Chapter 3 Screening, assessment and treatment planning

Screening, assessment and diagnosis play a critical role in treatment planning and clinical management. The level of detail collected during assessment will vary across treatment settings and circumstances. In primary care settings such as general medical practices and hospitals, screening is recommended to identify hazardous or dependent drinkers.

Screening

Screening is intended to indicate the presence or absence of certain problems that might need further investigation. It can lead to early intervention for problem drinkers (see Chapter 4, Brief interventions), further investigation and problem management as the setting or referral to specialist services if the client requires more intensive assessment and treatment.

Risky drinking needs to be identified and targeted in its early stages, in order to reduce its impact on the individual and the community. It is far more prevalent than dependent drinking (AIHW 2008).

Where to screen?

Given the pervasiveness of risky alcohol consumption in Australia and the seriousness of the health consequences of risky drinking, detection of risky alcohol consumption has been evaluated in a wide range of health care settings.

General practice and relevant specialist settings

In routine general practice, without specific screening techniques, up to 70 percent of risky/high risk drinkers are not detected (Reid et al. 1986). As indicated in the Cochrane review by Kaner et al (2007), a number of studies, but not all, have shown that screening and brief interventions are effective in primary care settings. There is Australian evidence that screening and early intervention in primary care settings is cost-effective (Wutzke et al. 2001).

One study examined current practices and barriers for screening and interventions with primary care patients across randomly selected clinics in a large health care system in the USA. Focus groups and mailed structured surveys were sent to practising GPs. Results indicated that 85% of patients treated in primary care received some screening for alcohol use disorders (Barry et al. 2004). However CAGE was the predominant screening tool; the drawback of this approach is that the primary clinical focus falls on patients who meet abuse/dependence criteria. This shows the importance of using an appropriate screening instrument. Lack of time was the most important perceived barrier to implementing screening and brief interventions for problem drinkers.

Another study examining barriers to screening conducted focus groups with primary care practitioners (GPs) in Pennsylvania. Their key barriers included lack of time, lack of access to treatment, and financial resources, both from the patient perspective and their own, of reimbursement from insurers. Additional barriers

included the negative attitude toward AOD use, their lack of self-efficacy in managing AOD use disorders, and lack of knowledge in this area (Holland et al. 2009).

However, screening is the most important first step towards identification of problems and has been proven valuable in other common conditions such as raised cholesterol. GPs are well placed to undertake this important first step, as 85% of the Australian population have contact with a GP annually. Moreover, one comprehensive study (of 78,974 adult patients from 2470 GPs in Australia) found that heavy drinkers (n = 5,753) were more likely to see their GP for management of chronic problems, psychological problems and physical injuries than were light- or non-drinkers (Proude et al. 2006), thus providing perfect opportunities for early intervention.

A number of initiatives to encourage screening were undertaken as part of the Smoking, Nutrition, Alcohol and Physical Activity (SNAP) Framework for General Practice (Harris et al. 2005). The Drink-Less package, developed by the University of Sydney in 1990s (Gomel et al. 1994) and revised and re-released in 2004 (Proude et al. 2005; Proude et al. 2006), has been implemented mainly within NSW, although it has been used in other countries, notably the UK (Institute of Health & Society, Newcastle University, Gateshead).

Screening and brief interventions are feasible in specialist settings where prevalence of alcohol use is high such as opioid treatment services (Watson et al. 2007) and sexual health services (Lane et al. 2008). See also Chapter 4.

Hospital settings, including emergency, mental health and general wards

Several studies have shown that alcohol use disorders are commonly not identified in hospitalised patients (Proude et al. 2008; Shourie et al. 2007; Williams et al. 2008).

Screening and brief interventions in emergency departments have proved to be effective in reducing risky levels of alcohol intake and binge drinking episodes (see Chapter 4).

It is considered a good clinical practice to provide routine screening procedures for excessive alcohol consumption among *inpatients and outpatients* and have procedures for appropriate intervention in all hospital settings.

Notwithstanding this consensus recommendation, studies in medical and surgical wards have not shown improved health outcomes as a consequence of screening and intervention for alcohol disorders in hospital inpatients (Shourie et al. 2007), (Saitz et al. 2007). However, the major benefit may lie in earlier recognition prevention and treatment of alcohol withdrawal and alcohol-related medical toxicity.

Welfare and general counselling services

In these settings, there is a need to develop a structure where screening can occur in a routine way, thereby increasing the likelihood that it will become and will remain a part of the normal for detecting unsafe drinking patterns (Piccinelli et al. 1997a). However, there are significant barriers to the widespread adoption of screening and intervention procedures. For instance, there are few incentives and some disincentives to primary health caseworkers and others becoming involved in screening activities (Babor et al. 2005).

The Workplace

There is evidence of high rates of problem drinking in some of these settings, suggesting that the workplace is a suitable venue for detection of risky drinking and intervention (Richmond et al. 2000; Roche et al. 2008). Detection of unsafe alcohol consumption should form part of any routine health evaluation in the workplace.

Although appealing in concept, brief intervention is not always effective in this setting (Anderson and Larimer 2002; Matano et al. 2007), and strategies for more intensive interventions have not been well studied (see also Chapter 4). Accordingly, widespread implementation of brief intervention in this setting cannot be recommended at this time.

Workplace occupational health and safety procedures should identify appropriate strategies and referral options for those workers identified as having alcohol-related problems.

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 quantity-frequency estimates of alcohol consumption, screening questionnaires, physical examination for intoxication or signs of harmful use of alcohol and biological markers of excessive alcohol consumption.

Evaluation of all methods for assessing alcohol intake suffers from the absence of a “gold standard” against which they can be tested.

Quantity-frequency estimates

A quantitative alcohol history can be a reliable method of detecting risk patterns of alcohol consumption. It comprises the daily average consumption (grams per day or standard drinks per day) of alcohol, the number of drinking days per week (or month) and the pattern of drinking. Where use exceeds recommended NHMRC guidelines, a more detailed assessment is indicated to exclude harmful use and/or dependence.

