Management of Acute Alcohol Withdrawal

<table>
<thead>
<tr>
<th>CATEGORY:</th>
<th>Clinical Guidelines</th>
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<tbody>
<tr>
<td>CLASSIFICATION:</td>
<td>Clinical</td>
</tr>
<tr>
<td>PURPOSE:</td>
<td>To prevent inappropriate hospital admissions for alcohol detoxification whilst ensuring that those not admitted are offered help and referred to appropriate community agencies.</td>
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<td>To better manage the symptoms of alcohol withdrawal in patients admitted to hospital; to reduce the complications associated with inadequate management of alcohol withdrawal.</td>
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<td></td>
<td>To prevent and treat Wernicke’s encephalopathy and prevent Korsakoff’s psychosis.</td>
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Controlled Document Number: CG054

Version Number: 4

Controlled Document Sponsor: Clinical Guidelines Group

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Approved By: Clinical Guidelines Group
             Medicines Management Expert Panel Division 3

On: April 2020

Review Date: April 2023

Distribution: Medical, Nursing and Pharmacy staff working within ED or AMU

Information for: Medical, Nursing and Pharmacy staff working within ED or AMU
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Executive Summary &amp; Overview</td>
<td>4</td>
</tr>
<tr>
<td>2. Management Flow Chart</td>
<td>4</td>
</tr>
<tr>
<td>2.1 Prescribing Pabrinex and oral thiamine</td>
<td>6</td>
</tr>
<tr>
<td>3. Body of Guideline</td>
<td>7</td>
</tr>
<tr>
<td>3.1 Recognition and Assessment</td>
<td>7</td>
</tr>
<tr>
<td>3.1 Signs and symptoms of alcohol withdrawal</td>
<td>7</td>
</tr>
<tr>
<td>3.2 Decisions on admission to hospital</td>
<td>8</td>
</tr>
<tr>
<td>3.3 Acute management of alcohol withdrawal syndrome</td>
<td>9</td>
</tr>
<tr>
<td>3.3 Glasgow Modified Alcohol Withdrawal Scale (GMAWS)</td>
<td>9</td>
</tr>
<tr>
<td>3.3.1 Patients with established alcoholic liver disease</td>
<td>10</td>
</tr>
<tr>
<td>3.3.2 Patients at high risk of severe alcohol withdrawal</td>
<td>10</td>
</tr>
<tr>
<td>3.3.3 Patients at low/moderate risk of severe alcohol withdrawal</td>
<td>10</td>
</tr>
<tr>
<td>3.4 Delirium Tremens</td>
<td>11</td>
</tr>
</tbody>
</table>

Page 2 of 15
3.5  Wernicke’s encephalopathy

3.6  Alcohol withdrawal during pregnancy

3.7  Useful contacts

4.  Methodology

5.  Monitoring & Suggested Quality Standards

6.  References, Related Documents and Other Guidance

7.  Appendix

7.1  Glasgow Modified Alcohol Withdrawal Scale (GMAWS) – scoring and management

7.2  FAST (Fast Alcohol Screen Test)
1. Executive Summary & Overview

Alcohol withdrawal can be a presenting complaint or develop in an alcohol-dependent patient who has been admitted to hospital for other reasons and deprived of alcohol. Untreated, severe alcohol withdrawal (delirium tremens) carries a 15% mortality rate.

Mild withdrawal symptoms generally begin 6-8 hours after the last alcoholic drink, but may occur sooner (and in some cases whilst the patient is still consuming alcohol) or may be considerably delayed. Moderate-severe withdrawal usually occurs about 48 hours after the last alcoholic drink.

Wernicke’s encephalopathy and Korsakoff’s psychosis represent the acute and chronic phases of a single disease process – Wernicke-Korsakoff syndrome – which is caused by neuronal degeneration secondary to thiamine deficiency and most commonly seen in heavy drinkers. If managed inappropriately, Wernicke’s encephalopathy carries a mortality rate of 15% and results in permanent brain damage in 85% of survivors.

This clinical guideline applies to:

- Anyone over 18 years of age who is admitted to an acute hospital in University Hospitals NHS Foundation Trust

2. Management Flow Chart

Patient attends acute hospital within UHB NHS Foundation Trust  

Patient has known alcohol dependence or potentially harmful alcohol intake  
– see FAST screening test, Appendix 7.2

Offer brief advice as a first step in treatment

Does the patient require admission to hospital  
e.g. for a medical/surgical condition?

