

## A view from the acute hospital

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## A view from the acute hospital: Managing alcohol problems in a changing clinical environment --Manuscript Draft--

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# **A view from the acute hospital: Managing alcohol problems in a changing clinical environment**

## **Short title: Managing alcohol problems**

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### **Abstract**

Regular heavy consumption of alcohol is associated with a wide range of physical, psychological and social problems. All healthcare clinicians should be able to screen for and detect problematic levels of alcohol consumption in their patients, and deliver an effective brief intervention. When patients with alcohol dependence are admitted to the hospital there must be an assessment of whether medication is required to prevent withdrawal symptoms and potential delirium tremens and withdrawal seizures. Medically assisted alcohol withdrawal using a long acting benzodiazepine such as chlordiazepoxide should be carefully monitored and titrated to effect, and the clinician should be aware of the risk of Wernicke Korsakoff syndrome and other complications. Abstinence from alcohol is usually only the first step in treatment, and effective linkage to community alcohol services is an important step.

# **A view from the acute hospital: Managing alcohol problems in a changing clinical environment**

## **Abstract**

Regular heavy consumption of alcohol is associated with a wide range of physical, psychological and social problems. All healthcare clinicians should be able to screen for and detect problematic levels of alcohol consumption in their patients, and deliver an effective brief intervention. When patients with alcohol dependence are admitted to the hospital there must be an assessment of whether medication is required to prevent withdrawal symptoms and potential delirium tremens and withdrawal seizures. Medically assisted alcohol withdrawal using a long acting benzodiazepine such as chlordiazepoxide should be carefully monitored and titrated to effect, and the clinician should be aware of the risk of Wernicke Korsakoff syndrome and other complications. Abstinence from alcohol is usually only the first step in treatment, and effective linkage to community alcohol services is an important step.

## **Short Introduction**

Alcohol is linked to over a million admissions to hospital each year in the NHS, and the number has increased as investment in specialist community treatment services has been reduced. It is therefore important that hospital clinicians are able to intervene effectively to manage this issue.

## **Introduction**

Alcohol consumption contributes to a wide range of adverse health outcomes, from risky behaviours such as drink driving and road traffic accidents to cardiovascular disease and cancer. Alcohol use disorders (AUDs) constitute a significant burden on the individual and society, and it is estimated that alcohol cost the NHS £3.3 billion in 2006-7 (Scarborough et al., 2011). In 2017/18 there were 1.17 million hospital admissions where the primary or any secondary reason for admission was linked to alcohol, and 338,000 where the main reason for admission was attributable to alcohol. This is 15% higher than 2007/8, and represents 2.1% of all hospital admissions (Health and Social Care Information Centre, 2019). These data are significant in the context of sustained cuts in specialist alcohol and drug treatment agencies in England over the past 10 years (Drummond, 2017, Mohammadi, 2014).

In 2016 the UK Chief Medical Officer (CMO) published new guidelines recommending that both men and women avoid regularly drinking more than 14 units per week (Department of Health, 2016). Alcohol sales and the amount people in the UK drink increased steadily from the early 1980s, peaking and stabilising in 2008. More people, particularly under 18s, are choosing not to drink, but those at high risk of health conditions because they drink heavily are drinking more now than ever. Over 10 million people drink alcohol at levels in excess of the CMO's low-risk guideline, thus increasing their risk. The importance of a public health approach to managing alcohol problems has been highlighted, where all clinicians have a responsibility to detect, assess and signpost people with alcohol use disorders to the appropriate form of help (National Institute for Health and Clinical Excellence, 2010b).