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

Screening questionnaires

In specialist alcohol and drug treatment settings, diagnostic interviews and questionnaires help to assess the severity of alcohol dependence, including consumption levels, so that appropriate treatment goals and strategies can be selected. A range of questionnaires is available for both uses.

The list of assessment instruments reviewed below is by no means exhaustive. For a more comprehensive review of alcohol and other drug instruments, see Teesson et al. (2000). For a review of screening and diagnostic tools for other substances and mental disorders, see the review by Dawe et al. (2002).

Validated alcohol screening questionnaires include the Alcohol Use Disorders Identification Test (AUDIT) and its short version, AUDIT-C, the Michigan Alcoholism Screening Test (MAST) and its shortened versions, b-MAST, S-MAST, CAGE, T-ACE and TWEAK. To be effective, a questionnaire needs to be sensitive (capable of correctly identifying patients with the condition) and specific (capable of discriminating those who do not have the condition). Thus, a sensitivity of 0.90 indicates that 90 percent of those with the condition will be correctly identified; and a specificity of 0.90 indicates that the test correctly identifies 90 percent of those who do not have the condition.

Alcohol Use Disorders Identification Test

The AUDIT is a 10-item instrument designed to screen for a range of drinking problems, particularly hazardous and harmful consumption. A cut-off score of 8 is used to identify risky drinkers. Developed by a World Health Organisation (WHO) collaborative study in six countries, it is the only questionnaire designed for international use and has been translated into several languages. The questions cover four conceptual domains: alcohol consumption, drinking behaviour, adverse reactions and alcohol-related problems (Saunders et al. 1993). For more detailed administration and scoring information, refer to the World Health Organization Guidelines (Babor et al. 1992). 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.

Its short version, AUDIT-C (the first 3 questions of AUDIT) also performs well at identifying alcohol misuse (Bradley et al. 2007), especially in primary care. A score of 3 or above for women, or 4 and above for men, has maximum sensitivity and specificity (Bradley et al. 2007; Dawson et al. 2005).

AUDIT-C has been used successfully with male Veterans' Affairs patients to screen for heavy drinking, performing similarly to the full AUDIT. Patients were considered to be heavy drinkers if they drank more than 14 drinks a week or five or more drinks on one occasion in the past or a typical month (Bush et al. 1998).

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 (level 1 evidence) (Bradley et al. 2007).

At a cut-off score of eight to identify hazardous and harmful drinking, the full AUDIT has demonstrated a sensitivity of 0.92 and specificity of 0.94 (Saunders et al. 1993). When validated against a diagnostic interview, physical examination and laboratory tests, the AUDIT was better than the MAST at distinguishing between hazardous and non-hazardous drinkers (Fiellin et al. 2000). Both instruments effectively identified dependent drinkers. The AUDIT performed as well as the MAST and the CAGE when validated against Composite International Diagnostic Interview (CIDI) scores for dependent drinking and had higher sensitivity and specificity for detecting risky, non-dependent drinking (Piccinelli et al. 1997b).

MAST and CAGE questionnaire

The prototype alcohol dependence questionnaire is the MAST (Selzer 1971). Instruments such as the MAST and the CAGE questionnaire were derived on the basis of their ability to distinguish chronic alcohol dependent individuals from non-alcohol dependent individuals (Mayfield et al. 1974).

The MAST is a 24-item instrument designed to identify alcohol abuse and dependence. It has adequate sensitivity and specificity at a cut-off score of 13 in identifying both of these disorders, but is very long, taking at least 10 minutes. The S-MAST, a shorter 13-item version of the MAST, has also demonstrated good reliability as a self-administered questionnaire. However there is little recent published research on these instruments. The Brief Michigan Alcohol Screening Test (b-MAST) has been recently validated against AUDIT, found significantly correlated, and proved effective in measuring severity of problem drinking in a treatment-seeking population (Connor et al. 2007). The MAST and its shorter versions have been criticised for their lack of sensitivity in detecting alcohol problems among women (Dawe et al 2002).

The CAGE is a four-item screening instrument intended to identify alcohol abuse and dependence. Because of its brevity, it is less sensitive than the AUDIT or the MAST. It is not a diagnostic instrument, however a ‘yes’ to two or more questions indicates the need for further assessment for alcohol abuse (Mayfield et al. 1974).

In a study with drink drivers, the MAST correlated more highly than the AUDIT with the Diagnostic and Statistical Manual (DSM-IV) criteria for alcohol use disorders, although both had acceptable internal validity (Conley 2001). Almost no new literature has been found in this area; one study examined the test-retest reliability of a new instrument to assess intoxicated driving, the FORM 90-DWI (Hettema et al. 2008) and found it demonstrated high levels of reliability for this purpose. However, this is not a brief screening test as it takes 45 minutes to administer.

Japanese translations of AUDIT and CAGE have also been tested against a semi-structured interview diagnosis; results showed that AUDIT had superior sensitivity and specificity for detecting dependent and problem drinkers (Volk et al. 1997). CAGE was found to have poor validity with a sample of USA university students (Heck and Lichtenberg 1990).

When used with a group of drug-dependent patients, the AUDIT and the MAST were equally able to detect alcohol dependence, but the AUDIT was better at identifying

hazardous drinking (Skipsey et al. 1997). The AUDIT has also been evaluated in psychiatric patients and in one study demonstrated very high sensitivity and specificity at detecting alcohol abuse using a cut- off of 10 (Cassidy et al. 2008). The AUDIT-C also performed well against the S-MAST and CAGE in detecting risk drinking among people with any past-year mood disorder (Dawson et al. 2005). In another study of patients affected by a mood disorder, AUDIT and CAGE were compared with the first 2 questions of the NIAA guide ("do you sometimes drink alcohol?" and "how many times in the past year have you had 5 drinks [men] 4 [women] in a day?"). Both instruments achieved high sensitivity, using a cut-off of 5 for AUDIT and 1 for CAGE (Agabio et al. 2007).