- No
  - Do NOT admit patient purely for alcohol detoxification
  
  Discharge with advice to avoid a sudden reduction in alcohol intake and sign-post to CGL

- Yes
  - Patient is admitted to hospital
  
  See next page
Assess the patient's risk factors for severe withdrawal (score 1 for each):
- Previous alcohol withdrawal seizures
- Previous severe withdrawal or delirium tremens
- Very heavy alcohol intake e.g. greater than or equal to 10-15 units per day
- High initial GMAWS score

Does the patient have established alcoholic liver disease?
(i.e. clinical or radiological evidence of liver cirrhosis, and biochemical evidence of cirrhosis e.g. low albumin, raised INR +/- deranged LFTs)

No

Assess the patient's risk factors for severe withdrawal (score 1 for each):
- Previous alcohol withdrawal seizures
- Previous severe withdrawal or delirium tremens
- Very heavy alcohol intake e.g. greater than or equal to 10-15 units per day
- High initial GMAWS score

2 or more risk factors

High risk

Front-loading with high dose oral (PO) chlordiazepoxide
Day 1 – 50 mg QDS +
30-50 mg PRN based on GMAWS score

Days 2 and 3 –
Symptom-triggered management with PO chlordiazepoxide 30-50 mg based on GMAWS score

Day 4 onwards –
Symptom-triggered management with PO chlordiazepoxide based on GMAWS score

Symptom-triggered management with oral oxazepam 10-30 mg PRN based on GMAWS score

Yes

Symptom-triggered management with oral oxazepam 10-30 mg PRN based on GMAWS score

Less than 2 risk factors

Low/moderate risk

Symptom-triggered management with PO chlordiazepoxide 30-50 mg based on GMAWS score

*GMAWS = Glasgow Modified Alcohol Withdrawal Scale
See Appendix 7.1 for scoring and management advice
2.1 Prescribing Pabrinex® and oral thiamine

Please note that oral vitamin B co-strong is no longer advocated for the treatment chronic alcoholism and should NOT be prescribed.

Prescribe oral thiamine or Pabrinex Intravenous High Potency® in line with the guidance below:

**Symptoms and signs of Wernicke’s encephalopathy:**
- Acute confusion
- Decreased consciousness level including unconsciousness or coma
- Memory disturbance
- Ataxia/unsteadiness
- Ophthalmoplegia
- Nystagmus
- Unexplained hypotension with hypothermia
3. Body of Guideline

3.1 RECOGNITION & ASSESSMENT

Alcohol withdrawal may be a presenting feature to hospital or occur as a development in a patient who has been admitted for other reasons and deprived of alcohol. It can result from the failure to recognise harmful drinking patterns in patients.

The Fast Alcohol Screening Tool (FAST) has been developed to detect hazardous drinking and is reproduced at the end of this guideline. It should be used within the Emergency Department and Acute Medical Unit to detect potentially harmful alcohol intake.

Simple, structured advice delivered to patients after completing a validated alcohol screening tool (Identification and Brief Advice) should be offered as a first step in treatment. It typically takes 5-10 minutes in 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.

Signs and symptoms of alcohol withdrawal

Signs and symptoms of alcohol withdrawal can appear anywhere between 6 and 72 hours after the last alcohol ingestion, and the range and severity of symptoms depends on factors such as the degree of alcohol dependence and the current level of consumption.

<table>
<thead>
<tr>
<th>Mild Withdrawal</th>
<th>Moderate Withdrawal</th>
<th>Severe Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild anxiety</td>
<td>Malaise</td>
<td>Marked anxiety</td>
</tr>
<tr>
<td>Slight sweating</td>
<td>Marked anxiety</td>
<td>Increasing confusion</td>
</tr>
<tr>
<td>Insomnia</td>
<td>Depression</td>
<td>Insomnia</td>
</tr>
<tr>
<td>Slight sweating</td>
<td>Irritability</td>
<td>Profuse sweating</td>
</tr>
<tr>
<td>Hyperreflexia</td>
<td>Profuse sweating</td>
<td>Disorientation</td>
</tr>
<tr>
<td>Tachycardia (100-120 bpm)</td>
<td>Noticeable tremor</td>
<td>Hallucinations</td>
</tr>
<tr>
<td>Fever (37.2-37.8 °C)</td>
<td>Tachycardia (greater than 100 bpm)</td>
<td>Delusions</td>
</tr>
<tr>
<td>GIT symptoms</td>
<td>Fever (37.2-37.8 °C)</td>
<td>Restlessness</td>
</tr>
<tr>
<td></td>
<td>Raised BP</td>
<td>Coarse tremor progressing to head and trunk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ataxia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tachycardia (greater than 120 bpm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fever (greater than 37.8 °C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Raised BP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vestibular disturbance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Possible convulsions</td>
</tr>
</tbody>
</table>
3.2 DECISIONS ON ADMISSION TO HOSPITAL

Patients sometimes attend hospital requesting a “detox”.

