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	3
j. Other – specify:	0	3
Probe if all answers are negative: 'Not even when you were in school?'		
If 'No' to all items, stop interview.		
If 'Yes' to any of these items, ask Question 2 for each substance ever used.		

Question 2 (score as indicated)					
In the past three months, how often have you used the substances you mentioned (first drug, second drug, etc.)?					
	Never	**Once or twice**	**Monthly**	**Weekly**	**Daily or almost daily**
	0	2	3	4	6
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)					
b. Alcoholic beverages (beer, wine, spirits, etc.)					
c. Cannabis (marijuana, pot, grass, hash, etc.)					
d. Cocaine (coke, crack, etc.)					
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)					
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)					
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)					
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)					
i. Opioids (heroin, morphine, methadone, codeine, etc.)					
j. Other – specify:					
If 'Never' to all items in Question 2, skip to Question 6.					
If any substances in Question 2 were used in the previous three months, continue with Questions 3, 4 & 5 for each substance used.					

Question 3 (score as indicated)					
During the past three months, how often have you had a strong desire or urge to use (first drug, second drug, etc.)?					
	Never	**Once or twice**	**Monthly**	**Weekly**	**Daily or almost daily**
	0	3	4	5	6
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)					
b. Alcoholic beverages (beer, wine, spirits, etc.)					
c. Cannabis (marijuana, pot, grass, hash, etc.)					
d. Cocaine (coke, crack, etc.)					
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)					
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)					
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)					
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)					
i. Opioids (heroin, morphine, methadone, codeine, etc.)					
j. Other – specify:					

Question 4 (score as indicated)					
During the past three months, how often has your use of (first drug, second drug, etc.) led to health, social, legal or financial problems?					
	Never	**Once or twice**	**Monthly**	**Weekly**	**Daily or almost daily**
	0	4	5	6	7
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)					
b. Alcoholic beverages (beer, wine, spirits, etc.)					
c. Cannabis (marijuana, pot, grass, hash, etc.)					
d. Cocaine (coke, crack, etc.)					
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)					
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)					
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)					
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)					
i. Opioids (heroin, morphine, methadone, codeine, etc.)					
j. Other – specify:					

Question 5 (score as indicated)					
During the past three months, how often have you failed to do what was normally expected of you because of your use of (first drug, second drug, etc.)?					
	Never	**Once or twice**	**Monthly**	**Weekly**	**Daily or almost daily**
	0	2	4	6	8
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)					
b. Alcoholic beverages (beer, wine, spirits, etc.)					
c. Cannabis (marijuana, pot, grass, hash, etc.)					
d. Cocaine (coke, crack, etc.)					
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)					
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)					
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)					
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)					
i. Opioids (heroin, morphine, methadone, codeine, etc.)					
j. Other – specify:					
Ask Questions 6 & 7 for all substances ever used (i.e. those endorsed in Question 1)					

Question 6 (score as indicated)			
Has a friend or relative or anyone else ever expressed concern about your use of (first drug, second drug, etc.)?			
	No, never	**Yes, in past 3 months**	**Yes, but not in past 3 months**
	0	6	3
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)			
b. Alcoholic beverages (beer, wine, spirits, etc.)			
c. Cannabis (marijuana, pot, grass, hash, etc.)			
d. Cocaine (coke, crack, etc.)			
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)			
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)			
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)			
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)			
i. Opioids (heroin, morphine, methadone, codeine, etc.)			
j. Other – specify:			

Question 7 (score as indicated)			
Have you ever tried and failed to control, cut down or stop using (first drug, second drug, etc.)?			
	No, never	Yes, in past 3 months	Yes, but not in past 3 months
	0	6	3
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)			
b. Alcoholic beverages (beer, wine, spirits, etc.)			
c. Cannabis (marijuana, pot, grass, hash, etc.)			
d. Cocaine (coke, crack, etc.)			
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)			
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)			
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)			
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)			
i. Opioids (heroin, morphine, methadone, codeine, etc.)			
j. Other – specify:			
Question 8 (score as indicated)			
Have you ever used any drug by injection? (non-medical use only)			
	No, never	Yes in the past 3 months	Yes, but not in the past 3 months
	0	2	1

IMPORTANT NOTE: Patients who have injected drugs in the last 3 months should be asked about their pattern of injecting during this period, to determine their risk levels and the best course of intervention.

Pattern of injecting	Intervention guidelines
Once weekly or less? Fewer than three days in a row?	Brief intervention including 'risks associated with injecting' card.
More than once per week? More than three days in a row?	Further assessment and more intensive treatment.

How to calculate a specific substance involvement score

For each substance (labelled a. to j.) add up the scores received for questions 2 through 7 inclusive. Do not include the results from either Q1 or Q8 in this score.

For example, a score for cannabis would be calculated as: Q2c + Q3c + Q4c + Q5c + Q6c + Q7c.

Note that Q5 for tobacco is not coded, and is calculated as: Q2a + Q3a + Q4a + Q6a + Q7a.

The patient's specific substance involvement score determines the type of intervention

	Record specific substance score	No intervention	Receive brief intervention	More intensive treatment *
a. tobacco		0–3	4–26	27+
b. alcohol		0–10	11–26	27+
c. cannabis		0–3	4–26	27+
d. cocaine		0–3	4–26	27+
e. amphetamine		0–3	4–26	27+
f. inhalants		0–3	4–26	27+
g. sedatives		0–3	4–26	27+
h. hallucinogens		0–3	4–26	27+
i. opioids		0–3	4–26	27+
j. other drugs		0–3	4–26	27+

Note: * Further assessment and more intensive treatment may be provided by the health professional(s) within your primary care setting, or, by a specialist drug and alcohol treatment service when available.
Source: World Health Organization 2002, 'Alcohol, Smoking and Substance Involvement Screening Test (WHO ASSIST) Working Group, The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST); development, reliability and feasibility', *Addiction*, vol. 97, pp. 1183–94.

ASSIST V3.0 (WHO) response card for patients

Response Card – substances
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)
b. Alcoholic beverages (beer, wine, spirits, etc.)
c. Cannabis (marijuana, pot, grass, hash, etc.)
d. Cocaine (coke, crack, etc.)
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)
i. Opioids (heroin, morphine, methadone, codeine, etc.)
j. Other – specify:
Response Card (ASSIST Questions 2 to 5)
Never: not used in the last 3 months
Once or twice: 1 to 2 times in the last 3 months
Monthly: 1 to 3 times in one month
Weekly: 1 to 4 times per week
Daily or almost daily: 5 to 7 days per week
Response Card (ASSIST Questions 6 to 8)
No, never
Yes, but not in the past 3 months
Yes, in the past 3 months

ASSIST V3.0 (WHO) feedback report card for patients

Name _____		Test date _____/ _____/ _____	
Specific substance involvement scores			
Substance score risk level			
a. Tobacco products	0–3 Low	4–26 Moderate	27+ High
b. Alcoholic Beverages	0–10 Low	11–26 Moderate	27+ High
c. Cannabis	0–3 Low	4–26 Moderate	27+ High
d. Cocaine	0–3 Low	4–26 Moderate	27+ High
e. Amphetamine type stimulants	0–3 Low	4–26 Moderate	27+ High
f. Inhalants	0–3 Low	4–26 Moderate	27+ High
g. Sedatives or Sleeping Pills	0–3 Low	4–26 Moderate	27+ High
h. Hallucinogens	0–3 Low	4–26 Moderate	27+ High
i. Opioids	0–3 Low	4–26 Moderate	27+ High
j. Other – specify	0–3 Low	4–26 Moderate	27+ High

What do your scores mean?	
Low	You are at low risk of health and other problems from your current pattern of use.
Moderate	You are at risk of health and other problems from your current pattern of substance use.
High	You are at high risk of experiencing severe problems (health, social, financial, legal, relationship) as a result of your current pattern of use and are likely to be dependent

Are you concerned about your substance use?

a. Tobacco

Your risk of experiencing these harms is: Low ☐ Moderate ☐ High ☐ (tick one)

Regular tobacco smoking is associated with:

- premature aging, wrinkling of the skin
- respiratory infections and asthma
- high blood pressure, diabetes
- respiratory infections, allergies and asthma in children of smokers
- miscarriage, premature labour and low birth weight babies for pregnant women
- kidney disease
- chronic obstructive airways disease
- heart disease, stroke, vascular disease
- cancers.

