Alcohol Withdrawal

Recognition and Assessment

- Alcohol withdrawal may be a presenting feature or occur as an unexplained development in a patient who has been admitted for other reasons and deprived of alcohol

Symptoms and signs

- Signs and symptoms of alcohol withdrawal commonly appear anywhere between 6 and 72 hours after the last alcohol, and the range and severity of symptoms depends on factors such as the degree of alcohol dependence and the current level of consumption. The table below provides an outline of the spectrum of withdrawal symptoms, though in clinical practice the presentation is often less clear

Mild Withdrawal	Moderate Withdrawal	Severe Withdrawal
Mild anxiety	Malaise	Marked anxiety
Slight sweating	Marked anxiety	Increasing confusion
Insomnia	Depression	Insomnia
Slight sweating	Irritability	Profuse sweating
Hyper–reflexia	Profuse sweating	Disorientation
Tachycardia (100-120 bpm)	Noticeable tremor	Hallucinations
Fever (37.2-37.8 °C)	Tachycardia (> 100 bpm)	Delusions
GIT symptoms	Fever (37.2-37.8 °C)	Restlessness
	Raised BP	Coarse tremor progressing to head and trunk
		Ataxia
		Tachycardia (> 120 bpm)
		Fever (> 37.8 °C)
		Raised BP
		Vestibular disturbance
		Possible convulsions

- Alcohol withdrawal can be seen as existing along a continuum from mild tremulousness, with or without changes in mood, through to seizures, hallucinations and delirium. A major concern is to prevent the severely alcohol dependent person from developing Delirium Tremens (DTs), seizures or Wernicke's encephalopathy
- ALWAYS REFER TO THE DRUG AND ALCOHOL LIAISON TEAM(DALT) contactable via switchboard WHO CAN ADVISE ON NEED FOR ADMISSION OR FACILITATE ASSISTED WITHDRAWAL ("DETOX") IN THE COMMUNITY. Additionally there is no need to keep patients in hospital to complete their withdrawal. Once they are stable they can be discharged with community support from the Alcohol team, if the alcohol team are involved at an early stage and the patient lives in Wolverhampton.

Screening Tools

Assess severity using Clinical Institute Withdrawal Assessment of Alcohol Scale (revised CIWA-Ar) –Ask specific questions shown for each category and use CIWA-Ar form to derive score from answers or observations

- Score 0 - 8 – absent or minimal withdrawal
- Score 9 - 19 – mild to moderate withdrawal
- Score >20 – severe withdrawal

It is important to note that it is possible to develop a withdrawal state even while consuming large quantities of alcohol if there is a high degree of tolerance towards alcohol. Appendix 1.

If severe withdrawal and agitation see separate guidance on page 4.

Detailed alcohol history

- Quantity
- Frequency of use
- Highest intake
- Previous treatment; Previous abstinence; Previous symptoms experienced during withdrawal
- Triggers for drinking
- Psychiatric problems
- Motivation

Investigations

- FBC and U&E
- LFT, calcium, magnesium, phosphate, blood glucose
- Arterial blood gases (severe withdrawal)
- INR
- Consider Urine drug screen and blood alcohol level if diagnosis unclear

Differential diagnosis

- Withdrawal of drug(s) of dependence guideline

Acute Management

Mild Symptoms

- These can generally be managed with reassurance and general support
- A well lit, cool environment with sympathy and 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 (>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
- The greater the number of these symptoms, the greater the need for inpatient medical and nursing supervision to prevent seizures or DTs

- In more severe cases, medication can reduce symptoms and reduce the risk of the patient developing convulsions or delirium tremens. Medium– to long–acting benzodiazepines are the treatment of choice, provided the patient does not have severe liver disease or severe chronic obstructive pulmonary disease.
- Recommended regimen is given below:

- **Chlordiazepoxide**
    - The following regimen (Table 1) will be suitable in most cases, although the dose should always be tailored to each patient. Doses may have to be increased in more severely dependent drinkers (by adding 5-15 mg qds on a prn basis), whilst smaller or frail/elderly patients may need a decrease. Generally, in the first three to four days, doses should ideally be spread across four drug rounds, with night and morning doses reduced last in order to maintain drug levels. The patient should be carefully monitored for signs of benzodiazepine toxicity

