Detecting and managing alcohol misuse

Many patients undergoing alcohol withdrawal can do so safely at home under supervision, but some need inpatient admission, writes **Grozdana Lalevic**

MEDICAL, mental and behavioural problems due to alcohol use are common. Overall, 4% of the global burden of disease is attributable to alcohol, which accounts for about as much death and disability globally as tobacco and hypertension *(see Figure 1)*.[1]

More than 80 deaths every month in Ireland are directly attributable to alcohol, and one in four deaths of young men aged 15-39 in Ireland are related to alcohol. Furthermore, there are 1,200 cases of cancer detected each year in Ireland related to alcohol.[2]

The Global Burden of Disease project showed that the proportion of Irish 15-year-olds (together with British and Danish) who had been drunk three times or more in the past 30 days considerably exceeded the proportion of 15-year-olds elsewhere in Europe.[3]

There is clear and conclusive evidence that the problems from consumption levels are reflected in both admissions to general hospitals and attendances at emergency departments. Hope et al suggested that 20-50% of all presentations to EDs in Ireland are alcohol-related, with the figure rising to more than 80% at peak weekend periods.[4]

How much is too much?

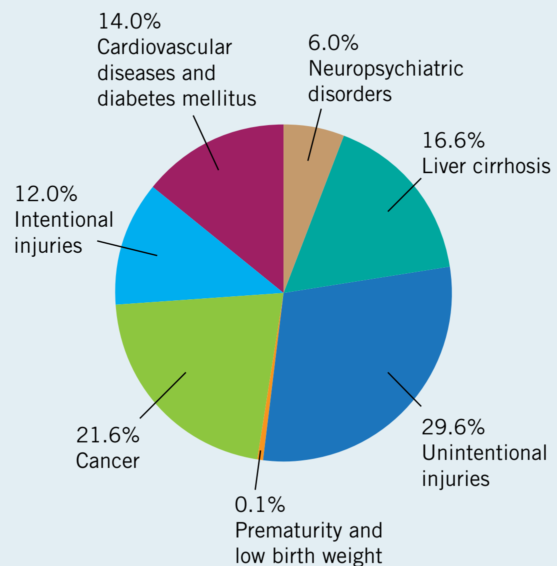
Hazardous drinking is consuming more than 17 standard drinks per week for men or 11 standard drinks per week for women. (A standard drink has 10g of pure alcohol.) There is an increased risk of liver disease for those who drink daily, compared with those who drink intermittently or periodically. The liver needs at least two to three alcohol-free days to recover after drinking anything but the smallest amount of alcohol.[5]

Harmful alcohol use or abuse refers to a pattern of use that is causing damage to health.[6] The damage may be physical (eg. hepatitis) or mental (eg. depressive episodes secondary to heavy alcohol intake). Harmful use commonly, but not invariably, has adverse social consequences.

Alcohol dependence is defined as 'cluster of physiological, behavioural and cognitive phenomena in which the use of alcohol takes on much higher priority for a given individual than other behaviours that once had greater value'.[6]

A definite diagnosis of dependence should only be made if at least three of the following have been present together in the past year: compulsion to take alcohol; difficulties controlling alcohol-taking behaviour; physiological withdrawal state; evidence of tolerance; neglect of alternative interests; and/or persistent use despite harm.

Figure 1: Global distribution of all alcohol-attributable deaths by disease or injury



Detection of alcohol misuse

The clinical assessment of alcohol misuse involves finding out the number of standard drinks consumed per week; patterns of drinking; physical and mental health of the patient; and testing blood markers. The following screening questionnaires for detection of alcohol misuse, severity and withdrawal are useful:

- CAGE, PAT, FAST – for detection of alcohol misuse, quick and easy to use in ED settings
- AUDIT – more detailed 10-question screening test suitable for primary care settings[7] (see adapted algorithm in *Table 1*)
- SADQ – for severity of alcohol dependence
- CIWA Ar – for detection of alcohol withdrawal and measure of severity of withdrawal. Score > 10 indicates withdrawal.[8]

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Table 1: Identification and management of harmful drinking and alcohol dependence

AUDIT score < 8	AUDIT score 8-15	AUDIT score 16-19	AUDIT score 20-40	
No intervention needed	Brief intervention	Brief intervention and regular monitoring	Evaluate presence and severity of physical dependence	
	Periodic re-assessment		Physical dependence is absent or mild	Physical dependence is moderate or severe
			Outpatient addiction treatment and/or support services	Outpatient or inpatient detoxification
				Outpatient or inpatient addiction treatment

People who misuse alcohol often tend to misuse benzodiazepines or other illicit drugs, so it is always worth asking them about other substances.

Presentation of alcohol problems in the medical setting

Patients usually present for three major reasons:

1. Wishing to abstain from alcohol and not in alcohol withdrawal or alcohol-dependent

This group of people would have an AUDIT score < 20. The principles underlying most approaches to brief interventions were systemised by Hester and Miller in what is called the FRAMES model:[9]

- Feedback – give feedback on the risks and negative consequences of substance use. Seek the client's reaction and listen
- Responsibility – emphasise that the individual is responsible for making his or her own decision about their drug use
- Advice – give straightforward advice on modifying drug use
- Menu of options – give menu of options to choose from, fostering the client's involvement in decision-making
- Empathy – be empathic, respectful and non-judgmental
- Self-efficacy – express optimism that the individual can modify his or her substance use if they choose. Self-efficacy is one's ability to produce a desired result or effect.

2. Alcohol-related medical comorbidities or injuries

This includes patients presenting with accidental or deliberate self-harm.