Overall it appears that the AUDIT is superior to other instruments in detecting various aspects of a range of alcohol problems. CAGE is proven to be insufficient to detect lower levels of alcohol abuse among primary care patients, and conventional laboratory tests were proved in at least one study to be of no use in this setting (Aertgeerts et al. 2001).

The AUDIT can be also used effectively to identify hazardous, problem and dependent alcohol consumption amongst psychiatric patients; AUDIT-C can be used to detect alcohol use disorders, using a cut-off of 5 (Dawson et al. 2005).

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 (World Health Organization 2002).

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 special populations: Pregnant Women

The NHMRC guidelines recommend 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 were designed in the 1980's.

TWEAK is a modified five-item version of MAST 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 (Russell et al 1994). TWEAK and T-ACE have been tested against CAGE with pregnant women in Brazil and both were found to be clearly more reliable than CAGE (Moraes et al. 2005). TWEAK and AUDIT also both perform better than the CAGE when validated against standard cut-off points on the Composite International Diagnostic Interview (CIDI)(Piccinelli et al. 1997b).

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

The ASSIST questionnaire that screens for alcohol and other substances can also be used in this population (World Health Organization 2002).

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.

Certain physical disorders or signs are indicative of hazardous alcohol use. Common physical indicators include hypertension, a pattern of accidents, dilated facial capillaries, blood shot eyes, hand or tongue tremor, history of gastrointestinal disorders, duodenal ulcers and cognitive deficits (Saunders and Hanratty 1990; Skinner et al. 1986). Conditions such as liver cirrhosis and pancreatitis are commonly alcohol-induced. More subtle signs include job, financial, marriage and relationship problems, insomnia, depression and anxiety, and domestic violence (Scouller et al. 2000).

Whilst the above problems are indicative of alcohol misuse, it should be noted that they are not conclusive, nor does their absence rule out the existence of hazardous alcohol consumption.

However, 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 (e.g. 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 (e.g. mean corpuscular volume) and others.

Measures of alcohol levels

Alcohol concentrations may be measured in breath, blood and urine. Use of breath alcohol testing has been incorporated into Emergency Department practice by a number of groups (Cherpitel 1995; Robinson et al. 1992; Walsh and Macleod 1983) as part of screening and brief intervention programs. There is evidence that such programs prevent readmission with alcohol-related trauma (Longabaugh et al. 2001).

False positive detection may result from technical failure but may also be rarely encountered in low levels due to endogenous production of ethanol (Spinucci et al. 2006). Endogenous production of ethanol by yeasts is accentuated by gastrointestinal stasis and dietary sucrose and is reduced by antibiotics (Baraona et al. 1986).

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 biological markers can be used to detect alcohol consumption: gamma glutamiltransferase (GGT), aspartate aminotransferase (AST), alanine aminotransferase (ALT), mean cell volume (MCV), carbohydrate-deficient transferrin (CDT) and uric acid (Conigrave et al. 2003; Hannuksela et al. 2007).

Serum GGT, a liver enzyme, is elevated in 60-80 percent of alcohol dependent people (Conigrave et al. 2002). CDT has similar sensitivity to GGT but higher specificity (Scouller et al. 2000). CDT results vary depending on the laboratory method used (the more commonly used modified test is less sensitive than the original test) and consequently may be no more sensitive than GGT (Scouller et al. 2000).

A multi-site international study comparing CDT, GGT and AST found that CDT was little better than GGT in detecting high- or intermediate-risk alcohol consumption, although both were better than AST. CDT and GGT levels were influenced by body mass index, sex, age, and smoking status (Conigrave et al 2002). False positives occur with most CDT test kits in the presence of advanced liver disease of any cause (Anton et al. 2001).

CDT and GGT are used in some clinical settings, however with a clinical detection rate of around 30-40 percent in some studies, they are not recommended as a stand-alone screening technique. Some CDT assay methods (i.e. liquid chromatography and isoelectric focusing) appear promising, but more research is required before firm conclusions are drawn (Scouller et al. 2000).

The other generally available laboratory tests are less sensitive: for example, an elevated mean cell volume (MCV) is found in only five to twenty percent of alcoholic patients. The value of these tests in detecting non-alcohol dependent people with risky/harmful alcohol consumption is correspondingly lower.The combination of a number of biological markers can provide a rate of detection above the rate achievable by any biochemical marker alone, with a sensitivity of 78 percent (Vanclay et al. 1991). However, combinations of tests are not recommended for clinical use because of reduced specificity (Musshoff and Daldrup1998).

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

Other Screening methods for binge drinking: The Quantity-Frequency Index (QFI) and the Retrospective Diary

A comparison of a 30-day quantity-frequency index with a seven day retrospective diary and item three on AUDIT showed that the quantity-frequency question was comparable to the AUDIT item in detecting binge drinking (95 percent positive predictive value). All three methods were administered using a computer. The retrospective diary requires patients to identify the type and quantity of alcoholic beverage consumed beginning with the previous day and work back through each day of the week. It was less sensitive than the QFI (ranging from 23.1 percent to 36.7 percent) (Shakeshaft et al. 1999).

The quantity-frequency question asked respondents to indicate the number of occasions during the previous 30 days on which they had consumed four different levels of standard drinks (defined by the NHMRC as the equivalent of 10g of ethanol) (NHMRC 2001).

Item 3 (AUDIT-3) asks "how often do you have six or more drinks on one occasion?" Possible responses are "never", "less than monthly", "monthly", "weekly", and "daily or almost daily".