This review provides the hospital clinician with practical guidelines for assessment and management of alcohol dependence and withdrawal in the acute hospital, with discussion around working with community alcohol services. The National Institute for Health and Care Excellence (NICE) has produced guidelines in 3 separate areas: prevention (National Institute for Health and Clinical Excellence, 2010b), management of physical complications (National Institute for Health and Clinical Excellence, 2010a), and management of harmful drinking and dependence (National Institute for Health and Clinical Excellence, 2011). The guidance is summarised in clinical pathways which can be found at <http://pathways.nice.org.uk/pathways/alcohol-use-disorders>

## **Definitions**

The terminology used to define health problems relating to alcohol is currently evolving, with slightly different systems used by international organisations such as the World Health Organisation (World Health Organisation, 1992) and national bodies such as the American Psychiatric Association (American Psychiatric Association, 2013) and the Department of Health in the UK (see [www.gov.uk/government/policies/reducing-harmful-drinking](http://www.gov.uk/government/policies/reducing-harmful-drinking)). The definitions currently used by Public Health England are shown in table 1. There is general agreement that there is no such thing as a 'safe level' of drinking, and that the risk of harm increases with either frequency of consumption and/or amount consumed on a drinking occasion.

## **Identifying alcohol use disorders**

The majority of people with risky patterns of drinking are not dependent, and treatment interventions for those at increasing or higher risk do not need to be long in duration to be effective (Heather, 1995). A few minutes spent systematically identifying people at increased risk of harm and delivering advice about moderating alcohol consumption has been shown to be an effective strategy in various settings (Jackson et al., 2010). NICE recommends that NHS professionals should carry out alcohol screening as part of routine practice (National Institute for Health and Clinical Excellence, 2010b), and all doctors should feel comfortable and confident in raising the topic of alcohol consumption in a consultation. Health Education England and Public Health England have developed a useful training package, available at <https://www.e-lfh.org.uk/programmes/alcohol/>.

The 'Alcohol Use Disorders Identification Test' (AUDIT, table 2) consists of 10 questions about drinking frequency and intensity, experience of alcohol-related problems, and signs of possible dependence (Babor et al., 2001). AUDIT has a sensitivity of 92% and a specificity of 93%, and is the 'gold standard' screening questionnaire for detecting drinkers at increasing or higher risk (National Institute for Health and Clinical Excellence, 2010b). Furthermore, the AUDIT score can guide the clinician as to the best intervention, including brief advice, extended brief interventions or a referral to specialist services (see table 2). Scores should be revised downward when screening women, or people under 18 or over 65. Biochemical measures such as liver function tests are not normally used for screening, but are helpful in assessing the severity and progress of an established alcohol-related problem, or as part of a hospital assessment (Drummond et al., 2007).

AUDIT-C is a briefer version of the AUDIT that can be used for pre-screening. It consists of the first 3 questions from the AUDIT, and a total of 5 or more constitutes a positive screen and should prompt the completion of the remaining questions to obtain a full AUDIT score. The Modified single alcohol screening questionnaire (M SASQ) consists of just one question (question 3 from the full AUDIT) that was developed for use in emergency departments.

## Brief Advice and Brief Interventions

Simple, structured advice delivered to patients after completing a validated alcohol screening tool (Identification and Brief Advice, IBA) should be offered as a first step in treatment. It typically takes between 5-15 minutes and takes the form of personalized feedback on how to address problematic drinking behaviour as well as information and/or advice on how to avoid its adverse consequences (see <https://www.gov.uk/government/publications/alcohol-applying-all-our-health/alcohol-applying-all-our-health>). It is a cost-effective intervention with an extensive evidence base for those patients identified as drinking above recommended limits and at risk of developing health problems or dependence (National Institute for Health and Clinical Excellence, 2010b). It is not aimed at dependent drinkers, who should be referred to specialist services.

Extended or more intensive intervention using counselling and other psychotherapeutic techniques such as motivational interviewing or cognitive behavioural therapy (CBT) is an effective next step. Such interventions may be delivered by specialist clinicians and are usually designed to promote awareness of the negative effects of drinking and to motivate positive behaviour change. Such brief interventions are based on “FRAMES” principles (Miller and Sanchez, 1993):

- **Feedback:** on their score, drinking levels and guidelines
- **Responsibility:** drinking is a choice, a behaviour that can be changed
- **Advice:** risks of continued levels of drinking and benefits of cutting down
- **Menu:** of goal setting or strategies to help cut down
- **Empathy:** non-judgemental attitude
- **Self-efficacy:** provide encouragement, instil optimism and self confidence

The Commissioning for Quality and Innovation (CQUIN) *Preventing ill health by risky behaviour from alcohol and tobacco* has been introduced into all acute hospitals across England since April 2018, and focuses on identifying and influencing inpatients who are increasing or higher risk drinkers (<http://www.swsenate.org.uk/wp/wp-content/uploads/2017/12/IntroCQUIN.pdf>).