b. Alcohol

Your risk of experiencing these harms is: Low ☐ Moderate ☐ High ☐ (tick one)

Regular excessive alcohol use is associated with:

- hangovers, aggressive and violent behaviour, accidents and injury
- reduced sexual performance, premature ageing
- digestive problems, ulcers, inflammation of the pancreas, high blood pressure
- anxiety and depression, relationship difficulties, financial and work problems
- difficulty remembering things and solving problems
- deformities and brain damage in babies of pregnant women
- stroke, permanent brain injury, muscle and nerve damage
- liver disease, pancreas disease
- cancers, suicide.

c. Cannabis

Your risk of experiencing these harms is: Low ☐ Moderate ☐ High ☐ (tick one)

Regular use of cannabis is associated with:

- problems with attention and motivation
- anxiety, paranoia, panic, depression
- decreased memory and problem solving ability
- high blood pressure
- asthma, bronchitis
- psychosis in those with a personal or family history of schizophrenia
- heart disease and chronic obstructive airways disease
- cancers

d. Cocaine

Your risk of experiencing these harms is: Low ☐ Moderate ☐ High ☐ (tick one)

Regular use of cocaine is associated with:

- difficulty sleeping, heart racing, headaches, weight loss
- numbness, tingling, clammy skin, skin scratching or picking
- accidents and injury, financial problems
- irrational thoughts
- mood swings – anxiety, depression, mania
- aggression and paranoia
- intense craving, stress from the lifestyle
- psychosis after repeated use of high doses
- sudden death from heart problems.

e. Amphetamine-type stimulants

Your risk of experiencing these harms is: Low ☐ Moderate ☐ High ☐ (tick one)

Regular use of amphetamine type stimulants is associated with:

- difficulty sleeping, loss of appetite and weight loss, dehydration
- jaw clenching, headaches, muscle pain
- mood swings – anxiety, depression, agitation, mania, panic, paranoia
- tremors, irregular heartbeat, shortness of breath
- aggressive and violent behaviour
- psychosis after repeated use of high doses
- permanent damage to brain cells
- liver damage, brain haemorrhage, sudden death (ecstasy) in rare situations.

f. Inhalants

Your risk of experiencing these harms is: Low ☐ Moderate ☐ High ☐ (tick one)

Regular use of inhalants is associated with:

- dizziness and hallucinations, drowsiness, disorientation, blurred vision
- flu like symptoms, sinusitis, nosebleeds
- indigestion, stomach ulcers
- accidents and injury
- memory loss, confusion, depression, aggression
- coordination difficulties, slowed reactions, hypoxia
- delirium, seizures, coma, organ damage (heart, lungs, liver, kidneys)
- death from heart failure.

g. Sedatives

Your risk of experiencing these harms is: Low ☐ Moderate ☐ High ☐ (tick one)

Regular use of sedatives is associated with:

- drowsiness, dizziness and confusion
- difficulty concentrating and remembering things
- nausea, headaches, unsteady gait
- sleeping problems
- anxiety and depression
- tolerance and dependence after a short period of use.
- severe withdrawal symptoms
- overdose and death if used with alcohol, opioids or other depressant drugs.

h. Hallucinogens

Your risk of experiencing these harms is: Low ☐ Moderate ☐ High ☐ (tick one)

Regular use of hallucinogens is associated with:

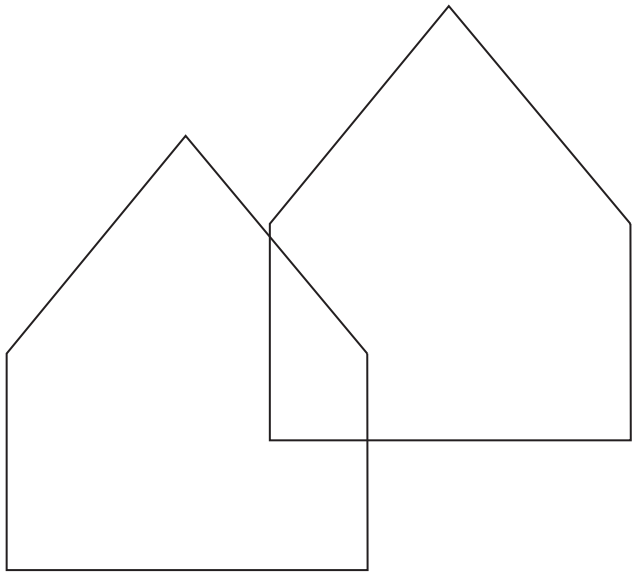
- hallucinations (pleasant or unpleasant) – visual, auditory, tactile, olfactory
- difficulty sleeping
- nausea and vomiting
- increased heart rate and blood pressure
- mood swings
- anxiety, panic, paranoia
- flash-backs
- increase the effects of mental illnesses such as schizophrenia.

i. Opioids
Your risk of experiencing these harms is: Low ☐ Moderate ☐ High ☐ (tick one)
Regular use of opioids is associated with: • itching, nausea and vomiting • drowsiness • constipation, tooth decay • difficulty concentrating and remembering things • reduced sexual desire and sexual performance • relationship difficulties • financial and work problems, violations of law • tolerance and dependence, withdrawal symptoms • overdose and death from respiratory failure.

11. Mini-Mental State Examination

	Patient score	Maximum score
ORIENTATION		
1. What is the (year) (season) (month) (date) (day)?		5
2. Where are we: (state) (country) (city) (suburb) (street or hospital) (house number or ward)? (Accept exact answer only)		5
REGISTRATION		
3. I am going to name three objects, after I have said all three objects I want you to repeat them. Remember what they are because I am going to ask you to name them in a few minutes (say them slowly at 1 second intervals). Please repeat the three items for me. (Score 1 point for each correct reply on the first attempt) (Allow 20 seconds for reply, if patient did not repeat all three, repeat until they are learned or up to a maximum of 5 seconds)		3
ATTENTION AND CALCULATION		
4. Subtract seven from 100 and keep subtracting seven from what is left until I tell you to stop. (May repeat three times if patient pauses – just the same instruction – allow one minute, stop after five answers.) If unable to subtract, ask the patient to recite the days of the week backwards or to spell 'world' backwards.		5
RECALL		
5. Now, what were the three objects that I asked you to remember? Please repeat the three items for me. (Score 1 point for each correct reply on the first attempt.) (Allow 10 seconds; allow one point for each correct response, regardless of order.)		3
LANGUAGE		
6. Show two objects (watch – take off wrist). 'What is this called?' Then pencil. 'What is this called?' (Allow 10 seconds – watch, not clock; pencil, not pen.)		2
7. I'd like you to repeat a phrase after me. 'No ifs, ands or buts' (Allow 10 seconds – repetition must be exact.)		1
8. Follow a three-stage command – ask if the patient is left or right handed. 'Take this paper in your (right/left) hand, fold it in half once with both hands, and put the paper down on the floor'. (Allow 10 seconds – repetition must be exact.)		3
9. Read the words on this page and then do what it says (show a sheet of paper with CLOSE YOUR EYES typed on it) (If patient reads and does not close their eyes – may repeat instruction a maximum of three times. Allow 10 seconds; score one point only if patient closes eyes. Patient does not have to read aloud.)		1
10. Ask the patient to write any complete sentence on a piece of paper. (Allow 30 seconds. The sentence should make sense; ignore spelling errors.)		1
11. Give patient pencil, eraser and paper and design (see two intersecting pentangles diagram below); ask patient to copy the design. (Allow multiple tries until patient is finished and hands it back. Maximum time 1 minute. Check if all sides and angles are preserved and if the intersecting sides form a quadrangle.)		1
Total score		**30**

Interpreting score	
0–17	Marked cognitive impairment, very likely to be dementia
18–23	Moderate cognitive impairment, quite possibly dementia
24–30	Normal range. Interpretation depends on previous level of education, language/culture



Source: Folstein, MF, Folstein, SE & McHugh PR 1975, 'Mini-mental state: A practical method for grading the cognitive state of patients for the clinician', *Journal of Psychiatric Research*, vol. 12, no. 3, 189–98