Although the retrospective diary took longer to administer than the QFI (mean completion times of three min, 38 sec and one min, 41 sec respectively) it provides two important pieces of information: weekly and binge consumption. Further, although the retrospective diary was inferior in detecting binge drinking, the QFI underestimated overall drinking relative to the retrospective diary (Shakeshaft et al. 1999). The researchers suggested that there is greater potential for improving the reliability and validity of the RD relative to the QFI.

Comprehensive Clinical Assessment

A comprehensive clinical assessment should be conducted before developing a comprehensive treatment plan for those drinkers who have not responded to advice to reduce their consumption of alcohol, have severe alcohol-related problems and in patients who asked for or need help to deal with their drinking.

Assessment should combine a variety of techniques for gathering information about the patient, including diagnostic interviews, physical examination, biological markers and clinical investigations as well as collateral information from significant others.

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 and 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 reduce.

Purpose of assessment

Assessment has three important functions:

a) to assist the patient and clinician to identify shared treatment goals and develop a treatment plan;
b) to engage the patient in the assessment and treatment process;
c) 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 (Miller and Rollnick 2002; Miller 1995).

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 procedure ideally takes the form of an open-ended, semi-structured interview where the patient and the clinician compile a narrative history, using questionnaires as appropriate and necessary. This has the advantage of clinician involvement which 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.

Standardised questionnaires are not often used, but a number of validated

instruments may be useful in selected cases. Structured diagnostic interviews are available but infrequently used in clinical practice. Examples include: Composite International Diagnostic Interview (CIDI), the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) and the Alcohol Use Disorder and Associated Disabilities Interview Schedule-Alcohol/Drug-Revised (AUDADIS-ADR).

The Composite International Diagnostic Interview (CIDI) is a standardised and comprehensive interview designed to assess psychological disorders against the International Classification of Diseases (ICD) and DSM-IV diagnoses (World Health Organisation 1990). It must be administered or supervised by a fully trained mental health professional who has undertaken recognised CIDI training. As well as substance use disorders, it covers eating disorders, organic mental disorders, schizophrenic disorders, paranoid disorders, affective disorders, anxiety disorders, somatisation disorders, dissociative disorders, and psychosexual disorders. WHO also recently produced the World Mental Health (WMH) Survey Initiative version (Kessler and Ustun 2004). However, one study found that CIDI performed poorly, especially in diagnosing social phobia and post-traumatic stress disorder, compared to clinical assessment (Komiti et al. 2001).

The CIDI, the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) and the Alcohol Use Disorder and Associated Disabilities Interview Schedule-Alcohol/Drug-Revised (AUDADIS-ADR) all have reasonable test-retest reliability and diagnostic concordance for alcohol dependence, but not for risky alcohol use or abuse.

Assessing level and history of alcohol consumption

The assessment process should gather information about the drinking history, including how the drinking pattern evolved, fluctuated and/or progressed over time.

The history should include the daily average consumption (grams per day or standard drinks per day) of alcohol, the number of drinking days per week (or month) and the pattern of drinking.

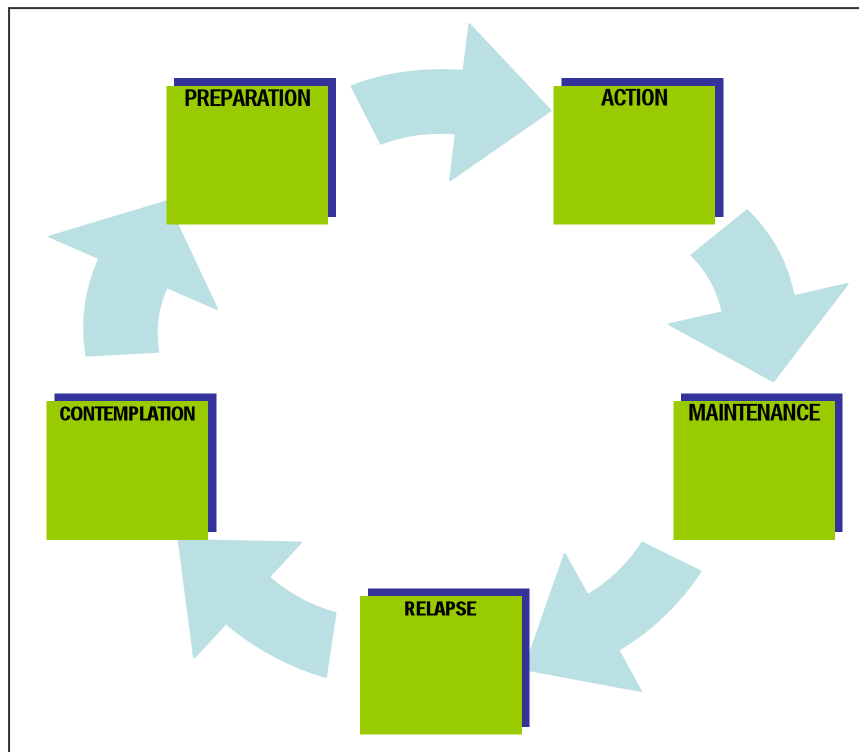
There is limited community recognition of a standard drink (Kaskutas and Kerr 2008) (Gill et al. 2007). Based on cumulative population self-report, overall alcohol use is under-reported, but interviewing style influences the accuracy of self-report (Stockwell et al. 2004; Stockwell et al. 2008). For example, the Lifetime Drinking History that examines alcohol use throughout the life span has been shown to be a valid assessment (Koenig et al. 2009).

There are several structured methods available to perform assessment of alcohol consumption, although these are not routinely used in clinical practice. The Timeline Follow-back Method (TLFB) helps to obtain an accurate, retrospective account of alcohol consumption over a particular period, typically three months. This method requires the patient and clinician to fill in a blank calendar with a detailed description of alcohol consumption. The patient is first asked to note all events that may assist with recall, for example public holidays or significant personal events. Any personal diaries may help with recall. The patient then fills in the drinking days, noting the amount consumed, and perhaps also the number of hours of consumption. This can be extended to obtain a life-time drinking history which is useful for research and occasionally for other purposes, but is time consuming and of moderate accuracy (Sobell and Sobell 1992).