3. Alcohol dependent or in alcohol withdrawal

Most patients undergoing alcohol withdrawal can do so safely at home with regular supervision by their GP. For people who typically drink over 15 units per day and/or score 20 or more on AUDIT, detox in the community is a possible option. Consider inpatient detox in individuals with: severe alcohol dependence; history of delirium tremens or seizures; poor physical health; pregnancy; major mental illness; cognitive impairment; or multiple failed community detoxifications.

Alcohol withdrawal timeline example

- Six to 16 hours after last drink: tremor, headache, nausea, vomiting, anxiety, agitation, tachycardia, hypertension, insomnia
- 12-24 hours after last drink: the above plus seizures and perceptual abnormalities
- Two to five days after last drink: the above plus delirium tremens (a complication of alcohol withdrawal), involves severe agitation, confusion, hallucinations, seizures, fever.

Most of the withdrawal symptoms subside five to seven days after last drink, but craving for alcohol may persist longer.

Table 2: Examples of chlordiazepoxide detox

Day 1	10-40mg QDS; PRN 10-40mg two-hourly; daily max 250mg in 24 hours
Day 2	10-40mg QDS +/– PRN
Day 3	10-30mg QDS +/– PRN
Day 4	10mg QDS
Day 5	10mg QDS

Day 1: Librium detox example
(based on number of units/week):

- < 100 units/week: 20mg QDS
- 100-200 units/week: 30mg QDS
- > 200 units/week: 40mg QDS

Reduce dose in elderly, frail patients or adjust according to body mass. Patients with abnormal liver enzymes but no clinical evidence of liver failure and normal serum bilirubin, albumin and prothrombin time are suitable for chlordiazepoxide. Consider lorazepam or oxazepam to decompensate liver failure[11]

Drugs used in acute withdrawal

Benzodiazepines are used to prevent/relieve withdrawal symptoms and to prevent delirium and seizures. Most commonly used would be diazepam and chlordiazepoxide. They do not reduce craving and after initial detox, additional interventions may be required. For examples of chlordiazepoxide detox see *Table 2*.[10]

Vitamin B complex is used for prophylaxis or treatment of Wernicke-Korsakoff's syndrome (WKS). A presumptive diagnosis of Wernicke's encephalopathy (WE) should be made for any patient with a history who shows one or more of the following: evidence

Table 3: Useful resources

www.addictionireland.ie	www.rutlandcentre.ie
www.prioritymedicalclinic.ie	www.stjohnofgodhospital.ie
www.dualdiagnosis.ie	www.coolmine.ie
www.bushypark.ie	www.taborlodge.ie
www.stpatricks.ie	

www.probation.ie/pws/websitepublishingdec09.nsf/Content/Full+Listing+of+Community+Based+Organisations

ICGP CPD Education e-learning module on alcohol awareness, www.icgp-education.ie/alcohol awareness

Table 4: Support services

- Alcoholics Anonymous (AA) 12-step programme 'to stay sober and help other alcoholics achieve sobriety'
- Al-Anon Family Groups provide support to anyone whose life is, or has been, affected by someone else's drinking (www.al-anonuk.org.uk/meetings/)
- Outpatient/inpatient or day patient addiction treatment
- Addiction outreach workers in the community

of ophthalmoplaegia, ataxia, acute confusion, memory disturbance, unexplained hypotension, hypothermia, unconsciousness or coma.

Thiamine replacement is still the critical intervention for WKS, and increased vulnerability is associated with genetic susceptibility in association with poor diet.

Recommendations for treatment of WKS and WE:[11]

- Oral thiamine 300mg for a healthy individual with uncomplicated and low-risk ADS
- High-risk WE (unwell and malnourished) – parenteral Pabrinex one pair three to five days
- Established WE – parenteral Pabrinex two pairs three to five days followed by one pair three to five days or according to response.

Promoting abstinence

Detoxification is usually the first step towards abstinence, followed by appropriate addiction aftercare/support *(see below)*. The four pharmacological treatments available to maintain abstinence include:[11]

- Acamprosate – acts as a functional glutamatergic antagonist. It is generally well tolerated; nausea and diarrhoea would be the main side-effects. It does not interact with alcohol and reduces cravings. The current recommendation is that it is to be given for one year.[2] In patients with moderate renal dysfunction (creatinine clearance 30-50ml/min), the initial dose should be 333mg three times daily, but usual dosage is 666mg three times daily
- Naltrexone – acts as non-selective competitive antagonist of the opioid receptor which prevents the endogenous opioids from binding to the receptor, therefore giving reduction in the pleasurable effects from alcohol. Consequently, naltrexone reduces the alcohol's rewarding effects and also cravings. The recommended dosage of naltrexone is 50mg per day in a single dose. NICE[12] recommends that oral acamprosate or naltrexone should be offered to those who are moderately to severely dependent or drinking harmfully if failing to improve. Both acamprosate and naltrexone should be stopped if drinking persists beyond four to six weeks, and should be considered in combination with psychological intervention
- Disulfiram – it blocks aldehyde dehydrogenase, causing accumulation of acetaldehyde if alcohol is consumed resulting in nausea, flushing and palpitations. NICE recommended that disulfiram should be tried after acamprosate or naltrexone, or where the patient indicates a preference for it. There is no evidence to guide how long to prescribe disulfiram, but clearly it can only be started once the patient is alcohol-free for at least 24 hours. Patients must also be warned about the potential for a reaction with alcohol for up to seven days after stopping disulfiram. The average maintenance dose is 250mg daily
- Baclofen – The anti-craving and anti-reward effects of baclofen appear to relate to its agonist effect on GABA-B receptors. Baclofen should be considered if a patient wants to be abstinent, has a high level of anxiety and has not benefited or is unable to take acamprosate, naltrexone or disulfiram. Start therapy at a low dosage and increase gradually until optimum effect is achieved (usually 40-80mg daily).

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