12. Indigenous Risk Impact Screen (IRIS)

Question	Content domain	Response alternatives
1. In the last 6 months have you needed to drink or use more to get the effects you want?	Alcohol and drug	1 = No 2 = Yes, a bit more 3 = Yes, a lot more
2. When you have cut down or stopped drinking or using drugs in the past, have you experienced any symptoms, such as sweating, shaking, feeling sick in the tummy/vomiting, diarrhoea, feeling really down or worried, problems sleeping, aches and pains?	Alcohol and drug	1 = Never 2 = Sometimes when I stop 3 = Yes, every time
3. How often do you feel that you end up drinking or using drugs much more than you expected?	Alcohol and drug	1 = Never/hardly ever 2 = Once a month 3 = Once a fortnight 4 = Once a week 5 = More than once a week 6 = Most days/every day
4. Do you ever feel out of control with your drinking or drug use?	Alcohol and drug	1 = Never/hardly ever 2 = Sometimes 3 = Often 4 = Most days/every day
5. How difficult would it be to stop or cut down on your drinking or drug use?	Alcohol and drug	1 = Not difficult at all 2 = Fairly easy 3 = Difficult 4 = I couldn't stop or cut down
6. What time of the day do you usually start drinking or using drugs?	Alcohol and drug	1 = At night 2 = In the afternoon 3 = Sometime in the morning 4 = As soon as I wake up
7. How often do you find that your whole day has involved drinking or using drugs?	Alcohol and drug	1 = Never/hardly ever 2 = Sometimes 3 = Often 4 = Most days/every day
8. How often do you feel down in the dumps, sad or slack?	Mental health and emotional wellbeing	1 = Never/hardly ever 2 = Sometimes 3 = Most days/every day
9. How often have you felt that life is hopeless?	Mental health and emotional wellbeing	1 = Never/hardly ever 2 = Sometimes 3 = Most days/every day
10. How often do you feel nervous or scared?	Mental health and emotional wellbeing	1 = Never/hardly ever 2 = Sometimes 3 = Most days/every day
11. Do you worry much?	Mental health and emotional wellbeing	1 = Never/hardly ever 2 = Sometimes 3 = Most days/every day
12. How often do you feel restless and that you can't sit still?	Mental health and emotional wellbeing	1 = Never/hardly ever 2 = Sometimes 3 = Most days/every day
13. Do past events in your family still affect your wellbeing today (such as being taken away from family)?	Mental health and emotional wellbeing	1 = Never/hardly ever 2 = Sometimes 3 = Most days/every day

Source: Schlesinger, CM, Ober, C, McCarthy, MM, Watson JD & Seinen A 2007, 'The development and validation of the Indigenous Risk Impact Screen (IRIS): a 13-item screening instrument for alcohol and drug and mental health risk', Drug and Alcohol Review, vol. 26, pp. 109–17

13. Alcohol Problems Questionnaire (APQ)

All questions refer to the preceding 6 months and are answered either 'yes' or 'no'.

Common items
1. Have you tended to drink more on your own than you used to?
2. Have you worried about meeting your friends again the day after a drinking session?
3. Have you spent more time with drinking friends than other kinds of friends?
4. Have your friends criticised you for drinking too much?
5. Have you had any debts?
6. Have you pawned any of your belongings to buy alcohol?
7. Do you find yourself making excuses about money?
8. Have you been caught out at lying about money?
9. Have you been in trouble with the police due to your drinking?
10. Have you lost your driving licence for drinking and driving?
11. Have you been in prison?
12. Have you been physically sick after drinking?
13. Have you had diarrhoea after a drinking session?
14. Have you had pains in your stomach after a drinking session?
15. Have you had 'pins and needles' in your fingers or toes?
16. Have you had any accidents, requiring hospital treatment, after drinking?
17. Have you lost any weight?
18. Have you been neglecting yourself physically?
19. Have you failed to wash for several days at a time?
20. Have you felt depressed for more than a week?
21. Have you felt so depressed that you felt like doing away with yourself?
22. Have you given up any hobbies you previously enjoyed due to your drinking?
23. Have you found it hard to get enjoyment from your usual interests?
Marital
24. Has your spouse complained about your drinking?
25. Has your spouse tried to stop you from having a drink?
26. Has he/she refused to talk to you because you have been drinking?
27. Has he/she threatened to leave you because of your drinking?
28. Has he/she had to put you to bed after you have been drinking?
29. Have you shouted at him/her after you have been drinking?
30. Have you injured him/her after you have been drinking?
31. Have you been legally separated from your spouse?
32. Has he/she refused to have sex with you because of your drinking?
Children items
33. Have your children criticised your drinking?
34. Have you had rows with your children about your drinking?
35. Do your children tend to avoid you when you have been drinking?
36. Have your children tried to stop you from having a drink?
Work items
37. Have you found your work less interesting than you used to?
38. Have yon been unable to arrive on time for work due to your drinking?
39. Have you missed a whole day at work after a drinking session?
40. Have you been less able to do your job because of your drinking?
41. Has anyone at work complained about you being late or absent?
42. Have you had any formal warnings from your employers?
43. Have you been suspended or dismissed from work?
44. Have you had any accidents at work due to your drinking?

Sources: Drummond, C 1990, The relationship between alcohol dependence and alcohol related problems in a clinical population, Addiction, vol. 85, no. 3, pp. 357–66.
Williams, BTR & Drummond, DC 1984, 'The alcohol problems questionnaire: reliability and validity', *Drug and Alcohol Dependence*, vol. 35, no. 3, pp. 239–43.

14. University of Rhode Island Change Assessment (URICA) scale

There are five possible responses to each of the items in the questionnaire:

1 = strongly disagree	2 = disagree	3 = undecided	4 = agree	5 = strongly agree

1.	As far as I'm concerned, I don't have any problems that need changing.	
2.	I think I might be ready for some self-improvement.	
3.	I am doing something about the problems that had been bothering me.	
4.	It might be worthwhile to work on my problem.	
5.	I'm not the problem one. It doesn't make much sense for me to be here.	
6.	It worries me that I might slip back on a problem I have already changed, so I am here to seek help.	
7.	I am finally doing some work on my problem.	
8.	I've been thinking that I might want to change something about myself.	
9.	I have been successful in working on my problem but I'm not sure I can keep up the effort on my own.	
10.	At times my problem is difficult, but I'm working on it.	
11.	Being here is pretty much a waste of time for me because the problem doesn't have to do with me.	
12.	I'm hoping this place will help me to better understand myself.	
13.	I guess I have faults, but there's nothing that I really need to change.	
14.	I am really working hard to change.	
15.	I have a problem and I really think I should work at it.	
16.	I'm not following through with what I had already changed as well as I had hoped, and I'm here to prevent a relapse of the problem.	
17.	Even though I'm not always successful in changing, I am at least working on my problem.	
18.	I thought once I had resolved my problem I would be free of it, but sometimes I still find myself struggling with it.	
19.	I wish I had more ideas on how to solve the problem.	
20.	I have started working on my problems but I would like help.	
21.	Maybe this place will be able to help me.	
22.	I may need a boost right now to help me maintain the changes I've already made.	
23.	I may be part of the problem, but I don't really think I am.	
24.	I hope that someone here will have some good advice for me.	
25.	Anyone can talk about changing; I'm actually doing something about it.	
26.	All this talk about psychology is boring. Why can't people just forget about their problems?	
27.	I'm here to prevent myself from having a relapse of my problem.	
28.	It is frustrating, but I feel I might be having a recurrence of a problem I thought I had resolved.	
29.	I have worries but so does the next guy. Why spend time thinking about them?	
30.	I am actively working on my problem.	
31.	I would rather cope with my faults than try to change them.	
32.	After all I had done to try to change my problem, every now and again it comes back to haunt me.	

Description

The scale is designed to be a continuous measure. Thus, subjects can score high on more than one of the four stages.

Scoring

Precontemplation items	1, 5, 11, 13, 23, 26, 29, 31
Contemplation items	2, 4, 8, 12, 15, 19, 21, 24
Action items	3, 7, 10, 14, 17, 20, 25, 30
Maintenance items	6, 9, 16, 18, 22, 27, 28, 32

Source: McConnaughy E, Prochaska, J & Velicer, W 1983, 'Stages of change in psychotherapy: measurement and sample profiles', *Psychotherapy: Theory, Research and Practice*, vol. 20, pp. 368–75

15. Clock drawing test

The numerous versions of the clock-drawing test all involve asking the patient to draw the face of a clock. Further questions from the patient may be politely deferred by repeating the request to draw the face of a clock. Most variations of the test also include asking the patient to draw the hands to denote a certain time. The time 11.10 has been suggested as useful because of the distraction of 'pull' of the numeral 10 on the clock when setting a time. Generally there is no time limit to the test, but it usually takes only one to two minutes.