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

Assessing motivation

According to the model developed by Prochaska and DiClemente (Prochaska et al. 1992), readiness for change may be conceptualised as involving five (or six if pre-contemplation is included) stages:



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- A pre-contemplative stage, during which the person is not considering changing
- A contemplative stage, during which the person becomes more aware of the benefits of changing, but is ambivalent about changing and does not act
- A preparation stage, during which the person formulates plans for change, may take steps to monitor their problem behaviour and initiate behaviour change
- An action stage, during which the person will engage in active attempts to moderate or to cease the behaviour
- A maintenance stage, which occurs after the behaviour has been moderated or stopped but during which the person could relapse and return to an earlier stage
- A relapse stage, when the individual resumes or even increases the intensity or frequency of the previous behaviour

The model, also known as the transtheoretical model (TTM), includes change processes and levels of change. However, the assessment tool's primary purpose is to measure stages of change and our discussion is limited to this aspect. The TTM

theory has been tested widely, most often with smoking cessation, and correlational data supports its predictive validity (DiClemente et al. 1991); however this has recently been challenged by others (Dijkstra et al. 2006; West 2005).

There is only slim evidence of its ability to predict treatment outcome with alcohol dependent patients. Project MATCH assessed readiness to change using a subset of the University of Rhode Island Change Assessment (URICA) scale, and hypothesised that patients low in motivation would do better in the motivational enhancement therapy than in cognitive behaviour therapy. On an analysis of data, overall a median of only 3% of the drinking outcome at follow-up could be attributed to treatment; however the effect appeared to be present before most of the treatment had been delivered, with the zero treatment group showing the most improvement. The long-term results found that patient-treatment matching was unsuccessful and that the three treatments produced essentially the same results (Cutler and Fishbain 2005).

Callaghan's additional analysis found that, contrary to expectations, the individuals who made a progressive stage transition to action-oriented stages did not manifest greater improvements in drinking than those remaining in preparatory stages (Callaghan et al. 2007). A similar effect, that greater readiness to change was not predictive of reduced alcohol consumption, was found in a prospective cohort study (Williams et al. 2007), where patient confidence in their ability to change was more predictive of a favourable outcome. Others have challenged the concept that well-defined 'stages' actually exist; West's criticism partly rests on the premise that people sometimes change their behaviour on strong situational determinants without any prior evidence of motivation (West 2005).

In an Australian study of brief interventions, heavy drinkers who were less ready to change did better with a brief motivational interviewing intervention than with a skills based intervention; however, those classified as ready to change did not do better in the skills-based intervention (Heather et al. 1996). In a more recent study of hospital patients, Saitz et al found that brief motivational counselling did not reduce alcohol consumption significantly among the intervention group of heavy drinkers (1.8 drinks per day) compared to 'usual care' patients (2.6 drinks per day) at 12 months; neither did it reduce the need for alcohol assistance in the intervention group at 3 months. However, both groups reduced their drinking and this may be attributable to the screening and feedback process in itself (Saitz et al. 2007).

Results of these studies suggest that factors other than 'stage of change' (e.g. confidence, peer group behaviour) play an important part in behaviour change and must be considered in all assessments. However, treatment planning should take motivational state into account so as to maintain and enhance motivation to control excessive drinking.

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/she may be consequently suffering, clinicians should examine patient's severity of dependence, the consequences of drinking and any previous experiences of abstinence and treatment.

Severity of dependence

DSM-IV criteria or ICD-10 diagnoses are more often currently used to define alcohol dependence than the older questionnaires (American Psychiatric Association 2000; World Health Organization 1992).

A number of instruments are available to assess the severity of alcohol dependence. However there is little current research on some of the questionnaires described below.

The Severity of Alcohol Dependence Questionnaire (SADQ-C) is most useful as an assessment tool with problem drinkers rather than as a screening tool (Stockwell et al. 1994). It takes about five minutes to complete and has five subscales: physical withdrawal symptoms, affective withdrawal symptoms, craving and withdrawal relief drinking, consumption and reinstatement. An addition, the Impaired Control Scale (ICQ) part of SADQ assesses the extent to which subjects perceive themselves to be out of control with respect to their alcohol use (Marsh et al. 2002).

The original SADQ had good concordance with clinician ratings of alcohol dependence (Stockwell et al. 1979), high test-retest reliability, and significant correlations with observed withdrawal severity and narrowing of drinking repertoire (Stockwell et al. 1983) A cut-off score of 30 was found to indicate severe dependence. However, a lower cut-off score may be appropriate for females due to the contribution of consumption questions to the total score. The shortened version of the SADQ (SADQ-C) demonstrated good reliability and validity in a general (Australian) population sample (Stockwell et al. 1994). A key difference between the SADQ and the SADQ-C is that the latter focuses on the last three months, rather than a 'recent period' of heavy drinking.

The Short Alcohol Dependence Data Questionnaire (SADD), a 15-item questionnaire, is similar to the SADQ, although less focused on the experience of withdrawal symptoms. The SADD and the SADQ are thought to measure the same theoretical construct, i.e. the alcohol dependence syndrome (Raistrick et al. 1983; Heather 1995).

The Severity of Dependence Scale (SDS) was the subject of a recent Australian study aiming to determine a cut-off point that discriminated between the presence and absence of a DSM-IV diagnosis of alcohol dependence. It was found that a score of 3 or above on the SDS was the optimal cut-off to detect alcohol dependence (Lawrinson et al. 2007).