Numerous studies have shown that unplanned admissions to hospital for alcohol detoxification are unsuccessful in achieving long-term abstinence.

- Therefore, patients should NOT be routinely admitted to hospital purely for alcohol detoxification.

Very heavy drinkers who are referred for admission from ED are highly likely to start withdrawing. This can lead to an unnecessary prolonged hospital stay and can be avoided by preventing admission in the first place.

Patients who express a desire to stop drinking should be sign-posted to CGL (Change, Grow, Live). Contact details are included in this document and can be provided to the patient by any member of staff.

- Patients can easily self-refer online or by telephone.
- If the patient attends during the normal working day, it may be possible for a CGL worker to meet with the patient.
- Patients should not be admitted purely to be referred to CGL.

People who are alcohol dependent but not admitted to hospital should be advised to avoid a sudden reduction in alcohol intake.

If a patient who is alcohol dependent needs hospital admission for a clinical problem, then the management flowchart should be followed.

Note that patients admitted for another reason do not need to complete a full detoxification as an inpatient.

Hospital admission can also be considered in the following cases:

- For people with severe depression, self-harm or suicidal ideation offer admission to hospital to commence medically assisted alcohol withdrawal, in conjunction with liaison psychiatry referral.

- For young people less than 18 years of age that are in acute alcohol withdrawal offer admission to hospital for physical and psychosocial assessment, in addition to medically assisted alcohol withdrawal. A safeguarding referral may also need to be considered.

- For certain vulnerable people who are in acute alcohol withdrawal (for example, those who are frail, have cognitive impairment or multiple co-morbidities, lack social support, have learning difficulties), consider a lower threshold for admission to hospital for medically assisted alcohol withdrawal.
3.3 ACUTE MANAGEMENT OF ALCOHOL WITHDRAWAL SYNDROME

Healthcare professionals who care for people in acute alcohol withdrawal should be skilled in the assessment and monitoring of withdrawal symptoms and signs.

Often, alcohol withdrawal requires no pharmacological management. Whether drugs are required or not, it is important that patients are comfortable, in a well-lit room and well hydrated. It is also important to maintain the dignity of the patient.

When managing acute alcohol withdrawal it is important to correctly assess the person’s symptoms since they guide the use of the ‘as required’ treatment. Clinical judgement can be supported by the Glasgow Modified Alcohol Withdrawal Scale (GMAWS) tool.

Glasgow Modified Alcohol Withdrawal Scale (GMAWS)

GMAWS (Appendix 7.1) is a 5-point tool that allows healthcare professionals to rapidly and objectively rate alcohol withdrawal symptoms. This guides administration of symptom-triggered ‘as-needed’ benzodiazepine dosing for patients at high risk of withdrawal.

To be effective, it does require frequent reassessment by nursing staff e.g. initially every 1-2 hours, although the frequency will decrease with time.

Symptom Control

- Mild symptoms can generally be managed with reassurance and general support.
- A well-lit, cool environment with reassurance from nursing staff or relatives is ideal for the confused patient.
- Attention should be paid to optimising nutrition and fluid levels.

Risk factors for progression to severe withdrawal include:

- High alcohol intake (greater than 10-15 units per day)
- Previous history of severe withdrawal, seizures or DTs
- Concomitant use of other psychotropic drugs
- Poor physical health
- High levels of anxiety or other psychiatric disorders
- Electrolyte disturbance
- Fever or sweating
- Insomnia
- Tachycardia

Medication can reduce symptoms and reduce the risk of the patient developing seizures or delirium tremens. Medium to long-acting benzodiazepines are the treatment of choice, provided the patient does not have severe liver disease.
3.3.1 Patients with established alcoholic liver disease

If the patient has established alcoholic liver disease, with clinical or radiological evidence of cirrhosis and biochemical evidence of significant liver function impairment (low albumin, raised INR, deranged LFTs), PO oxazepam should be used as an alternative benzodiazepine to PO chlordiazepoxide.

Oxazepam has a much shorter half-life and so is less prone to accumulation and toxicity. However, patients will still need to be monitored more frequently between doses to avoid alcohol withdrawal symptoms or drowsiness.

If necessary, you can contact the on-call hepatology registrar at UHB for advice when managing patients with decompensated liver disease who are being treated for acute alcohol withdrawal.