## Assessment for Admission

Admission to hospital may be required to assess and manage acute withdrawal symptoms from alcohol, or a range of physical complications such as seizures, delirium tremens, Wernicke-Korsakoff Syndrome, or alcohol-related pancreatitis or liver disease (National Clinical Guideline Centre, 2010). An assessment of risk should inform the overall care plan and cover risk to self (unplanned withdrawal, neglect, suicide) and risk to others. Unplanned medically assisted withdrawal from alcohol in isolation is rarely an effective long-term treatment for alcohol dependence, and there is a need to link to appropriate community services focusing on relapse prevention on discharge. However, admission to hospital for medically-assisted withdrawal should be offered to patients experiencing, at risk of developing, alcohol withdrawal seizures or delirium tremens, or with signs and symptoms of autonomic over-activity with blood ethanol concentration greater than 100mg/100ml. There should be a lower threshold for admission for vulnerable people, for example those who are frail, have multiple co-morbidities, poor social support, learning difficulties or are younger than 18 years of age. For patients not admitted to hospital but alcohol dependent, offer

advice to gradually reduce intake or to avoid sudden dramatic reduction or cessation of drinking. Signpost these patients to local drug and alcohol treatment services.

### **Management of Alcohol Withdrawal**

The alcohol withdrawal syndrome develops on abrupt discontinuation or significant reduction of alcohol use. Symptoms start to appear within 6-8 hours and range from relatively mild symptoms such as tremor, sweating and anxiety through to withdrawal seizures which occur in the first 12-48 hours. Delirium tremens is a life threatening condition that develops 48-72 hours after cessation of alcohol use and is characterised by agitation, fever, coarse tremor, tachycardia, persecutory delusional beliefs, auditory and visual hallucinations and risk of circulatory collapse.

The principles of good management of alcohol withdrawal include the following:

- Staff awareness
- Access to a screening tool to measure withdrawal symptoms and guide interventions
- Competency in taking an alcohol history
- Use of clinical guidelines to direct prescribing regimen
- Support from specialist alcohol clinicians (usually qualified nurses but may include specialist doctors)

When alcohol withdrawal is identified, long acting benzodiazepines such as chlordiazepoxide or diazepam are the drug of choice (Lingford-Hughes et al., 2012). Chlordiazepoxide has similar efficacy to other benzodiazepines but has the advantage of lower dependence-forming potential and has unique metabolites that can be detected on urine toxicology (helpful where polydrug use is an issue). The aim of treatment is to titrate the dose of benzodiazepines to prevent withdrawal symptoms and any serious complications such as seizures and delirium tremens.

In the acute hospital setting, fixed dose regimens should be used (see example in table 3). The standard regimen will be suitable for most patients at high risk of severe alcohol withdrawal, although the dose should always be tailored to each patient. Doses may have to be increased in more severely dependent drinkers (by adding 5-15mg QDS on a daily basis), or reduced in frail, elderly or young patients or those with significant hepatic or renal impairment. Where there is impaired liver synthetic function (e.g. low levels of albumin or increased prothrombin time) oxazepam may be preferred as it requires less liver metabolism, or lorazepam as it has a shorter half-life and is less prone to accumulation and toxicity. The dose is titrated to effect and then reduced slowly over 5-7 days, a process which can be continued in the community under the supervision of a specialist alcohol treatment service when the patient is medically fit for discharge.