The Alcohol Dependence Scale (ADS), a 25-item questionnaire, is designed to identify and assess alcohol abuse and dependence. It assesses four aspects of the alcohol dependence syndrome: loss of behavioural control, psychoperceptual withdrawal symptoms, psychophysical withdrawal symptoms and obsessive-

compulsive drinking style. The validation study for the ADS reported high correlations with daily consumption of alcohol, lifetime use of alcohol, social consequences from drinking, prior treatment for alcohol abuse, use of alcohol to change mood, feelings of guilt over drinking, and MAST scores (Skinner and Holm 1984). For alcohol use disorders, a cut-off score of six or seven had a sensitivity of 0.97 and 0.75 specificity.

An early study found high correlations between the ADS and the MAST, with an ADS score of eight or nine accurately classifying 88 percent of patients with an alcohol use disorder (Ross et al. 1990). The ADS was also found to correlate well with a structured diagnostic interview amongst a sample of homeless women (Chantarujikapong et al. 1997).

A more recent study identified nine of the 25 ADS items as reliably discriminating between those with no or minimal alcohol problems and those with symptoms of excessive or abusive drinking, in a sample of high-risk drinkers mandated to a domestic violence program (Kahler et al. 2003). However, another study evaluated the concurrent validity of the ADS as a general measure of severity and the screening accuracy of the total score and subscales to detect DSM-IV physiological dependence, with patients entering the COMBINE study. These authors conclude that the ADS reflected variation in symptom severity, but did not adequately identify physiological dependence or withdrawal in treatment-seeking individuals with DSM-IV alcohol dependence (Saxon et al. 2007).

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. 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. 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 (Drummond 1990).

Previous experiences of abstinence and treatment

Previous episodes of abstinence or reduced drinking and treatment exposure are important to record and understand as it helps to plan future treatment, both in terms of what worked and what did not, as well as to clarify patient experiences, tolerances.

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	

Assessing physical well-being

According to the professional background and skills of the health professional, all patients should be assessed regarding their physical health. If there are any active medical issues, it is appropriate to encourage the patient to see his/her GP or other medical practitioner. If there are no significant symptoms but the 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 assessment, including history, examination and clinical investigations. Physical examination should at least assess signs intoxication or withdrawal, signs of liver disease, vital signs (temp, blood pressure, pulse) and screen for organic brain damage (Miller et al. 1988).

There is demonstrated value in the simple act of feeding back to the patient the results of the medical examination and any clinical investigations. For example, discussion about the implications of abnormal liver function tests has been shown to reduce subsequent alcohol consumption.The Drinker's Check-up is an example of a computer software program that relies heavily on this motivating function of feeding back objective information (Hester et al. 2005; Miller et al. 1988).

The advantages of feedback are less clear when the medical tests show normal results. However, the whole assessment process should allow patients to assess accurately the degree of their alcohol- related problems and normal medical results should not detract from this process. The issue of normal results can be looked at within the context of a clinical interaction and is further discussed in the motivational interviewing material in Chapter 6: Psychosocial interventions.

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

Alcohol use disorders are associated with a range of mental health problems. It is therefore critical to assess for comorbid disorders and symptoms, particularly depression and anxiety symptoms. A range of short questionnaires is available for assessing mental health disorders.

Around one in five (20 percent) Australians with alcohol dependence also have an anxiety disorder, whilst 24 percent have an affective (mood) disorder. Heavy alcohol use is also associated with other substance misuse, greater levels of psychological distress and high levels of psychosis (Teesson et al. 2000; Cleary et al. 2008). Patients with post-traumatic stress disorder (PTSD) also have increased rates of alcohol-related disorders, and both of these may also be associated with a range of personality disorders (American Psychiatric Asscoation 2000). However, care must be taken not to make a personality disorder diagnosis based solely on behaviours that are a result of alcohol intoxication or withdrawal.

Thus, it is critical to assess for comorbid disorders and symptoms, and suicidal ideation. Referral for further specialist assessment may be required if significant mental problems are suspected.

A limited range of measures of mental health is outlined below. Their use will depend to some extent on the setting (i.e. the type of patients being seen; the amount of time available for assessment; the skill level/qualifications of the clinician). However, at least a brief assessment for depression and anxiety should be routinely carried out for patients with a suspected alcohol use disorder such as the Kessler 10 Symptom Scale or the General Health Questionnaire (Kessler et al. 2002; Goldberg 1972).

The following list is a sample of the available assessment tools. For a more extensive review of instruments, see Dawe et al (2002).

- The Kessler 10 Symptom Scale is a scale of psychological distress, suitable for use as an outcome measure in people with anxiety and depressive disorders (Kessler et al. 2002).
- The General Health Questionnaire (GHQ) is designed as a screening instrument to identify likely non-psychotic psychiatric 'cases' in general health settings (Goldberg 1972).
- The Short Form 12 (SF-12) assesses possible limitations in both physical and mental health (Ware et al. 1996).
- The Beck Depression Inventory measures depression and its symptoms (Beck and Steer 1987a).
- The Beck Hopelessness Scale measures hopelessness and negative views about the future, as well as being an indicator of suicide attempts (Beck and Steer 1987b).
- The Spielberger State-Trait Anxiety Scale measures current anxiety (state anxiety) and a more enduring personality characteristic (trait anxiety) (Speilberger et al. 1983).
- The Social Anxiety Interaction Scale and the Social Phobia Scale are useful for assessing social phobia (Mattick and Clarke 1998).
- The Modified PTSD Symptom Scale is a brief (17-item) measure of post traumatic stress disorder symptoms (Falsetti et al. 1993).

Note: The Kessler 10, the GHQ, the SF-12, the Mattick scales and the Modified PTSD Symptom Scale are all in the public domain. The other scales 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	

Assessment of cognitive functioning

There is a high prevalence of cognitive dysfunction among people with alcohol problems (Cook 2000). It is estimated that more than 50 percent of patients over the age of 45 who have lengthy histories of drinking at risky levels will show some degree of cognitive dysfunction, although this may not be permanent (Lishman 1987). Between 75 and 100 percent of patients admitted to alcohol treatment facilities perform below normal for their age groups on tests of cognitive function (Goldman 1995).