Three easy steps

1. Provide the patient with a piece of paper upon which is a pre-drawn circle of approximately 10 cm in diameter or with a blank piece of paper.

2. Ask the patient to draw a clock face and put in the numbers.

3. Ask the patient to draw the hands so the clock indicates the time '10 minutes past 11.'

Sources: Manos, PJ 1997, 'The utility of the ten-point clock test as a screen for cognitive impairment in general hospital patients', *General Hospital Psychiatry*, vol. 19, no. 6, pp. 439–44.
Munro, CA, Saxton, J & Butters, MA 2000, The neuropsychological consequences of abstinence among older alcoholics: a cross-sectional study, *Alcoholism: Clinical and Experimental Research*, vol. 24, no. 10, pp. 1510–16

Scoring system for clock drawing test

There are a number of scoring systems for this test. The Alzheimer's disease cooperative scoring system is based on a score of five points:

- 1 point for the clock circle
- 1 point for all the numbers being in the correct order
- 1 point for the numbers being in the proper special order (alignment)
- 1 point for the two hands of the clock
- 1 point for the correct time

A normal score is four or five points.

OR

Perhaps the quickest scoring technique involves dividing the clock into four quadrants and counting the numbers in the correct quadrant.

There are a number of variations on scoring the clock, more than variations in administering the test itself. Most scoring systems are highly correlated with well-established measures including the Mini-Mental State Examination, Dementia Rating Scale and the Global Deterioration Scale.

For more detail on different methods of scoring, including references, go to <http://www.neurosurvival.ca/ClinicalAssistant/scales/clock_drawing_test.htm#mendez>.

Appendix 2
Diagnostic criteria for alcohol use disorders

This appendix contains two sests of diagnostic criteria for alcohol use disorders, namely:

- ICD-10 Criteria
- DSM-IV-R Criteria

ICD-10 Criteria for the Alcohol Dependence Syndrome

Three or more of the following manifestations should have occurred together for at least one month or, if persisting for periods of less than one month, should have occurred together repeatedly within a 12-month period:

- A strong desire or sense of compulsion to consume alcohol.
- Impaired capacity to control drinking in terms of its onset, termination, or levels of use, as evidenced by:
  - alcohol being often taken in larger amounts or over a longer period than intended, or
  - by a persistent desire to or unsuccessful efforts to reduce or control alcohol use.
- A physiological withdrawal state when alcohol is reduced or ceased, as evidenced by:
  - the characteristic withdrawal syndrome for alcohol, or
  - by use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms.
- Evidence of tolerance to the effects of alcohol, such that:
  - there is a need for significantly increased amounts of alcohol to achieve intoxication, or
  - the desired effect, or a markedly diminished effect with continued use of the same amount of alcohol.
- Preoccupation with alcohol, as manifested by:
  - important alternative pleasures or interests being given up or reduced because of drinking, or
  - a great deal of time being spent in activities necessary to obtain, take, or recover from the effects of alcohol.
- Persistent alcohol use despite clear evidence of harmful consequences, as evidenced by continued use when the individual is actually aware, or may be expected to be aware, of the nature and extent of harm.

Source: WHO 1992, *The ICD-10 Classification of Mental and Behavioural Disorders: Clinical descriptions and diagnostic guidelines, F10–F19 Mental and behavioural disorders due to psychoactive substance use*, World Health Organization, Geneva, available at <http://www.who.int/substance_abuse/terminology/ICD10ClinicalDiagnosis.pdf>.

DSM-IV diagnostic criteria for substance abuse

A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by one (or more) of the following, occurring within a 12-month period:

- Recurrent substance use resulting in failure to fulfil major role obligations at work, school or home.
- Recurrent substance use in situations in which it is physically hazardous (such as driving while intoxicated).
- Recurrent substance-related legal problems.
- Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.

The symptoms have not met the criteria for substance dependence.

DSM-IV diagnostic criteria for 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:

- Tolerance, as defined by either:
  - a need for markedly increased amounts of the substance to achieve intoxication or the desired effect
  - markedly diminished effect with continued use of the same amount of the substance.
- Withdrawal, as manifested by either:
  - a characteristic withdrawal syndrome
  - the same or a closely related substance is used to relieve or avoid withdrawal symptoms.
- The substance is taken in larger amounts or for a longer period than intended.
- There is a persistent desire or unsuccessful efforts to cut down or control substance use.
- A great deal of time in spent in activities necessary to obtain the substance, use the substance, or recover from its effects.
- Important social, occupational or recreational activities are reduced or given up because of substance use.
- 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.

Source: American Psychiatric Association 2000, *Diagnostic and Statistical Manual of Mental Disorders*, 4th edn, text revision (DSM-IV-TR), American Psychiatric Association, Washington, DC.

Appendix 3
Withdrawal scales

This appendix contains three withdrawal scales, namely:

- Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-AR)
- Alcohol Withdrawal Scale (AWS)
- Short Alcohol Withdrawal Scale (SAWS)

Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar)

The CIWA-Ar is not copyrighted and may be reproduced freely. This assessment for monitoring withdrawal symptoms requires approximately 5 minutes to administer. The maximum score is 67. Patients scoring less than 10 do not usually need additional medication for withdrawal.

Patient: _____	
Date: _____/_____/_____ **Time:*** _____ * 24 hour clock, midnight = 00:00	
Pulse or heart rate, taken for one minute: _____ **Blood pressure:** _____/_____	
Nausea and vomiting: Ask 'Do you feel sick to your stomach? Have you vomited?'	
Observation	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
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?'	
Observation	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

Tremor: Arms extended and fingers spread apart.	
Observation	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
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?'	
Observation	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
Paroxysmal sweats:	
Observation	0. No sweat visible 1. Barely perceptible sweating, palms moist 2. 3. 4. Beads of sweat obvious on forehead 5. 6. 7. Drenching sweats
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?'	
Observation	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 hallucination

Anxiety: Ask 'Do you feel nervous?'	
Observation	0. No anxiety, at ease 1. Mild 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
Headache, 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.	
Observation	0. Not present 1. Very mild 2. Mild 3. Moderate 4. Moderately severe 5. Severe 6. Very severe 7. Extremely severe
Agitation:	
Observation	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
Orientation and clouding of sensorium: Ask 'What day is this? Where are you? Who am I?'	
Observation	0. Oriented and can do serial additions 1. Cannot do serial additions or is uncertain about date 2. Disoriented for date by no more than 2 calendar days 3. Disoriented for date by more than 2 calendar days 4. Disoriented for place/person
Total CIWA-Ar score	_____ **Maximum possible score 67**

Note: The CIWA-Ar is not copyrighted and may be reproduced freely. This assessment for monitoring withdrawal symptoms requires about 5 minutes to administer. The maximum score is 67. Patients scoring less than 10 do not usually need additional medication for withdrawal.

Source: Sullivan, JT, Sykora, K, Schneiderman, J, Naranjo, CA & Sellers, EM 1989, 'Assessment of alcohol withdrawal: The revised Clinical Institute Withdrawal Assessment for Alcohol Scale (CIWA-Ar)', *British Journal of Addiction*, vol. 84, pp. 1353–57.

Alcohol Withdrawal Scale (AWS)

Perspiration	0. No abnormal sweating 1. Moist skin 2. Localised beads of sweat, for example, 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, for example, 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°C to 38.0°C 3. Temperature of 38.1°C to 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 self 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; may be short periods of lucidity 4. Disorientated in time, place and person; no meaningful contact can be obtained
Total AWS score _____	**Maximum possible score 27**
Perspiration (0–4) Tremor (0–3) Anxiety (0–4) Agitation (0–4) Axilla temperature (0–4) Hallucinations (0–4) Orientation (0–4) **Total (maximum score is 27)**	

Source: NSW Health Department 1999, *New South Wales Detoxification Clinical Practice Guidelines*, NSW Health Department, ISBN 0 7347 3034.

Short Alcohol Withdrawal Scale (SAWS)

Please put a tick in the boxes to show how you have been feeling for all of the following conditions in the last 24 hours.