The CIWA-Ar (Clinical Institute Withdrawal Assessment – Alcohol Revised) rating scale is recommended by NICE as an adjunct to clinical judgement (see table 4). The ‘symptom-triggered’ approach to medically-assisted withdrawal, where the patient is assessed using CIWA-Ar every 2-3 hours and medication only administered if a threshold score is obtained (usually 11 or more), has been shown to be associated with significantly lower doses of benzodiazepines than fixed dosing, with a shorter duration but without an increase in the incidence of seizures or delirium tremens (National Clinical Guideline Centre, 2010). However, if the regular rating of symptoms is delayed or missed, it can put the patient at more risk. All staff should be competent in monitoring symptoms effectively and the unit should have sufficient resources to allow them to do so frequently and safely.

Although The CIWA-Ar has a substantial evidence base, in practice it is quite lengthy and complex to administer by busy clinicians. The GMAWS (Glasgow Modified Alcohol Withdrawal Scale, table 5) is a 5 point tool that allows clinicians to rapidly and objectively rate alcohol withdrawal symptoms (McPherson et al., 2012). This guides commencement of benzodiazepine fixed dose regimens for patients at high risk of severe withdrawal, and administration of symptom-triggered 'as-needed' benzodiazepine dosing. A fixed dose diazepam regimen with additional symptom triggered treatment is recommended for patients at high risk, while symptom triggered only treatment is for patients at low risk. Other than a GMAWS score of >8, factors which indicate high risk are a history of withdrawal seizures, delirium tremens or previous severely agitated withdrawal.

### **Delirium Tremens**

Delirium tremens may occur if alcohol withdrawal symptoms are left untreated, and has a mortality rate of 20%. The aim of management is to make the patient calm and sedated but easily rousable. For patients taking oral medication, doses of chlordiazepoxide up to 50mg every 2 hours may be necessary. For patients requiring parenteral treatment, intravenous diazepam can be given at doses of 10mg every 30-60 minutes. Rectal diazepam is indicated if there is difficulty establishing intravenous access. In liver impairment, intravenous lorazepam 1-2mg every 30 minutes can be given. Psychotic symptoms such as hallucinations and persecutory delusional beliefs respond well to haloperidol 1-5mg up to 8-hourly or olanzapine 2.5-5mg up to 12-hourly (National Clinical Guideline Centre, 2010).

### **Treatment and Prevention of Wernicke-Korsakoff Syndrome**

The Wernicke-Korsakoff syndrome (WKS) develops when an individual is thiamine deficient, and this is more likely in people who drink alcohol heavily over a prolonged period of time at the expense of eating (Day et al., 2013). The classic triad of Wernicke's encephalopathy (WE) is global confusion (accompanied by disorientation and disturbed memory rather than drowsiness), eye signs (such as nystagmus, gaze palsies and ophthalmoplegia) and ataxia. Korsakoff's Psychosis (KP) involves a profound impairment of retrograde and anterograde memory with preservation of other intellectual capabilities, and it usually occurs after an acute episode of WE. There should be a high index of suspicion for WE, and a low threshold for treatment, in any patient presenting as confused in the acute hospital setting. Additional indicators include decreased consciousness levels, memory disturbance, ataxia, ophthalmoplegia or unexplained hypotension or hypothermia. The classical triad of ophthalmoplegia, ataxia and confusion is rarely seen. If WE is suspected, the patient should be treated with parenteral thiamine, which should be continued for at least 5 days followed by oral therapy. Prophylactic parenteral thiamine followed by oral thiamine should be offered to heavy or dependent drinkers that are malnourished or at risk of malnourishment, have decompensated liver disease, or if they are admitted to hospital with an acute illness or injury

### **Specialist Treatment Services**

Where screening or assessment in hospital suggests that a patient may be alcohol dependent, the appropriate response is to refer them for specialist assessment (Public Health England, 2018). The setting for this assessment depends on the local availability of alcohol specialists, who might be:



- an alcohol specialist nurse or health worker in a hospital alcohol care team or psychiatric liaison service
- a psychiatrist or nurse in the mental health service with suitable competence
- a member of the community alcohol or substance misuse treatment team

It is estimated that there is some form of alcohol specialist care provision in approximately 75% of acute hospitals, although these teams vary in size, days of operation and the treatment they offer. The alcohol specialist can expand on the initial screening and assess the patient's level of dependence and risk of withdrawal, as well as helping to develop a care plan and start alcohol treatment.