3.3.2 Patients at high risk of severe alcohol withdrawal

Certain patients will be at high risk of severe alcohol withdrawal. They will have a history of very heavy daily alcohol intake e.g. more than 10-15 units per day, previous alcohol related seizures, previous severe withdrawal or delirium tremens. Patients with a high initial GMAWS score will also be at higher risk. Such patients should be treated with an initial high dose of chlordiazepoxide for the first 24 hours, followed by a symptom-triggered ‘as required’ approach.

Front-loading

The front loaded dosing regimen provides a large dose of long-acting benzodiazepine at the start of the treatment regimen and then provides it on an ‘as required’ basis after this.

Suggested regimen for patients at high risk of severe alcohol withdrawal:

<table>
<thead>
<tr>
<th>Day of admission</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4 onwards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose of PO chlordiazepoxide</td>
<td>50 mg QDS + 30-50 mg PRN</td>
<td>30-50 mg PRN</td>
<td>30-50 mg PRN</td>
<td>None, or at the discretion of the prescriber</td>
</tr>
</tbody>
</table>

3.3.3 Patients at low/moderate risk of alcohol withdrawal

Patients without risk factors for severe alcohol withdrawal (i.e. alcohol intake less than 10 units per day; no history of previous alcohol related seizures, severe withdrawal or delirium tremens; low initial GMAWS score) can be safely managed with a symptom-triggered regimen.

This type of regimen tailors treatment to the person’s requirements as determined by the severity of their withdrawal signs and symptoms. As such, the patient is regularly assessed and monitored, using clinical experience and questioning, and with the help of GMAWS. Pharmacotherapy is provided only if the patient needs it and treatment is withheld if there are no symptoms of withdrawal.
Overall, symptom-triggered dosing is associated with significantly lower doses of benzodiazepine requirements than fixed-dosing and with shorter treatment duration, importantly without an increase in the incidence of seizures or delirium tremens.

**Diazepam**

Diazepam may be used as an alternative to chlordiazepoxide. It has a longer half-life, and so is more prone to accumulation and toxicity. A similar regimen should be used, remembering that 5 mg diazepam is equivalent to 10-15mg chlordiazepoxide. Diazepam can be used for patients who require medication via nasogastric (NG) tube. Diazepam can also be given intravenously if necessary. It is preferable to use diazepam emulsion (Diazemuls®) when large doses are required, in order to avoid toxicity from propylene glycol.

**Cautions with Benzodiazepine Use**

Benzodiazepines can cause respiratory depression as well as sedation. The use of such drugs should be carefully considered and monitored in certain clinical situations such as suspected or recent head injury where neurological symptoms may be masked. In such instances, a head CT scan should be considered and the risks of sedation balanced with the need to manage significant alcohol withdrawal effectively.

Benzodiazepines can cause respiratory depression and should only be used with caution in patients with respiratory failure, e.g. patients with chronic obstructive pulmonary disease.

**3.4 DELIRIUM TREMENS (DTs)**

This has a significant mortality rate if untreated, and is recognised by:

- increasing confusion and disorientation
- severe tremor and autonomic disturbance
- visual and auditory hallucinations
- delusional beliefs

Prompt recognition of the risk of alcohol withdrawal and treatment with benzodiazepines will usually prevent this. Initial management of the severely confused or agitated patient requires the administration of adequate sedative doses of benzodiazepines (if necessary intravenously). The object of treatment is to make the patient calm and sedated but easily roused. There is no upper dose limit but a senior clinician (Medical Registrar and above) should be involved.

- For patients able to take oral medication, offer PO lorazepam 2 mg as first-line treatment.
- If symptoms persist or oral medication is declined, give parenteral lorazepam 1-2 mg (intramuscular or intravenous) every 30 minutes until symptoms are controlled.
- Severe psychotic symptoms may be managed by the addition of intramuscular (IM) haloperidol 1-5 mg 2-3 times per day, but adequate treatment with benzodiazepines must remain the priority.
- Close monitoring of fluid balance is important: urea and electrolytes (including magnesium) should be regularly checked.
3.5 WERNICKE’S ENCEPHALOPATHY

If inappropriately managed this carries a significant mortality rate and can result in permanent brain damage (Korsakoff’s psychosis) in 85% of survivors.

The classical triad of signs (acute confusion, ataxia and ophthalmoplegia) only occurs in 10% of patients. Therefore the triad cannot be used as the basis of diagnosis and a high index of suspicion is needed. The presence of any one of the following signs should be sufficient to assign a diagnosis and commence treatment:

- Acute confusion
- Decreased consciousness level including unconsciousness or coma
- Memory disturbance
- Ataxia/unsteadiness
- Ophthalmoplegia
- Nystagmus
- Unexplained hypotension with hypothermia

Treatment:

- Give Pabrinex® IV High Potency 2 pairs three times daily for a minimum of 5 days.
- Continue 1 pair TDS until symptoms/signs improve.
- Then continue oral thiamine 100 mg TDS.