Many patients can report that there has been a decline in memory function as shown by a number of changes in memory ability. However, some commentators caution against relying upon the self-report of patients, especially in the case of damage to the frontal lobes, as they may not be aware that the changes have occurred (Lennane 1986).

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 Chapters 5 and 9). Other medical causes of cognitive impairment include cerebrovascular disease, dementia, Alzheimer's disease, chronic subdural haematoma, cerebral neoplasm, syphilis and HIV/AIDS.

While not the most common form of alcohol-related cognitive deficit, Wernicke Korsakoff's syndrome (WKS) can have severe consequences for its sufferers (Donnino et al. 2007). WKS is characterised most notably by cognitive impairments in memory (i.e. anterograde amnesia) as well as deficits in abstraction and problem solving. However, overall intelligence usually remains intact. The acute phase (Wernicke's encephalopathy) is characterised by confusion, ocular and gait disturbances, apathy and amnesia. Once this acute phase resolves, some patients are left with an irreversible and dense amnesia, usually accompanied by apathy (the chronic phase, known as Korsakoff syndrome) (Thomson and Marshall 2006a; Thomson and Marshall 2006b; Donnino et al. 2007).

Autopsy studies in the 1980s showed that Australia had amongst the highest recorded prevalence of WKS in the world, 80% of which cases had not been diagnosed during life (Harper et al. 1989), although this rate of under-diagnosis is still common today (Donnino et al. 2007). The introduction of thiamine into bread flour in 1991 dramatically reduced the incidence of WKS in Sydney hospitals, most notably in the two years following its introduction (Ma and Truswell 1995), although some doubts were voiced at the time about 'mass medication'.

The condition is much more frequent in alcohol dependent individuals than in others (although by no means confined to alcohol drinkers) with a prevalence of around 12 to 13 percent. There is also some evidence that some single symptoms of WKS are present in around one-third of alcohol-dependent people, and that lower estimates are due to the difficulty in diagnosing WKS (Cook 2000).

Some cognitive deficits such as impairment in verbal abilities, visual-spatial abilities, problem-solving skills and memory often improve with a period of abstinence from alcohol (Goldman 1995).

Screening instruments for cognitive Impairment

A brief assessment of cognitive functioning should be an integral part of the assessment procedure 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.

For the non-psychologist seeking a quick assessment of cognitive dysfunction, the Mini-Mental State Examination (MMSE) is helpful (Kurlowicz and Wallace 1999). However, among elderly Australians aged 65 and over, taken from the National Mental Health and Wellbeing Survey, total scores on the MMSE were influenced by

education, ethnic background, language spoken at home, socio-economic status, occupation, prevalence of a mood disorder, sex and age (Anderson et al. 2007), and the authors suggest appropriate cut-off points to take some of these variables into account.

One study among alcohol-dependent, psychiatric patients, and those with dual diagnosis found higher rates of cognitive impairment among dual diagnosis patients compared to the schizophrenia or alcohol patients, and age was a considerable confounding factor. Despite its common usage, global MMSE scores were insensitive to the cognitive impairments typically found in these clinical groups (Manning et al. 2007).

Therefore the MMSE should be used with caution, and referral to a specialist for further assessment is recommended.

For a more extensive assessment, a variety of tests have been shown to be sensitive to alcohol-related brain damage. These tests include the Rey Complex Figure Test, designed to test perceptual organisation and visual memory, the Rey Auditory-Verbal Learning Test which measures verbal memory recall and recognition and the Trail Making Test which tests visual concepts and visuomotor tracking. However, some of these tests have very limited normative data available and they are not specific to alcohol-related brain damage, so that their confident interpretation is made difficult.

Some of the tests relevant to the detection of cognitive dysfunction (e.g. Wechsler Adult Intelligence Scale-III (WAIS-III)) should only be administered by psychologists who have been trained in their interpretation. Two subtests are especially useful in this context, although the entire WAIS-III should be administered to determine if there is significant scatter among the various subtests, rather than relying upon a single subtest result. The most relevant subtests of the WAIS-III are the Digit Symbol subtest and the Block Design subtest (Ryan et al. 2000). The Wechsler logical testing materials are available, depending upon professional qualifications, from the Australian Council for Educational Research and the Psychological Corporation.

The Clock Drawing Test is another widely used screening test for cognitive dysfunction that can be recommended but to achieve optimal performance (Pinto and Peters 2009).

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

Excessive alcohol use and its consequences are stigmatised problems that many patients are reluctant to acknowledge. Collateral interviews play a central role where the patient does not self-report their use of alcohol or its consequences. Collateral information is particularly needed where a discrepancy appears likely.
There are significant barriers that limit access to collateral reports, including legal (privacy legislation limits the distribution of personal information without consent), ethical and financial (the enquiry can be time consuming). Patients may object to such enquiries and the therapeutic relationship may be disrupted.

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 including the relationships with their spouse or partner, their parents, their children, and other significant people in their lives including any attributions about the effects of the patient's drinking.

Domestic violence and sexual abuse, either as perpetrator and/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 there is reason to believe 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 required.

When it is possible the clinician should interview the spouse or the family members. The family interview is an opportunity for family members to ask questions and to voice their concerns. It may also help the family see the drinking problem in perspective.

While this kind of complex information is best obtained by clinical interview, Alcohol Problems Questionnaire has a subscale assessing family problems and one assessing marital/relationship problems (see Appendix) (Drummond 1990).

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), childcare, 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

As part of treatment planning 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

The factors that promote change in individuals are broader than treatment alone, but treatment can help patients change by learning to think and act differently in relation to drinking (Orford et al. 2006).

The cumulative evidence from the results of the large scale treatment trials, such as Project MATCH (Project MATCH Research Group 1997) and the United Kingdom Alcohol Treatment Trial (UKATT Research Team 2005) ssuggests that there are 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 treatment processes that reduce the likelihood of finding large differential effects between empirically supported interventions.