One of the aims of alcohol specialist workers is to support appropriate discharge and transfer of patients from secondary care to continue their treatment in the community. Assessing a patient's suitability to complete medically assisted withdrawal in the community should only be done by an alcohol specialist, following written clinical guidelines and with appropriate transfer of care agreements. Where there is no alcohol specialist provision in the hospital, patients whose screening shows they are potentially dependent and those who have been actually diagnosed should be referred to the community alcohol treatment service before they are discharged from hospital.

### **Community Treatment Services**

Treatment in the community is appropriate for people with alcohol dependence and for at risk drinkers who need additional help managing their consumption. These services are effective in reducing the health harms of alcohol use (Charlet and Heinz, 2017). Treatment programmes may include:

- medications to achieve safe withdrawal from alcohol or maintain abstinence (e.g. disulfiram, acamprosate or naltrexone)
- psychological therapies for the same goals
- support for continued recovery
- help with employment and housing

Local authorities are responsible for providing community alcohol treatment which is usually commissioned from NHS provider trusts or third sector organisations. Community services work with other providers involved in the care and support of their clients, such as GPs, mental health services, assertive engagement teams, housing and Job Centre Plus (JCP). Hospital clinicians should also be aware of the benefits of attending Alcoholics Anonymous and other mutual self-help meetings, and should be able to signpost them effectively (Public Health England, 2013).

### **Conclusions**

When managing alcohol use disorders in the acute hospital setting, prompt identification, followed by treatment of the withdrawal syndrome and prophylaxis of the more serious conditions such as Wernicke's encephalopathy are of paramount importance. Opportunistic brief interventions are effective and there is a growing evidence base for the substantial benefits of a reduction in alcohol intake, not just for abstinence. Hospital clinicians are ideally placed to identify and treat alcohol use disorders, offer brief interventions and signpost to mutual aid, to start them on their recovery journey.

## Key Points

- Common cause of acute medical admissions
- Prescribe adequate doses of benzodiazepines in fixed dose regimens with additional symptom triggered regimens as necessary
- Use lorazepam or oxazepam in liver impairment
- Delirium tremens is a preventable but life threatening condition
- Use antipsychotics (such as haloperidol or olanzapine) as an adjunct for psychotic symptoms
- High index of suspicion for Wernicke's Encephalopathy and low threshold for treatment
- Discuss and signpost patients to specialist treatment services or mutual aid if motivated to continue recovery

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**TABLE 1: Definitions for terms used for various degrees of alcohol-related harms**

| Category of Alcohol Consumption  | Definition   | AUDIT-C score | AUDIT score |
|--|--|---------------|-------------|
| <b>Low risk</b>  | No amount of alcohol consumption can be called 'safe', but risks of harm are low if below levels   | 1-4           | 7 or less   |
| <b>Increasing risk ('hazardous')</b>   | Regularly drinking more than 2-3 units a day (women) and more than 3-4 units a day (men)   | 5-7           | 8-15        |
| <b>Higher risk ('harmful')</b>   | Regularly drinking more than 6 units per day (women) or more than 8 units per day (men)<br>Or more than 35 units per week (women) and more than 50 units per week (men)  | 8-10          | 16-19       |
| <b>Dependence (as defined by the International Classification of Disorders (ICD-10))</b> | <p>A definite diagnosis of dependence should be made only if three or more of the following have been present together at the same time during the previous year:</p> <ul style="list-style-type: none"> <li>(a) a strong desire or sense of compulsion to drink alcohol</li> <li>(b) difficulties in controlling drinking behaviour in terms of its onset, termination, or levels of consumption</li> <li>(c) a physiological withdrawal state when drinking has ceased or been reduced, as evidenced by: the characteristic alcohol withdrawal syndrome; or use of the same (or a closely related) substance with the intention of relieving or avoiding withdrawal symptoms e.g. benzodiazepines</li> <li>(d) evidence of tolerance, such that increased quantities of alcohol are required in order to achieve the effects originally produced by lesser amounts</li> <li>(e) progressive neglect of alternative pleasures or interests because of alcohol consumption, increased amount of time necessary to obtain or drink alcohol or to recover from its effects</li> <li>(f) persisting with drinking alcohol despite clear evidence of overtly harmful consequences, such as harm to the liver, depressive mood states, or impaired cognitive functioning</li> </ul> <p>It is an essential characteristic of the dependence syndrome that either alcohol consumption or a desire to drink alcohol is present; the subjective awareness of compulsion to drink alcohol is most commonly seen during attempts to stop or control substance use</p> | 11-12         | 20-40       |