Pabrinex® IV should always be given by infusion over 30 minutes, following dilution of ampoule pairs in 50-100 ml 0.9% sodium chloride or 5% glucose.

3.6 Alcohol withdrawal during pregnancy

Alcohol withdrawal will cause significant distress to the mother and may disrupt the pregnancy. There is a significant risk of a baby developing Foetal Alcohol Syndrome where mother’s drink during pregnancy; alcohol is significantly more teratogenic than a short course of benzodiazepines. It is accepted practice that any pregnant woman admitted to hospital with active symptoms of withdrawal be commenced on the standard chlordiazepoxide regimen to medically manage alcohol withdrawal together with IV Pabrinex®. Pregnant patients should be reviewed as soon as possible by CGL who will then work closely with obstetrics and midwifery. Further information is available through the UK teratology information service at www.uktis.org.

3.7 Useful Contacts

Contact details are correct at the time of publication.

Community Drug & Alcohol Team:

Change, Grow, Live (CGL)
https://www.changegrowlive.org/drug-and-alcohol-service-birmingham

Lisa: 07469 356075
Sabrien: 07469 356201
4. Methodology

- Review of existing National Guidelines including NICE CG100.
- Harmonisation of guidelines from QEHB and HGS sites.
- The guideline has been reviewed at Medicines Management Expert Panel for Division 3 and Medicines Management Advisory Group.
- The main authors are:
  - Dr Mark Pucci, Consultant in Clinical Pharmacology and Therapeutics and General Internal Medicine, with a special interest in Medical Toxicology and Substance Misuse.
  - Dr Dennis Freshwater, Consultant Hepatologist.
- In collaboration with Dr David Pang, Consultant in Addiction Psychiatry for CGL (Change, Grow, Live).
- Some material from a previous version of the HGS guideline authored by Tom Heaps and Pete Duffield has been included and is acknowledged.

5. Monitoring & Suggested Quality Standards

All adult inpatients over the age of 18 with alcohol related problems should be managed according to these guidelines.

The use of the guidelines will be audited through local/departmental clinical audit.

6. References, Related Documents and Other Guidance


7. APPENDIX

7.1 Glasgow Modified Alcohol Withdrawal Scale

| Date | Time | Tremor | | | | Sweating | | | | Hallucinations | | | | Orientation | | | | Agitation | | | | Total score |
|------|------|--------|------|------|------|--------|------|------|--------|------|------|---------------|------|------|---------------|------|------|---------------|
|      |      | 0 – no tremor | 1 – on movement | 2 – at rest | 0 – no sweat visible | 1 – moist | 2 – drenching sweats | 0 – not present | 1 – dissuadable | 2 – not dissuadable | 0 – orientated | 1 – vague, detached | 2 – disorientated, no contact | 0 – calm | 1 – anxious | 2 – panicky |  |

Do not use scoring tool if patient intoxicated, must be at least 8 hours since last drink.

Management:

Score 0  Repeat score in 2 hours (discontinue after scoring on 4 consecutive occasions, except if less than 48 hours after last drink)

Score 1-3  Give PO chlordiazepoxide 30 mg (or PO oxazepam 10 mg if cirrhotic): Repeat score in 2 hours

Score 4-8  Give PO chlordiazepoxide 40 mg (or PO oxazepam 20 mg if cirrhotic): Repeat score in 1 hour

Score 9-10  Give PO chlordiazepoxide 50 mg (or PO oxazepam 30 mg if cirrhotic): Repeat score in 1 hour and discuss with medical registrar regarding management of severe withdrawal
### 7.2: FAST (Fast Alcohol Screen Test)

<table>
<thead>
<tr>
<th>Score</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Patient Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How often have you had greater than or equal to 6 units on a single occasion in the last year?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>2. How often during the last year have you failed to do what was normally expected from you because of your drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>3. How often during the last year have you been unable to remember what happened the night before because you had been drinking?</td>
<td>Never</td>
<td>Less than monthly</td>
<td>Monthly</td>
<td>Weekly</td>
<td>Daily or almost daily</td>
<td></td>
</tr>
<tr>
<td>4. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested that you cut down?</td>
<td>No</td>
<td></td>
<td>Yes, but not in the last year</td>
<td></td>
<td>Yes, during the last year</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL FAST SCORE (score of greater than or equal to 3 = FAST positive):**