	None (0)	Mild (1)	Moderate (2)	Severe (3)
Anxious				
Sleep disturbance				
Problems with memory				
Nausea				
Restless				
Tremor (shakes)				
Feeling confused				
Sweating				
Miserable				
Heart pounding				

Source: Gossop, M, Keaney, F, Stewart, D, Marshall, E & Strang, JA 2002, 'Short Alcohol Withdrawal Scale (SAWS) development and psychometric properties', *Addiction Biology*, vol. 7, pp. 37–43.

Appendix 4
Alcohol and drug interactions

Alcohol interacts with many other drugs, including prescription, over-the-counter medications and herbal preparations (Izzo & Ernst 2001; Koski et al. 2005; Pringle et al. 2005; Weathermon & Crabb 1999). The effects of combining alcohol and medication depend on the type, route and dosage of medication, the volume of alcohol consumed, and also on personal factors, such as genetics, gender and comorbid health conditions (Weathermon & Crabb 1999). The potential for drug interactions increases with the number of medications being used.

Alcohol can exert direct effects on the absorption of medications. Alcohol can increase drug absorption by enhancing the gastric solubility of medications and by increasing gastrointestinal blood flow. However, high alcohol concentrations induce gastric irritation causing pyloric spasm, which in turn may delay drug absorption and/or reduce bioavailability.

Alcohol is not extensively bound to plasma proteins sufficient to modify drug distribution. However, serum albumin levels in chronic alcoholics may be abnormally low so that some drugs, such as diazepam, have an increased volume of distribution.

Short-term alcohol intake can inhibit the hepatic metabolism of many drugs (primarily through cytochrome enzyme systems). Long-term heavy alcohol use however can induce liver enzymes to metabolise drugs more efficiently.

These pharmacokinetic interactions may result in:

- increased effects of alcohol, with greater levels of intoxication and sedation
- increased or decreased effects of other medications, which may result in greater adverse events (side effects), or reduced effectiveness of medication.

Alcohol can also have pharmacodynamic interactions with other psychoactive drugs, such as benzodiazepines, opioids and other sedating medications (for example, some antihistamines, tricyclic antidepressants), typically resulting in greater sedation and intoxication, and increased risk of respiratory depression, coma and death.

Interactions between alcohol and medications can have serious implications for people undertaking activities requiring concentration, such as driving a motor vehicle or operating heavy machinery.

Commonly prescribed classes of medications, such as benzodiazepines, opiate analgesics, antidepressants, antibiotics, antihistamines, anti-inflammatories, hypoglycaemic agents and anti-coagulants have known interactions with alcohol (see 'Drugs with the potential to interact with alcohol' below).

Alcohol use can also result in poor adherence with other medications (patients not taking their medication as indicated), with potential for adverse consequences. This may be more likely to occur in heavy drinkers, in those with alcohol-related cognitive impairment, and in those taking multiple medications in complex regimes.

People who drink alcohol and are using prescribed or over-the-counter medications should discuss the possibility of interactions with their medical practitioner or pharmacist, and read any information on alcohol interactions included in the packaging. Temporary or permanent abstinence from alcohol may be necessary, particularly for people taking multiple medications.

Health practitioners should, where relevant, caution patients against using alcohol in combination with medication. Patients on multiple medications (such as those older adults, and/or those with complex medical problems) should regularly have their medications reviewed and rationalised by their general practitioner and pharmacist, as individual specialists may not be aware of other medications the patient is using.

Further information can be obtained by contacting the National Poisons Information Hotline on **13 11 26** (24 hours, 7 days), for all States and Territories.

For urgent attention in case of accidental poisoning, especially children:

New South Wales	The Children's Hospital Westmead Hawkesbury Road and Hainsworth Street Westmead NSW 2145 Ph (02) 9845 0000
Victoria	Austin Hospital Studley Road Heidelberg Vic. 3084 Ph (03) 9496 5000
Queensland	Royal Children's Hospital Herston Qld 4006 Ph (07) 3636 8111
South Australia	Women's and Children's Hospital King William Rd North Adelaide SA 5006 Ph (08) 8222 4000
Western Australia	Poisons Information Centre Sir Charles Gairdner Hospital Hospital Avenue Nedlands WA 6009 Ph (08) 9346 3333
Tasmania	Royal Hobart Hospital Liverpool St Hobart Tas. 7000 Ph (03) 6222 8308
Northern Territory	Royal Darwin Hospital Rocklands Drive, Casuarina Darwin NT 0800 Ph (08) 8922 8888
Australian Capital Territory	The Canberra Hospital Yamba Drive Garran ACT 2605 Ph (02) 6244 2222

Drugs with the potential to interact with alcohol

Medication	Type of interaction
Sedative–hypnotics: • benzodiazepines • barbiturates	Acute alcohol consumption potentiates the central nervous system depressant effects of benzodiazepines and barbiturates. Risk of cognitive impairment, respiratory depression and overdose is increased. Chronic alcohol consumption decreases availability of barbiturates through hepatic enzyme induction, decreasing their effect.
Anaesthetic agents	Chronic alcohol consumption: • increases the dose of propofol required to induce anaesthesia • increases the risk of liver damage by anaesthetic gases enflurane and halothane.
Opioid analgesics	Alcohol increases sedative effect. Risk of cognitive impairment, respiratory depression and opioid overdose is increased.
Tricyclic antidepressants	Acute alcohol consumption increases risk of sedation and orthostatic hypotension (sudden drop in blood pressure upon standing up).
Antihistamines	Alcohol potentiates the central nervous system depressant effect of sedating antihistamines, especially in elderly people.
Antipsychotic medication: • phenothiazines • olanzapine	Acute alcohol consumption increases sedative effects, impairs coordination and may result in liver impairment. Alcohol increases sedation and risk of hypotension.
Oral hypoglycaemic agents: • sulfonylurea compounds	Diabetics on sulfonylureas should be advised not to drink. Acute alcohol ingestion prolongs availability of hypoglycaemic agents leading to hypoglycaemia. Hypoglycaemia may also occur if there is malnutrition or depletion of glycogen stores. Chronic alcohol administration decreases the availability of hypoglycaemic agents with risk of hyperglycaemia.
Anticonvulsants: • Phenytoin	Acute alcohol consumption increases availability of Phenytoin increasing risk of side effects. Chronic alcohol consumption decreases anticonvulsant effect of Phenytoin.
Histamine H2 receptor antagonists: • Cimetidine • Ranitidine	These drugs inhibit gastric alcohol dehydrogenase and increase the rate of gastric emptying. This may increase blood alcohol concentration.
Oral anticoagulants: • Warfarin	Acute alcohol consumption increases Warfarin's availability, increasing risk of haemorrhages. Chronic alcohol consumption reduces availability of Warfarin, decreasing its anticoagulant effect.
Non-narcotic analgesics: • Aspirin, NSAIDs • Paracetamol	Alcohol increases the risk of gastrointestinal bleeding. Chronic alcohol consumption increases risk of liver damage with paracetemol overdose.

Source: Modified with permission from Latt N, Conigrave, K, Saunders, JB, Marshall EJ & Nutt, D 2008, *Handbook of Addiction Medicine*, Oxford University Press, Oxford.

Appendix 5
Getting through alcohol withdrawal: A guide for patients and carers

What is alcohol withdrawal? How can treatment help?

Alcohol withdrawal is the process of your body readjusting to not having alcohol in your system after a long period of heavy drinking.

Most common symptoms are tremor (shakes), sweating, hot and cold flushes, nausea and vomiting, diarrhoea, stomach cramps, anxiety, poor sleep, mood swings, and cravings.

Some people get severe problems (complications) during withdrawal such as severe anxiety and agitation, seizures (fits), delirium (severe confusion), or hallucinations (seeing, feeling or hearing things that are not there).

Withdrawal usually starts 6 to 24 hours after the last drink, peaks in severity over days 2 to 3, and generally settles down within a week, although some symptoms, such as poor sleep, mood swings and cravings, can take several weeks to improve.

The aims of treatment for alcohol withdrawal are:

- to increase the likelihood that you will complete withdrawal
- to prevent or reduce the severity of complications during withdrawal
- to connect you with ongoing help to abstain from or reduce alcohol use in the future, and with services to help with any other social or health problems.

Getting through alcohol withdrawal

Part of getting through withdrawal successfully is being prepared. Talk to your health worker about what to expect, your history of withdrawal, current medical and social circumstances, and things that can help you get through withdrawal safely.

Some things you need to consider include being in a safe environment, having support people, and perhaps taking appropriate medication and vitamins. As well, you need to concentrate on improving your diet and nutrition, getting enough sleep and relaxing.