TABLE 2: The Alcohol Use Disorders Identification Test (AUDIT)

| ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT)  |  |
|--|--|
| 1. How often do you have a drink containing alcohol?<br>(0) Never<br>(1) Monthly or less<br>(2) 2 to 4 times a month<br>(3) 2 to 3 times a week<br>(4) 4 or more times a week  | 6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?<br>(0) Never<br>(1) Less than monthly<br>(2) Monthly<br>(3) Weekly<br>(4) Daily or almost daily |
| 2. How many units of alcohol do you have on a typical day when you are drinking?<br>(0) 1 or 2<br>(1) 3 or 4<br>(2) 5 or 6<br>(3) 7, 8 or 9<br>(4) 10 or more  | 7. How often during the last year have you had a feeling of guilt or remorse after drinking?<br>(0) Never<br>(1) Less than monthly<br>(2) Monthly<br>(3) Weekly<br>(4) Daily or almost daily   |
| 3. How often do you have 6 or more units if female, or 8 or more units of male, on a single occasion in the last year?<br>(0) Never<br>(1) Less than monthly<br>(2) Monthly<br>(3) Weekly<br>(4) Daily or almost daily | 8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?<br>(0) Never<br>(1) Less than monthly<br>(2) Monthly<br>(3) Weekly<br>(4) Daily or almost daily     |
| 4. How often during the last year have you found that you were not able to stop drinking once you had started?<br>(0) Never<br>(1) Less than monthly<br>(2) Monthly<br>(3) Weekly<br>(4) Daily or almost daily         | 9. Have you or someone else been injured as a result of your drinking?<br>(0) No<br>(2) Yes, but not in the last year<br>(4) Yes, during the last year   |
| 5. How often during the last year have you failed to do what was normally expected from you because of drinking?<br>(0) Never<br>(1) Less than monthly<br>(2) Monthly<br>(3) Weekly<br>(4) Daily or almost daily       | 10. Has a relative or friend, doctor or another health worker been concerned about your drinking or suggested that you cut down?<br>(0) No<br>(2) Yes, but not in the last year<br>(4) Yes, during the last year                     |
| TOTAL SCORE:   |  |

TABLE 3: A standard fixed-dose Chlordiazepoxide alcohol withdrawal schedule

|       | Morning | Midday | Evening | Night | Total daily dose |
|-------|---------|--------|---------|-------|------------------|
| Day 1 | 30mg    | 30 mg  | 30mg    | 30mg  | 120mg            |
| Day 2 | 25mg    | 25mg   | 25mg    | 25mg  | 100mg            |
| Day 3 | 20mg    | 20mg   | 20mg    | 20mg  | 80mg             |
| Day 4 | 15mg    | 15mg   | 15mg    | 15mg  | 60mg             |
| Day 5 | 10mg    | 10mg   | 10mg    | 10mg  | 40mg             |
| Day 6 | 10mg    | 10mg   |         | 10mg  | 30mg             |
| Day 7 | 10mg    |        |         | 10mg  | 20mg             |

Sample medication regimen for moderate alcohol withdrawal symptoms. Chlordiazepoxide 15mg may be added prn, and given dependent on the CIWA-Ar score (score >10)

The patient's response to treatment should always be regularly and closely monitored. The dose should be titrated to effect, leaving the patient sedated but not drowsy.

