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Problem drinking

Detection and assessment in general practice

Background
Alcohol has long been an integral part of the social life of many Australians. However, alcohol is associated with significant harm to drinkers, and also to nondrinkers.

Objective
This article explores the role of the general practitioner in the detection and assessment of problem drinking.

Discussion
Excessive alcohol use is a major public health problem and the majority of people who drink excessively go undetected. General practitioners are in a good position to detect excessive alcohol consumption; earlier intervention can help improve outcomes. AUDIT-C is an effective screening tool for the detection of problem drinking. National Health and Medical Research Council guidelines suggest that no more than two standard drinks on each occasion will keep lifetime risk of death from alcohol related disease or injury at a low level. Once an alcohol problem is detected it is important to assess for alcohol dependence, other substance use, motivation to change, psychiatric comorbidities and examination and investigation findings that may be associated with excessive alcohol use. A comprehensive assessment of the impact and risk of harm of the patient's drinking to themselves and others is vital, and may require several consultations.

Keywords: alcohol related disorders; drinking behaviour; general practice

CPD

Alcohol is an integral part of the social life of many Australians. Almost half of the Australian population found regular alcohol use by adults acceptable and only one in 10 thought alcohol to be associated with a substance use problem.[1] Per capita consumption of alcohol in Australia is high by world standards and Australia is ranked in the top 30 alcohol consuming nations.[2] A recent study, which looked at the drinking consequences of more than 30 000 people from more than 40 countries, suggests that Australian women scored among the highest in the world with respect to negative consequences from drinking.[3]

Australian general practitioners are in contact with more than 85% of the population at least once per year, and as such are at the coalface of the many problems associated with alcohol use. Excessive alcohol use is a major public health problem due to the associated harms which may affect the physical, mental and social wellbeing of the person drinking, and those around them. Indeed, recent Australian data suggest that overall, alcohol results in almost as much harm to nondrinkers as to drinkers.[4]

Along with the injuries that may be caused by accidents or as a result of fights due to impaired judgment while intoxicated, nearly every system in the human body can be adversely affected by excessive alcohol consumption.[5,6] *Table 1* summarises the conditions most commonly associated with alcohol use. Impaired occupational functioning, marital discord along with domestic violence are common social harms from excessive drinking. In younger people, the social and behavioural harms predominate, whereas the medical harms are generally seen in people over the age of 40 years.

While there is some evidence to show that light drinking on a daily basis may reduce the risks of coronary heart disease and all cause mortality,[7,8] excessive alcohol intake and at risk drinking are detrimental to overall health (*Table 1*). It is not recommended that nondrinkers start drinking in order to gain health benefits. Most of these cardiovascular benefits can be achieved by other means such as exercise or weight loss, which do not involve the potential risk of developing alcohol related harms or an alcohol use disorder.

The role of the GP in detection and assessment

There is now a large body of evidence to support the benefits of early intervention for problem drinking in primary care.[9–14] Treatment is far easier before dependence is entrenched, which makes accurate and early detection of problems imperative. While management of established alcohol dependence is associated with variable outcomes, some patients may achieve major improvements in health and social function and management of these patients can be a rewarding experience for GPs.

Table 1. Problems associated with excessive alcohol use

Nutritional Protein deficiency, vitamin deficiency syndromes (especially thiamine and folic acid), obesity
Metabolic Ketoacidosis, hypoglycaemia or hyperglycaemia, electrolyte problems (ie. low magnesium or sodium)
Neurological Alcohol withdrawal syndrome (including seizures and delirium tremens), Wernicke encephalopathy and Korsakoff syndrome, cerebellar degeneration, dementia, peripheral neuropathy
Psychological Insomnia, fatigue, anxiety disorders, depression, suicide and suicidal ideation, exacerbation of existing mental health problems
Behavioural Disinhibition including unplanned sex, violence, trauma, sexually transmissible infection, use of other licit or illicit substances
Muscular Myopathy
Gastrointestinal Fatty liver, alcoholic hepatitis, cirrhosis, pancreatitis (chronic or clinically acute), gastroesophageal reflux disease, gastritis, chronic diarrhoea, malabsorption
Metabolic and endocrine High uric acid/gout, low testosterone/impotence/ testicular atrophy, gynaecomastia, irregular menstrual periods, osteoporosis, sexual dysfunction
Blood related Macrocytosis, anaemia, leukopenia, destruction of platelets, coagulopathy (especially 2° to liver disease)
Cardiac Hypertension, arrhythmias, dilated cardiomyopathy
Pulmonary Increased risk of pneumonia, tuberculosis; aspiration
Social Marital problems, workplace absenteeism, child abuse/ neglect, road safety issues

Improved management outcomes have been assisted by increased awareness of alcohol problems by the medical community and significant recent developments in the management of alcohol dependence.[9] However, due to the chronic and relapsing nature of the condition, in some cases, managing a patient with alcohol dependence can be a disappointing experience for GPs. Importantly, GPs are in a good position to detect alcohol problems and provide timely interventions, at whatever stage they present, due to their close contact with patients and the trust this generates as well as access to modern pharmacotherapies for relapse prevention (which may be initiated by the GP).[9] A caring and nonjudgmental approach to the initial assessment helps prepare the ground for a brief intervention or an offer of treatment.