A safe environment: Many people can safely withdraw at home if (a) their home is free from alcohol and other drugs, (b) the withdrawal is not expected to be too severe, and (c) there are people to help support through the first few days. Others may need a residential unit for several days, either a specialised detoxification unit, or a hospital.

Supports: People to help you during withdrawal, including monitoring how severe the symptoms, and how well you are coping, and helping with basic things, such as preparing meals, shopping, keeping drinking 'friends' away.

Medications: Not everyone needs medication to get through withdrawal, but some people do much better with medication. The most commonly used medication is diazepam (a sedative benzodiazepine drug), usually used for up to 5 days to help prevent or treat anxiety, fits and hallucinations. Diazepam should usually not be taken for more than this period of time, or in combination with alcohol. Talk to your doctor about the role of medication.

Vitamins: Many heavy drinkers have thiamine (Vitamin B1) deficiency, which if severe can cause confusion and unsteadiness (part of a condition called Wernicke's encephalopathy). Clinicians often recommend that people take thiamine supplements during withdrawal. If you have been eating well in the weeks leading up to withdrawal you can take thiamine orally as tablets. If you have not been eating well, it is more effective if you receive thiamine by injection.

Drink lots of fluids: It is important to drink at least 2 litres of fluids a day, more if you have diarrhoea, vomiting or are sweating a lot. Drink water, fruit juices and flat (non-fizzy) cordial throughout the day.

Avoid large heavy meals early in withdrawal: Eat small light meals or snacks (such as toast, salads, soups, yoghurt, vegetables, fruit) throughout the day and stay away from fried and fatty foods. If nausea, vomiting or diarrhoea is severe, stop eating solid foods and consume only liquids for a while. If you can keep fluids down for a few hours, try a small amount of light food (such as a piece of toast). If the problem continues talk to your doctor or pharmacist about taking medications to control the symptoms.

Sleep: Most people experience poor sleep patterns during withdrawal. Medication such as diazepam can help during the first few days, but it only delays the return of normal sleep, and other non-drug approaches are more important in the long-term. Ask your health worker for advice about better sleep, or visit:

- <http://www.sleepcouncil.com/SleepAdvice/sleep_tips_2.cfm>
- <http://www.bbc.co.uk/science/humanbody/sleep/articles/advicetips.shtml>
- <http://www.beyondblue.org.au/index.aspx?link_id=7.980>
- <http://www.beyondblue.org.au/index.aspx?link_id=6.1068&tmp=FileDownload&fid=1143>.

Relaxation: Anxiety and irritability are common during withdrawal, so it is important to do things that will help you relax. Everyone has simple ways to relax – watching television, videos, listening to music, warm baths, light exercise, reading – do whatever works for you. Ask your counsellor or health worker about information on more sophisticated relaxation approaches such as relaxation tapes, muscle relaxation and breathing exercises. For relaxation tips visit:

- <http://www.ptsd.org.uk/relaxation_tips.htm> and <http://confident1.com/10-top-tips-for-relaxation>.

Coping with cravings

Everyone gets the urge to drink alcohol during withdrawal. But cravings come and go, and are usually severe for short periods (usually less than 1 hour), then settle down to a level that is easier to deal with. Your goal is to see through this severe period. A useful approach for dealing with cravings might be to:

- Delay the decision for 1 hour as to whether you drink – you may or may not, but accept that you will not make the decision now.

- Distract yourself with some activity during this hour.
- After an hour, ask yourself 'What have I got to lose if I get back into drinking?' Make a list of these reasons at the beginning of withdrawal and keep them handy, to help remind you why you are trying to stop drinking.

High-risk situations

Everyone has triggers that make them feel like drinking. These are often linked to previous drinking patterns (people, places, times of day) or emotional states (after an argument with a partner). Not being able to cope with these triggers is a common reason for people to start drinking again, so be prepared – think about your high risk situations and triggers and how to best deal with them. This may include:

- Avoiding the situation wherever possible: stay away from certain people, places or events.
- Having a plan ready in case you do find yourself in a high-risk situation – what will you say or do? Having support people with you during vulnerable periods can help.
- Remembering the coping strategies you used before – coping with cravings, how to relax.

Coping with emergencies

Things can go 'wrong' during withdrawal, and it is important to be prepared. Your preparedness might include:

- Having someone to talk to if you feel as though you are not coping. This can include support people, health workers or 24-hour telephone counselling or crisis line.
- Having contact numbers for health workers, doctor, or emergency services readily available to use straight away.
- Dealing with a lapse. Many people attempting withdrawal lapse and have a drink. This does not mean the entire withdrawal has been a waste of time, and most people can get back on track. Talk to your support people and health workers.

After withdrawal: what next

Unfortunately, most people relapse to drinking unless they continue in some form of treatment. Options include counselling, self-help support groups (such as Alcoholics Anonymous, Smart Recovery®), medication (naltrexone, acamprosate, disulfiram), or residential rehabilitation programs. Talk to your health worker about options that will best suit you.

Appendix 6
A guide for people with alcohol-related problems

This information sheet is a guide for those people who are concerned that they may have a drinking problem, and are thinking about getting help to better control or stop their drinking. It provides an overview of the types of treatment options available, and how to access these services. Talk to your health worker about any issues raised here, and how to get the help that suits your needs.

Some points to think about treatment

A range of different treatment options is available for people with drinking problems. When considering possible treatment options you should remember:

- There is no 'best method' of treatment that will work for everyone. You may need to try a number of options before finding what best suits you. Also, a certain type of treatment may suit a person at one stage in their life, but may not be useful at another time.
- The importance of assessment. Treatment will work best if it fits your own circumstances. Everybody is different, and an assessment by a health professional such as a doctor, drug and alcohol worker or counsellor will help identify the types of treatments and services that best suit your needs.

How does alcohol affect you and those around you?

Alcohol can affect our lives in many different ways. It is often linked to celebrations and social occasions, and many people like the effects of a few drinks. But alcohol, like all drugs, can have negative effects. It is usually when the negatives outweigh the positives that people think about reducing their alcohol use.

Some of the more common negative effects of alcohol are listed below.

Social issues	Physical heath	Mental health
Financial problems	Liver disease	Bad memory
Relationship problems	Stomach problems (ulcers, reflux)	Anxiety
Legal problems	Muscle weakness	Depression
Violence	Sexual health problems	Suicidal thoughts
Lost friends	Heart problems	Fits
Employment problems	Poor diet	Blackouts
Drink–driving	Lower immunity to infections	Hallucinations
Accommodation problems	Harm to foetus in pregnancy	Difficulty concentrating

Take a minute to think about how alcohol may be affecting you and those around you. Talk to your health worker about these things, as it will help direct the best treatment approach for you.

Are you dependent on alcohol?

Many people will experience problems linked to their alcohol use, but are not necessarily dependent to alcohol.

Alcohol dependence refers to people with long-term and heavy alcohol use who find it difficult to cut down or stop drinking, despite ongoing physical, psychological and/or social harms.

One aspect of dependence is that the body adapts to regular and heavy alcohol use – it becomes 'tolerant' to the effects of alcohol, and you find that you have to drink much more in order to get intoxicated. After a long period of heavy drinking, your body adapts so that it only really works 'normally' if you have alcohol in your body – and going without alcohol can lead to withdrawal symptoms (such as anxiety, sweats, tremor, nausea, stomach cramps).

Dependent drinkers generally need more intensive treatment than people who are not dependent: they may require a withdrawal program (detoxification) to enable them to stop drinking, and ongoing treatment services (like counselling, medication, self-help programs) to 'stay stopped'.

If you are not sure whether you may have an alcohol problem, or are dependent on alcohol, you can complete the AUDIT questionnaire and discuss this with your health practitioner.

Controlled drinking or abstinence: what is a realistic goal?

Some people would like to continue drinking at 'low levels' or resume 'moderate' drinking soon after a short break.

In general, most dependent drinkers who attempt this find it very difficult, and most relapse to heavy drinking. Therefore, clinicians strongly suggest that dependent drinkers aim to stop drinking all alcohol for at least several months, preferably longer. Counselling programs with the specific goal of 'controlled drinking' are available, but are generally not recommended until the patient has achieved at least 3 to 6 months' abstinence.

Controlled drinking may suit people with no or low levels of dependence, either with the help of a short-term counselling program, or through controlled drinking programs.