Doses should be reduced in older adults and people with severe liver impairment (and consider using oxazepam or lorazepam in this group)

TABLE 4: The Clinical Institute Withdrawal Assessment – Alcohol Revised

| CLINICAL INSTITUTE WITHDRAWAL ASSESSMENT – ALCOHOL Revised   |
|--|
| <b>Nausea/vomiting (0-7)</b><br>Prompt: Do you feel sick? Have you vomited? + observation<br>0 – none 1 – mild nausea, no vomiting 4 – intermittent nausea 7 – constant nausea, frequent dry heaving/vomiting  |
| <b>Tremors (0-7)</b><br>Prompt: Extend arms in front of chest and spread fingers + observation<br>0 – no tremor 1 – not visible but can be felt 4 – moderate with arms extended 7 – severe, even without arms extended   |
| <b>Anxiety (0-7)</b><br>Prompt: Do you feel nervous or anxious? + observation<br>0 – none 1 – mildly anxious 4 – moderately anxious or guarded 7 – equivalent to acute panic state   |
| <b>Agitation (0-7)</b><br>Observation<br>0 – normal activity 1 – somewhat more than normal activity 4 – moderately fidgety/restless 7 – paces constantly or thrashes about   |
| <b>Paroxysmal Sweats (0-7)</b><br>Observation<br>0 – no sweat visible 1 – barely perceptible sweating, palms moist 4 – beads of sweat obvious on forehead 7 – drenching sweat  |
| <b>Orientation (0 – 4)</b><br>Prompt: ‘What day is it? Where are you? Who am I? Add 7 + 7 and keep adding 7<br>0 – oriented and can do serial additions 1 – uncertain about date or cannot do serial additions 2 – disorientated to date by no more than 2 days 3 – disorientated to date by more than 2 days 4 – disorientated to place and/or person   |
| <b>Tactile Disturbances (0-7)</b><br>Prompt: Have you any itching, pins & needles, burning sensations, numbness? Do you feel bugs crawling on or under your skin? + observation<br>0 – none 1 – very mild itch, pins & needles, numbness 2 – mild itch, pins & needles, burning, numbness 3 – moderate itch, pins & needles, burning, numbness 4 – moderate hallucinations 5 – severe hallucinations 6 – extremely severe hallucinations 7 – continuous hallucinations   |
| <b>Auditory Disturbances (0-7)</b><br>Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things that you know are not there? + observation<br>0 – not present 1 – very mild harshness/ability to startle 2 – mild harshness/ability to startle 3 – moderate harshness/ability to startle 4 – moderate hallucinations 5 – severe hallucinations 6 – extremely severe hallucinations 7 – continuous hallucinations |
| <b>Visual Disturbances (0-7)</b><br>Prompt: Does the light appear to be too bright? Is its colour different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things that you know are not there? + observation<br>0 – not present 1 – very mild sensitivity 2 – mild sensitivity 3 – moderate sensitivity 4 – moderate hallucinations 5 – severe hallucinations 6 – extremely severe hallucinations 7 – continuous hallucinations                                      |
| <b>Headache (0-7)</b><br>0 – not present 1 very mild 2 – mild 3 – moderate 4 – moderately severe 5 – severe 6 – very severe 7 – extremely severe   |
| <b>Total score = 67</b><br>Patients scoring 10 or less do not usually need additional medication for withdrawal  |

TABLE 5: The Glasgow Modified Alcohol Withdrawal Scale (GMAWS)

| <b>GLASGOW MODIFIED ALCOHOL WITHDRAWAL SCALE</b> |  |  |
|--|--|--|
| <b>TREMOR</b>                                    | No tremor – 0<br>On movement – 1<br>At rest – 2            |  |
| <b>SWEATING</b>                                  | None – 0<br>Moist – 1<br>Drenching - 2                     |  |
| <b>HALLUCINATIONS</b>                            | None – 0<br>Dissuadable – 1<br>Not dissuadable – 2         |  |
| <b>ORIENTATION</b>                               | Orientated – 0<br>Vague, detached – 1<br>Disorientated – 2 |  |
| <b>AGITATION</b>                                 | Calm – 0<br>Anxious – 1<br>Panicky – 2                     |  |
| <b>TOTAL SCORE (0-10)</b>                        |  |  |