How much is too much?

Recently updated National Health and Medical Research Council (NHMRC) guidelines[15] suggest that for both men and women, drinking no more than two standard drinks on each occasion, even if the drinking is daily, keeps the lifetime risk of death from alcohol related disease or injury to a low level. The risk of health problems rises steadily above these levels. If people drink more than four standard drinks on any one occasion, even episodically, they place themselves at risk of injury or other harm.[15] For some people, not drinking at all is the safest option. This is the case for those who are pregnant, those who have an illness that is exacerbated by alcohol, or those who have in the past been dependent on (addicted to) alcohol.

Terminology

Excessive drinking may occur in different forms, including regular daily drinking above recommended levels and episodic drinking to intoxication (eg. on pay day or weekends). If no harm has yet been experienced these consumption patterns are simply described as 'hazardous drinking'. On the other hand, drinking that has caused physical or mental harm is called 'harmful drinking', and drinking that has resulted in the person becoming dependent on alcohol is 'alcohol dependence'.[16]

Detecting problem drinking

The majority of people who drink excessively are not detected in general practice or hospital settings.[17,18] Most often this is because the drinking history is omitted because of time restrictions or discomfort in asking about drinking when the patient has presented for another problem. Patients rarely present directly for assistance with a drinking problem so a high index of suspicion is required with a focus on the clinical indicators described in *Table 2*.[19] If any of these are present, a detailed assessment of alcohol use and impact should follow.

The AUDIT-C screening tool

The AUDIT Alcohol Consumption Questions (AUDIT-C)[20] is an effective screening tool for the detection of problem drinking. It elicits a concise alcohol history using three questions about the

quantity and frequency of the patient's usual drinking, as well as the frequency of heavy drinking (*Table 3*). A score of 5 or more indicates that further assessment is necessary. Some GPs use this or the full 10-item Alcohol Use Disorders Identification Test (AUDIT), which was developed by the World Health Organization and is widely used around the world, as part of a self administered waiting room health screen for new patients. Alternatively, the three AUDIT-C questions may be incorporated into the clinical history.[17,18,21,22]

Quantifying alcohol use

Quantifying alcohol use is an important aspect of a detailed alcohol history. One common error is to record the patient's description verbatim, eg. 'social drinker'. To the patient, that term may simply mean that they do not drink alone, because of which they assume that alcohol is not a problem. However, it does not give any indication of how often or how much they drink.

Misunderstanding about drink sizes can also obscure an accurate recording of alcohol consumption. *Figure 1* shows what constitutes a standard drink in Australia.[23] It is important to remember that most alcoholic drinks in Australia are not poured in standard drink sizes. For example, an average restaurant glass of wine is around two standard drinks and a can of regular beer is around 1.5 standard drinks. It is also important to be aware that 'low-carb beer or wine', has the same alcohol content as standard products.

Table 2. Symptoms, signs and investigations that raise suspicion of problem drinking[19]

Physical symptoms and signs
• Hypertension • Bloodshot eyes • Dilated facial capillaries • Hand tremor • Tongue tremor • Gastrointestinal disorders • Cognitive impairment • Frequent accidents
Psychiatric and social indicators
• Work, financial, marriage or relationship problems • Insomnia • Anxiety • Depression • Domestic violence
Abnormal investigations
• Abnormal liver tests • Raised mean cell volume • Raised blood or breath alcohol concentration • Raised carbohydrate deficient transferrin

Assessing problem drinking

Alcohol dependence

If the initial assessment suggests excessive alcohol consumption, it is important to ask further questions to assess for the presence of International Classification of Diseases (ICD-10) criteria for alcohol dependence.[24] Dependence is diagnosed when three or more of the six symptoms are present (*Table 4*).

Other substance use

It is important to ask about other substances including benzodiazepines, cannabis, amphetamine-like substances and illicit or prescribed opioids. People are more likely to try other drugs, and to inject drugs, while intoxicated with alcohol.

Motivation to change

Once the existence of problem drinking is established it is important to assess the drinker's level of motivation to change. After a direct, nonjudgmental and nonconfrontational discussion about the risks of excessive drinking and the benefits of change, simple questions such as 'how do you feel about your drinking now?' or 'how interested are you in changing your drinking now?' can help elicit the level of readiness to change.

It is important to remember that ambivalence about change is very common among at risk drinkers and should not discourage GPs from providing advice and assistance.