What are your treatment options?

Many treatment options are available; they include brief counselling programs, withdrawal programs, counselling services, medications, residential rehabilitation programs and self-help programs.

Talk to your health practitioner about the problems you may need help with, or concerns you may have; look at what steps you can take to address them and which services may be able to help.

Stopping or reducing your alcohol use is often a major step towards sorting out these problems.

Brief counselling programs are designed to assess the level of your alcohol use, and how your drinking may be affecting your life (including health, relationships, work, finances). These programs help will help you set realistic goals and examine ways of reducing any alcohol-related problems, and will maintain contact with you to see how things have worked out. Brief counselling programs are usually only 1 to 4 sessions, and can be done with any

trained health practitioner, such as a general practitioner or an alcohol and drug worker. They are best suited to non-dependent drinkers; that is, people who do not have long-term and heavy patterns of alcohol use.

Withdrawal programs (also known as detoxification – detox – programs) are 1 to 2 week programs aimed at helping heavy long-term drinkers to stop drinking. Sometimes you can undertake withdrawal at home (if you have good supports and your withdrawal is not expected to be severe), but if you have severe health problems it is safer to go through withdrawal in special detox units or in hospital. Withdrawal programs involve supportive counselling and sometimes medication.

Most heavy drinkers will return to heavy drinking after a withdrawal program unless they take part in some form of ongoing treatment – as one saying goes: 'stopping is easy – it's staying stopped that's hard'.

Counselling services for drinking problems are many and varied. Programs can be one-to-one with a counsellor or group-based, where you will also learn from other people's experiences. Many counselling programs are based on 'relapse prevention' that aims to help you stay off alcohol by:

- identifying your likely risks and 'triggers' for drinking (such as places, people, routines, emotions)
- helping you find other ways of coping with these risks
- identifying ways to stop a 'slip up' (or lapse) from becoming a full blown relapse to heavy drinking.

You may also benefit from counselling for other issues, such as dealing with mood or anxiety problems, relationship issues, unresolved grief or stress, anger management, sleep problems or domestic violence. Talk to your health practitioner about your concerns, and what services may be best suited to you.

Medications can help reduce alcohol use after withdrawal.

- **Naltrexone** (brand name Revia®) reduces cravings for alcohol, reduces the number of drinking days, and the amount consumed on any drinking day. It has some benefits in about 40 to 60 per cent of the people who take the medication. It does not block the effects of alcohol, but it does block the effects of opiate medications (such as morphine), so it is best avoided if you need opioid analgesia. A standard dose is one tablet (50 mg) per day.
- **Acamprosate** (brand name Campral®) works to reduce alcohol cravings. It has some benefits in about 30 to 50 per cent of people taking the medication. A standard dose is two tablets three times a day.
- **Disulfiram** (brand name Antabuse®) works by causing a severe reaction (nausea, headache, abdominal discomfort) if you drink alcohol. It is only suitable for people who are very motivated to stop drinking, and usually works best if a family member or carer helps make sure you take your medication each day (see Appendix 7).

Talk to your health practitioner about these medications, as they can have side effects and are not recommended for some patients who have other health problems. If your prescribed medication is working, it should generally be continued for at least 6 months.

Residential rehabilitation – rehab – programs (also known as therapeutic communities) are usually long-term programs where people live and work in a community of other users, ex-users and professional staff. Programs can last anywhere between one and 12 months (or more). Rehab programs aim to help you build the skills and attitudes to make positive, long-term changes towards an alcohol and drug-free lifestyle. Programs usually include activities such as employment, education and skills training, counselling, group work, relapse prevention, and a 're-entry' part where you are helped return to your community.

Self-help programs for alcohol dependence consist of people helping each other to stay alcohol free, and are usually group programs run by their own members rather than by professionals. The main self-help program is the Alcoholics Anonymous12-step program; another, for people not keen to attend Alcoholics Anonymous, is Smart Recovery®.

Taking care of physical, mental and social issues

You may have a range of physical (such as hypertension, gastritis, liver disease) and/or mental health (such as anxiety, depression) problems linked to your alcohol use. Often, these health problems can get better after a period of abstinence, but this can take several weeks (and in some cases months) before major improvement occurs.

You may also need social and welfare help for financial, legal, accommodation, child support or employment problems. Your health practitioner can guide you to the appropriate support service (see also 'Contact details for further help and services' below).

Support for families

Family members, friends or carers of heavy drinkers experience a range of emotions in living with, and trying to support drinkers. Many benefit from support and the opportunity to discuss how they are coping. Self-help groups (such as Al-Anon) and professional services for families and carers are available (see also 'Contact details for further help and services' below).

Contact details for further help and services

Alcoholics Anonymous (AA)	http://www.aa.org.au/
Al-Anon (for friends and relatives)	http://www.al-anon.org/australia/
SMART Recovery®	www.smartrecoveryaustralia.com.au
Controlled drinking	http://www.acar.net.au/cdcp01.html

For information about local treatment services and referral options, contact the local Alcohol and Drug Information Service (ADIS), the Drug and Alcohol Specialist Advisory Service (DASAS) or The Australian National Council on Drugs at <http://www.ancd.org.au> or:

NSW	http://www.nsw.gov.au/package.asp?PID=9538 Phone: 1800 023 687 or (02) 9361 8006 (for professionals)
Vic.	<http://drugsandalcohol.dhs.vic.gov.au/directline.htm> Phone: 1800 888 236
Qld	http://www.health.qld.gov.au/atod/ Phone: 1800 177 833 or (07) 3837 5989
SA	http://www.dassa.sa.gov.au/site/page.cfm?u=110 Phone: 1300 131 340 or (08) 8363 8618
WA	www.dao.health.wa.gov.au/tabid/69/Default.aspx Phone: 1800 198 024 or (08) 9442 5000
NT	1800 131 350 or 1800 629 683 Alice Springs (08) 8951 7580 Darwin (08) 8922 8399 Amity House 1800 684 372 or (08) 8944 6565
Tas.	(03) 9416 1818 or 1800 811 994
ACT	<http://health.act.gov.au/c/health?a=da&did=10038160&pid=1058840628> Phone: (02) 6207 9977 or (02) 6205 4545

Appendix 7
Disulfiram Agreement

Disulfiram is a medication used to prevent relapse to alcohol use. It has been explained to me that:

- disulfiram is taken once a day
- using any alcohol products (for example, drinking alcohol, using alcohol-based aftershave, mouthwash or other cosmetics) will most likely produce unpleasant feelings, including flushing, dizziness, nausea and vomiting, irregular heart beat, breathlessness and headaches.

Patient

I, _____agree to take disulfiram daily for _____ days.

I will take disulfiram every **morning** **lunch** **evening** (please circle one). After this time, I agree to talk to my clinician and to discuss whether or not to continue taking disulfiram.

I agree to have my support person (the person designated below) witness my taking of disulfiram medication at each agreed time.

If I do not take the disulfiram medication as directed, I agree that my support person will contact my treating clinician (doctor or counselor) to inform them.

Support person:

I, _____
agree to be present and witness each dose of disulfiram for the duration of this agreement.

In response to _____
not taking disulfiram as scheduled, I will inform the treating clinician designated below.

Patient's name: _____

Patient's signature: _____

Support person's name: _____

Support person's signature: _____

Clinician's person's name: _____

Clinician's person's signature: _____

Date _____/_____/_____

Appendix 8
Treatment guidelines for mental disorders

Royal Australasian and New Zealand College of Psychiatrists <http://www.ranzcp.org/resources/clinical-practice-guidelines.html>

American Psychiatric Association <http://www.psych.org/MainMenu/PsychiatricPractice/PracticeGuidelines_1.aspx>

American Psychological Association, Society for Clinical Psychology, Research supported psychological treatments <http://www.psychology.sunysb.edu/eklonsky-/division12/index.html>

Depression:

<http://www.psychology.sunysb.edu/eklonsky-/division12/disorders/depression_main.php>

Generalised anxiety disorder:

<http://www.psychology.sunysb.edu/eklonsky-/division12/disorders/gad_main.php>

Obsessive–compulsive disorder:

<http://www.psychology.sunysb.edu/eklonsky-/division12/disorders/ocd_main.php>

Panic disorder:

<http://www.psychology.sunysb.edu/eklonsky-/division12/disorders/panic_main.php>

Post-traumatic stress disorder:

<http://www.psychology.sunysb.edu/eklonsky-/division12/disorders/ptsd_main.php>

Psychoses:

<http://www.psychology.sunysb.edu/eklonsky-/division12/disorders/schizophrenia_main.php>

Social phobia:

<http://www.psychology.sunysb.edu/eklonsky-/division12/disorders/socialphobia_main.php>

More generic:

The US National Guidelines Clearing House <http://www.guideline.gov/>.