Assessment and feedback

A comprehensive assessment is fundamental in treatment planning. Feedback of assessment information to patients, that is sharing this information in plain, non-judgemental language, should be standard practice in a collaborative and motivationally oriented approach to treatment (Miller and Rollnick 2002), and can increase the patient's understanding, motivation to change and engagement in the treatment process.

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. Higher levels of engagement are predictive of positive treatment outcomes and are, in turn, contingent upon patient, clinician and clinic characteristics.

- Patient characteristics include pre-treatment motivation, severity of disorder and prior treatment experiences, strength of therapeutic relationship, perceived helpfulness of the treatment services.

- Clinician factors include degree of empathy, therapeutic relationship and counselling skills.

- Clinic factors include removal of practical access barriers such as transportation, fees, hours, physical surroundings, and perceptions about other patients of the service.

In addition to identifying clinical disorders and effective interventions, negotiation of treatment goals requires clarification of the patient's insight, values and expectation. There is also evidence that providing the patient with a choice of treatment options improves treatment retention (Rokke et al. 1999).

Treatment adherence and completion are prominent issues in alcohol and other drug treatment and the factors that improve it are not yet well understood (Mattson and Friedman 1994; Mattson et al. 1998). A focus in early interactions with patients should be on maximising engagement with the professional and the service and fostering a sense of collaboration (Zweben 2002; Zweben and Zuckoff 2002).

Central to the provision of any intervention is a strong bond and therapeutic alliance alliance between patient and clinician (Shand et al. 2003). 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 outcomes (Shand et al. 2003; Miller and Rollnick 2002).

Goal setting: abstinence, moderation and reduced drinking

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

For patients with no or low levels of dependence, and who are not experiencing significant alcohol related harms, a goal of moderation may be achievable (Sitharthan et al. 1997; Heather 1995).

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 (Edwards et al. 2003).

Often patients may wish to drink at levels that can continue to cause harm, or may not be realistically sustained. Several options can be considered when the patient's

expressed preference for moderation is at odds with clinician advice (Miller and Page 1991; Jarvis et al. 2005). Options include

- to decline assistance explaining that it would be unethical for you to support your patient's goal. However, this approach is unlikely to engage and retain the patient in treatment;
- to accept the patient's goal on a provisional basis for a stipulated period of time, and:
  1. negotiate a period of abstinence (e.g. one to three months) with the rationale that this would allow the patient to get through withdrawal (if relevant), provide some much needed recovery from the effects of alcohol, and provide time to acquire new skills that can be applied to learning moderation (controlled drinking strategies);
  2. agree on a gradual tapering down of drinking towards abstinence, setting realistic, intermediate goals, and monitoring the number of drinks consumed daily;
  3. negotiate a period of trial moderation, with daily drink monitoring and controlled drinking strategies (coping skills training).

Central to this process is ongoing review and monitoring of drinking against identified goals. If these goals are too difficult to achieve, then abstinence may seem a more reasonable goal, and this should be clearly identified and agreed upon with the patient from the outset. Interventions with some patients require protracted but important negotiation for goal setting (Miller and Page 1991; Jarvis et al. 2005).

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 obtained during assessment is used to develop a case formulation with patients, 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 (Baker et al. 2007).
Any treatment plan must address the patient's presenting problem. Often, the presenting problem is alcohol-related (e.g. liver disease, depression, domestic violence), and it will be necessary to also address the patient's alcohol use in order for comprehensive and longer term changes to take effect. However, the sequence of interventions is often determined by immediate needs (e.g. hospitalisation for hepatic failure or suicidal attempt, emergency shelter to avoid further violence).
Treatment options should be discussed with patients (and their families or carers as relevant), identifying

- what is involved with each treatment approach,
- the likely outcomes (including potential adverse outcomes), and
- provide the patient the opportunity to raise questions or concerns.

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

A stepped care model is proposed that serves as a guide to clinical decision making and treatment planning (Sobell and Sobell 2000). Stepped care identifies that

patients should be offered the least "restrictive" intervention appropriate to their presentation. Should the first intervention prove to be insufficient to achieve the agreed treatment goals for the patient, the next level of intensity of treatment should be offered until the desired treatment goals are achieved. This approach requires regular review and monitoring of the patient, their response to treatment and any changes in their presentation (ie continuous assessment).

Relapse prevention, aftercare and long-term follow-up

Relapse is a common problem in alcohol treatment, with approximately 60% of treated patients relapsing to problematic drinking within the first 12 months (Connors et al. 1996).

It has long been observed that specific situations or mood states are associated with relapse. Factors include: negative emotional states (e.g. frustration, anger, anxiety, depression or anger); interpersonal conflict (e.g. relationships with partner, work colleagues, friends); and direct or indirect social pressure to drink (Marlatt and George 1984).

Relapse prevention addresses itself to the maintenance of change, and to the development of self-efficacy and coping skills (Edwards et al. 2003). Relapse prevention can be assisted through the use of medication, including alcohol pharmacotherapies for reducing alcohol use (e.g. naltrexone, acamprosate, disulfiram), or medication directed towards addressing psychological problems such as anxiety or depression (See Chapter 6).

Aftercare or extended care refers to the period immediately following intensive treatment (See Chapter 11). Aftercare acknowledges the fact that severe alcohol problems are prone to recurrence and that maintenance of change may require some ongoing monitoring and assistance beyond the active phase of initial treatment. It is particularly suited to people with severe dependence whose likelihood of relapse is greater. It consists 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.

Structured aftercare is more effective than patient-initiated, unstructured aftercare (See Chapter 11).

Many clinicians may use referral to self-help programs (such as Alcoholic Anonymous and SMART Recovery) as forms of continuing care, although aftercare generally refers to contact with the treating clinician or service with the goal of maintaining treatment gains. Often primary care workers (e.g. general practitioners) can provide this function through ongoing follow-up of other health issues (See Chapter 8).

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	

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