Table 3. AUDIT-C questions[20]

1. How often do you have a drink containing alcohol?					
Answer	Never	Monthly or less	Two to four times a month	Two to three times a week	Four or more times a week
Score	0	1	2	3	4
2. How many drinks containing alcohol do you have on a typical day?					
Answer	One or two	Three or four	Five or six	Seven to nine	10 or more
Score	0	1	2	3	4
3. How often do you have six or more drinks on one occasion?					
Answer	Never	Less than monthly	Monthly	Weekly	Daily
Score	0	1	2	3	4

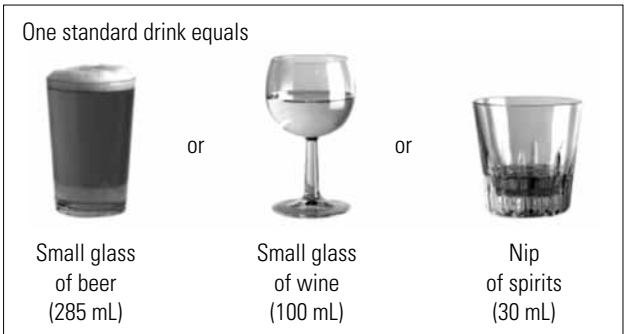

Figure 1. One standard drink in Australia

Table 4. ICD-10 criteria for harmful alcohol consumption and dependence[24]

Harmful alcohol consumption
A pattern of alcohol use causing damage to physical or mental health
Alcohol dependence
Alcohol dependence is not defined by the level of alcohol consumption per se, although most patients who are alcohol dependent drink at high risk levels. The ICD-10 defines alcohol dependence as the presence of three or more of the following within the past year: • a strong desire or compulsion to use alcohol • difficulties controlling the onset, amount or termination of alcohol use • withdrawal symptoms, or ongoing alcohol use to prevent withdrawal • tolerance, ie. the need to take more alcohol to achieve the same effect • continuing alcohol use despite clear evidence of harm • salience of alcohol use, ie. neglect of social or occupational activities to allow for alcohol use

Psychiatric comorbidities

Importantly, a range of mental illnesses may be comorbid with alcohol use[25] and a thorough alcohol assessment requires consideration of the possibility of dual diagnosis. Similarly, the treatment plan will include strategies to address any comorbid psychiatric problems.

Physical examination

It is important to look for the common indicators of excessive alcohol use (*Table 2*), however their absence does not exclude its existence. Most people drinking above recommended levels will be 'normal' on examination. Common early signs of alcohol excess include hypertension and abdominal obesity.

Investigations

Biological markers of alcohol use include direct markers such as blood or breath alcohol levels or indirect markers such as liver enzymes and mean corpuscular volume (MCV).[26] Although gamma glutamyl transferase (GGT) is a useful indicator of excessive alcohol use, only one-third of heavy drinkers will show an abnormality and many other factors can raise levels. It is important to warn the patient beforehand that the test most likely will be normal so that your advice on drinking will not be undermined by a normal test.

Aspartate aminotransferase (AST) is typically higher than alanine aminotransferase (ALT) when alcohol is the cause of liver disease. Carbohydrate deficient transferrin (CDT) is a measure of the changes regular heavy alcohol use makes to glycosylation of transferrin. The CDT test is not covered by Medicare and is too costly for routine use.

Biological markers are not as reliable as a good clinical history or brief screening questionnaire in detecting alcohol problems. They should only be used as an adjunct to the other assessment measures.

Corroborative information

Most patients are quite forthright about their drinking habits if asked in a nonjudgmental way that reflects a genuine concern for the patient. However, this is not always the case. If the alcohol history is discordant with the clinical picture, seek corroborative information from relevant others, such as co-workers, family members or a previous GP. The patient must consent to allow such enquiries to be made, but refusal to provide this consent is rather uncommon and can be most telling. Periodic reassessment is often revealing. Observation in hospital may be diagnostic but is rarely justifiable.

Comprehensive assessment of impact and risk

This may require several consultations and should explore the impact of the patient's drinking on the psychiatric and social indicators outlined in *Table 2* as well as the risk of harm to the patient and to others. Areas to explore include:

- suicide risk
- risk of violence
- child safety
- capacity to self care
- risk of accidental injury
- workplace safety
- driving safety.

If there is a concern for the safety of the patient or others, assistance should be sought from specialist services, regulatory authorities or allied health staff.[27] Child and road safety are important medicolegal matters and GPs should familiarise themselves with the requirements and regulations of the jurisdictions in which they work. For some professions such as professional driving, medicine or nursing, the risk must be assessed in relation to the specific work context. It is best to seek advice from medical defence organisations, senior colleagues or specialists regarding these issues until one feels confident and comfortable managing them.

Summary of important points

- Alcohol use is a major public health problem in Australia.
- Alcohol is associated with harm to physical, mental and social wellbeing of an individual and those around them.

- The majority of people who drink excessively go undetected.
- Regular and systematic screening will help identify people who are at risk because of their drinking.
- Assessment involves assessment for alcohol dependence, other substance use, motivation to change, psychiatric comorbidities and examination and investigation findings that may be associated with excessive alcohol use.
- A comprehensive assessment of the impact and risk of harm of the patient's drinking to themselves and others is vital, and may require several consultations.
- General practitioners are well placed to identify and assist people who drink excessively.
- A caring and nonjudgmental approach to alcohol history helps prepare the ground for a brief intervention or offer of treatment for alcohol problems.

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