Table 1: Chlordiazepoxide and Lorazepam reducing regimens for alcohol withdrawal

(DO NOT USE both Lorazepam and chlordiazepoxide. Prescribe chlordiazepoxide unless patient elderly, or has significant COPD or LIVER impairment, in which case use lorazepam)

Reduce dose of lorazepam by half in the elderly , but if not responding and not drowsy increase to full dose

	Chlordiazepoxide	**Lorazepam**	**Notes**
Step 1	40 mg 6 hrly	1 mg 6 hrly	Normal starting point for severe withdrawal if symptoms still not controlled, use additional doses (see notes below)
Step 2	30 mg 8 hrly	1 mg 8 hrly	Normal starting point for moderate withdrawal and community detoxification if symptoms not controlled, move to step 1
Step 3	15 mg 6 hrly	500micrograms 6 hrly	Withdrawal symptoms should be controlled so that additional benzodiazepine or hypnotics are not required
Step 4	15 mg 8 hrly	500micrograms 8 hrly	
Step 5	15 mg 12 hrly	500micrograms 12 hrly	
Step 6	15 mg once/day	500micrograms once/ day	
Step 7	**Stop Treatment**		If patient craving alcohol, consider acamprosate

Note;
Each step should last 2 days
Commence at step 1 for severe withdrawal or step 2 if moderate withdrawal
If patient not controlled when commenced at step 2 move up to step 1
If patient not progressing as expected between other steps, reduce dosage more slowly; reassess withdrawal symptoms and seek advice from medical SpR
If additional medication required at step 1, give extra doses of:
chlordiazepoxide up to 40 mg in 24 hr, (giving maximum total daily dosage of 200 mg) or
lorazepam up to 2 mg in 24 hr, (giving maximum total daily dosage of 6 mg)
7. If higher dose of medication required at step 1 stepwise reduction (every 2 days) should start from the higher dosage, lengthening the detoxification process
(state lorazepam dose in micrograms i.e. 500micrograms)
8. For patients unable to swallow or where oral route not practical, give lorazepam by slow IV injection over 3-5 min into a large vein or IM (diluted 1:1 with sodium chloride 0.9%) at doses suggested above. Change to oral route (and to chlordiazepoxide if appropriate) at earliest opportunity
9. For treatment of seizures – see Status epilepticus guideline

If maximum recommended dosages do not control symptoms or the patient has become agitated (often due to initial under-dosing) then escalate to severe withdrawal on page 4. This should involve SpR / Consultant and may need ICU and is likely to require doses in excess of 6mg lorazepam / 24hrs.

Caution in 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 a suspected or recent head injury where neurological symptoms may be masked. In such instances a head CT scan should be considered and the situation balanced with the need to manage significant alcohol withdrawal effectively. Again, Lorazepam may be more appropriate due to its shorter half–life

Severe withdrawal

- The following clinical features may warrant admission to hospital for treatment:
- Previous history of severe withdrawal or seizures
- High risk of developing Wernicke's encephalopathy
- Alcoholic hallucinosis
- Depression
- Suicidal ideation

Delirium Tremens (DTs)

- This has a mortality rate of up to 20% 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 (intravenously if necessary). The object of treatment is to make the patient calm and sedated but easily roused
- Agitation in a patient with alcohol withdrawal can lead to serious consequences (patient self harm, harming of staff or other patients). On-going confusion, particularly with disorientation and hallucinations, is of serious concern.
- Involve senior nurse, Medical registrar, security and contact ICU SPR.
- It is important to have sufficient nursing staff available so that the patient is not left unattended. If the patient is likely to abscond or is a threat to others then security may be required to restrain a patient (patient cannot be sectioned but can be held under common law).
- Ideally prompt intervention with medication can resolve a situation before physical restraint is required. A consistent, reassuring manner is helpful. Avoid verbal confrontation if possible.
- Oral medication can take some time to establish control. At any stage if the situation deteriorates consider involving ICU team.
- For patients able to take oral medication, doses of chlordiazepoxide as high as 50 mg every 2 hours may be necessary
- For patients requiring parenteral treatment, IV diazepam at doses of up to 10 mg every 30-60 minutes. Intravenous diazepam should be given at a rate of not more than 5 mg per minute into a large vein. Intramuscular diazepam should be avoided, but rectal diazepam may be useful where there is difficulty establishing venous access
- For patients with liver failure, IV lorazepam at doses of up to 1-2 mg every 30 minutes. Lorazepam may also be given intramuscularly (check that there are no contraindications to IM. injections).
- If regular IV or IM lorazepam is required for management of severe delirium tremens consider discontinuing chlordiazepoxide. When symptoms have settled stop lorazepam and reinstate reducing chlordiazepoxide regime
- Chlormethiazole is not recommended
- Severe psychotic symptoms may be managed by the addition of haloperidol 1-5mg 2-3 times per day, although adequate treatment with benzodiazepines should be the priority