NUMBER OF STANDARD DRINKS – BEER

1.1
285ml
Full Strength
4.8% Alc. Vol

0.8
285ml
Mid Strength
3.5% Alc. Vol

0.6
285ml
Low Strength
2.7% Alc. Vol

1.6
425ml
Full Strength
4.8% Alc. Vol

1.2
425ml
Mid Strength
3.5% Alc. Vol

0.9
425ml
Low Strength
2.7% Alc. Vol

1.4
375ml
Full Strength
4.8% Alc. Vol

1
375ml
Mid Strength
3.5% Alc. Vol

0.8
375ml
Low Strength
2.7% Alc. Vol

1.4
375ml
Full Strength
4.8% Alc. Vol

1
375ml
Mid Strength
3.5% Alc. Vol

0.8
375ml
Low Strength
2.7% Alc. Vol

34
24 x 375ml
Full Strength
4.8% Alc. Vol

24
24 x 375ml
Mid Strength
3.5% Alc. Vol

19
24 x 375ml
Low Strength
2.7% Alc. Vol

NUMBER OF STANDARD DRINKS – WINE

1.6
150ml
Average
Restaurant Serving
of Red Wine
13.5% Alc. Vol

1
100ml
Standard Serve
of Red Wine
13.5% Alc. Vol

0.9
60ml
Standard Serve
of Port
18% Alc. Vol

1.4
150ml
Average
Restaurant Serving
of White Wine
11.5% Alc. Vol

1
100ml
Standard Serve
of White Wine
11.5% Alc. Vol

1.4
150ml
Average Restaurant
Serve of Champagne
12% Alc. Vol

7.5
750ml
Bottle of Champagne
12.5% Alc. Vol

8
750ml
Bottle of Red Wine
13.5% Alc. Vol

43
4 Litres
Cask Red Wine
13.5% Alc. Vol

21
2 Litres
Cask Red Wine
13.5% Alc. Vol

7.5
750ml
Bottle of White Wine
12.5% Alc. Vol

39
4 Litres
Cask White Wine
12.5% Alc. Vol

19.5
2 Litres
Cask White Wine
12.5% Alc. Vol

28
2 Litres
Cask of Port
17.5% Alc. Vol

NUMBER OF STANDARD DRINKS – SPIRITS

1
30ml
High Strength
Spirit Nip
40% Alc. Vol

22
700ml
High Strength
Bottle of Spirits
40% Alc. Vol

1.1
275ml
Full Strength
RTD*
5% Alc. Vol

1.2
330ml
Full Strength
RTD*
5% Alc. Vol

2.6
660ml
Full Strength
RTD*
5% Alc. Vol

1.5
275ml
High Strength
RTD*
7% Alc. Vol

1.8
330ml
High Strength
RTD*
7% Alc. Vol

3.6
660ml
High Strength
RTD*
7% Alc. Vol

1
250ml
Full Strength
Pre-mix Spirits
5% Alc. Vol

1.2
300ml
Full Strength
Pre-mix Spirits
5% Alc. Vol

1.5
375ml
Full Strength
Pre-mix Spirits
5% Alc. Vol

1.7
440ml
Full Strength
Pre-mix Spirits
5% Alc. Vol

1.4 – 1.9
250ml
High Strength
Pre-mix Spirits
7% – 10% Alc. Vol

1.6
300ml
High Strength
Pre-mix Spirits
7% Alc. Vol

2.1
375ml
High Strength
Pre-mix Spirits
7% Alc. Vol

2.4
440ml
High Strength
Pre-mix Spirits
7% Alc. Vol

Glossary

Glossary

Standard drink The Australian standard drink contains 10 grams of alcohol (equivalent to 12.5 ml of pure alcohol).

The following terms are used as specific diagnostic terms in accordance with the DSM-IV-R or ICD-10 definitions (see Appendix 2 for the full diagnostic criteria):

Alcohol abuse	A maladaptive pattern of alcohol use manifested by recurrent and significant harmful consequences related to repeated use of alcohol (in the absence of the diagnosis of dependence syndrome) (DSM-IV-R).
Alcohol dependence or alcohol dependence syndrome	A cluster of cognitive, behavioural and physiological characteristics indicating that the patient continues using alcohol despite significant alcohol-related problems (DSM-IV-R; ICD-10; see Appendix 2 for details).
Harmful alcohol use	A pattern of alcohol use that is causing damage to health. The damage may be physical or mental (in the absence of the diagnosis of dependence syndrome) (ICD-10).

It should be noted, that 'alcohol-related harm' and 'problems related to alcohol consumption' are regarded as equivalent terms and usually have wider meaning than harm to the drinker's health. In practice they usually refer to a range of health and social problems to the drinker and to others, since they affect both the individual and society at various levels (WHO 2007). Therefore, these guidelines use a broader definition, namely:

Alcohol-related harm	Adverse health and social outcomes resulting from consumption of alcohol.

A number of terms are commonly used in the research literature to describe the levels of drinking that reflect the previous set of guidelines (NHMRC 2001). These guidelines recognised three levels of alcohol consumption (low risk, risky and high risk) in terms of short-term harm (such as risk of accidents and injuries occurring immediately after drinking) and long-term-harm (such as risk of developing alcohol-related disease). These terms include:

Low risk levels	A level of drinking at which there is minimal risk of harm, and for some the likelihood of health benefits.
Risky levels	Levels at which risk of harm is significantly increased beyond any possible benefits.
High risk levels	Levels at which there is substantial risk of serious harm, and above which risk continues to increase rapidly.

A number of terms have been traditionally used in clinical practice and professional literature to describe levels and patterns of alcohol consumption. The terms – binge drinking, hazardous drinking, heavy drinking, problematic drinking and risky drinking – are difficult to accurately define as they usually reflect the period of time in which the literature was published or indicate the levels and patterns of drinking specific to a particular publication.

Binge drinking	Usually refers to the pattern of heavy episodic drinking that can result in significant harm to the drinker and others.
Hazardous drinking	Indicates a level of consumption or pattern of drinking that is likely to result in harm if current drinking pattern continues.
Heavy drinking	Usually closest in meaning to harmful and high risk drinking levels defined above.
Problematic drinking	Usually refers to the level of drinking at which the person develops some alcohol-related problem or is at risk of developing such problems but has no diagnosis of dependence.
Risky drinking	Is close in its meaning to drinking at risky levels defined above.

Some of these terms are used in these guidelines where recommendations or statements are based on evidence that includes such terminology.

Acronyms

Acronyms

ADS	Alcohol Dependence Scale
APQ	Alcohol Problems Questionnaire
AUDIT	Alcohol Use Disorders Identification Test
AWS	Alcohol Withdrawal Scale
BDI	Beck Depression Inventory
CIWA	Clinical Institute Withdrawal Assessment for Alcohol
CT	computerised tomography scan
DASS	Depression, Anxiety and Stress Scale
DSM-IV-R	Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Revised
EEG	Electroencephalogram
GABA	gamma-aminobutyric acid
GABAA	gamma-aminobutyric acid type A
GGT	serum gamma-glutamyltransferase
GHB	gamma-hydroxybutyric acid
GHQ	General Health Questionnaire
ICD-10	International Classification of Diseases
K-10	Kessler-10 Symptom Scale
MRI	magnetic resonance imaging
NHMRC	National Health and Medical Research Council
NMDA	glutamate N-methyl D-aspartate
PTSD	post-traumatic stress disorder
RTCQ	Readiness to Change Questionnaire
SADD	Short Alcohol Dependence Data Questionnaire
SADQ-C	Severity of Alcohol Dependence Questionnaire, Form-C
SDS	Severity of Dependence Scale
SF-12	Short Form-12 Health Survey
SOCRATES	Stages of Change Readiness and Treatment Eagerness Scale
SSRI	selective serotonin reuptake inhibitor
UKATT	United Kingdom Alcohol Treatment Trial
URICA	University of Rhode Island Change Assessment scale

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