Fluids and electrolytes

- Monitor and replace electrolytes, magnesium and phosphate and give adequate hydration (defer glucose infusions until after first dose of thiamine replacement given as it can precipitate Wernicke's encephalopathy)

Wernicke's Encephalopathy (WE)

- Inappropriately managed this carries a mortality rate of over 15% and results 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 only 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 (IVHP) 5ml ampoules, 2 ampoule pairs (4 ampoules in total) three times daily for 2-3 days
- Followed by Pabrinex IVHP 5ml ampoules, 1 ampoule pair (2 ampoules in total) daily for 3-5 days
- Pabrinex IVHP should always be given by infusion over 30 minutes, following dilution of ampoule pairs in 100 ml N saline or 5% glucose
- Pabrinex should be continued until improvement of the clinical symptoms stops. Use of oral supplementation will then be useful (Thiamine 100 mg bd + Vitamin B Co Strong ii daily)

Prophylaxis:

- Prophylactic treatment is indicated in patients with concomitant findings that place increased demands on already depleted B–vitamin stores thereby increasing the risk of precipitation of WE
- All patients undergoing alcohol withdrawal should be treated prophylactically. This includes anyone admitted for any other reason that is subsequently found to require detoxification, as well as those with a known history of alcohol misuse and any from:
    - o Intercurrent illness
    - o Delirium Tremens
    - o Alcohol related seizures
    - o Head Injury
    - o Poor diet, signs of malnutrition or significant weight loss
    - o Recent diarrhoea or vomiting
    - o Drinking > 20 units of alcohol per day
    - o Peripheral neuropathy
- Give Pabrinex IVHP 1 ampoule pair daily for 3 to 5 days
- Followed by oral supplementation (Thiamine 100 mg bd + Vitamin B Co Strong daily)
- Intravenous dextrose should not be given before Pabrinex due to the risk of precipitating WE. This is because glucose metabolism utilises thiamine and therefore may deplete reserve

For patients who have no IV access and no contraindication for IM injections, Pabrinex Intramuscular High Potency (IMHP) may be considered. The contents of 1 pair of ampoules may be given twice daily for up to 7 days. The contents of each pair of ampoules should be drawn up into a syringe to mix just before use and injected slowly, high into the gluteal muscle 5cm below the iliac crest

Warning and Precautions:

Repeat injections of preparations containing high concentrations of vitamin B1 (thiamine) may give rise to anaphylactic shock. Mild allergic reactions such as sneezing or mild asthma are warning signs that further injections containing thiamine may give rise to anaphylactic shock
Facilities for treating anaphylactic reactions should be available when Pabrinex is administered

There are two distinct presentations of Pabrinex which are NOT interchangeable:
Pabrinex Intramuscular High Potency (IMHP) is only for intramuscular injection
Pabrinex Intravenous High Potency (IVHP) is only for intravenous injection

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Referral

- All patients with alcohol related problems should be managed according to these guidelines. In addition to withdrawal management which is a medical issue, there is also the need for patients to be offered psychological treatment for the underlying factors which may contribute to alcohol misuse
- Patients may be referred to the Drug and Alcohol Liaison Team at RWT via switchboard, who will be able to offer psychological input as well as ensure that the patient has the opportunity to engage with their local community services upon discharge for longer term counselling and support.
- The Drug and Alcohol Liaison Team should be the first point of contact for clarification or additional guidance on withdrawal management or for psychological input. Ward staff can also refer patients to their local community services for aftercare or suggest that the patient self refer to the local alcohol service, supplying them with the telephone number and encouragement to do so.
- Patients should be commenced on the Integrated Care Pathway Assisted withdrawal from alcohol in the Acute Hospital Setting (Mi 444113 27.11.13)

Contacts

Drug and Alcohol Liaison Team (DALT):
via Switchboard or telephone numbers on posters on the wards
Office extension 4079

Community Service:

- Patients should be offered the opportunity to contact the community services for ongoing counselling and support:
- Referrals to the SPOC (single point of contact) 0300 200 2400

The Royal Wolverhampton NHS
NHS Trust

Modified Alcohol Withdrawal Assessment Scoring Guidelines (CIWA - Ar)

Nausea / Vomiting - Rate on scale 0 - 7 0 - None 1 Mild nausea with no vomiting 2 3 4 Intermittent nausea 5 6 7 Constant nausea and frequent dry heaves and vomiting	**Tremors** - have patient extend arms & spread fingers. Rate on scale 0 - 7. 0 No tremor 1 Not visible, but can be felt fingertip to fingertip 2 3 4 Moderate, with patient's arms extended 5 6 7 Severe, even with arms not extended
Anxiety - Rate on scale 0 - 7 0 No anxiety, patient at ease 1 Mildly anxious 2 3 4 Moderately anxious or guarded, so anxiety is inferred 5 6 7 Equivalent to acute panic states seen in severe delirium or acute schizophrenic reactions.	**Agitation** - Rate on scale 0 - 7 0 Normal activity 1 Somewhat normal activity 2 3 4 Moderately fidgety and restless 5 6 7 Paces back and forth, or constantly thrashes about
Paroxysmal Sweats - Rate on Scale 0 - 7. 0 No sweats 1 Barely perceptible sweating, palms moist 2 3 4 Beads of sweat obvious on forehead 5 6 7 Drenching sweats	**Orientation and clouding of sensorium** - Ask, "What day is this? Where are you? Who am I?" Rate scale 0 - 4 0 Oriented 1 Cannot do serial additions or is uncertain about date 2 Disoriented to date by no more than 2 calendar days 3 Disoriented to date by more than 2 calendar days 4 Disoriented to place and / or person
Tactile disturbances - Ask, "Have you experienced any itching, pins & needles sensation, burning or numbness, or a feeling of bugs crawling on or under your skin?" 0 None 1 Very mild itching, pins & needles, burning, or numbness 2 Mild itching, pins & needles, burning, or numbness 3 Moderate itching, pins & needles, burning, or numbness 4 Moderate hallucinations 5 Severe hallucinations 6 Extremely severe hallucinations 7 Continuous hallucinations	**Auditory Disturbances** - Ask, "Are you more aware of sounds around you? Are they harsh? Do they startle you? Do you hear anything that disturbs you or that you know isn't there?" 0 Not present 1 Very mild harshness or ability to startle 2 Mild harshness or ability to startle 3 Moderate harshness or ability to startle 4 Moderate hallucinations 5 Severe hallucinations 6 Extremely severe hallucinations 7 Continuous hallucinations
Visual disturbances - Ask, "Does the light appear to be too bright? Is its color different than normal? Does it hurt your eyes? Are you seeing anything that disturbs you or that you know isn't there?" 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	**Headache** - Ask, "Does your head feel different than usual? Does it feel like there is a band around your head?" Do not rate dizziness or lightheadedness. 0 Not present 1 Very mild 2 Mild 3 Moderate 4 Moderately severe 5 Severe 6 Very severe 7 Extremely severe

Procedure:

1. Assess and rate each of the 10 criteria of the CIWA scale. Each criterion is rated on a scale from 0 to 7, except for "Orientation and clouding of sensorium" which is rated on scale 0 to 4. Add up the scores for all ten criteria. This is the total CIWA-Ar score for the patient at that time. Prophylactic medication should be started for any patient with a total CIWA-Ar score of 8 or greater (ie. start on withdrawal medication). If started on scheduled medication, additional PRN medication should be given for a total CIWA-Ar score of 15 or greater.
2. Document vitals and CIWA-Ar assessment on the Withdrawal Assessment Sheet. Document administration of PRN medications on the assessment sheet as well.
3. The CIWA-Ar scale is the most sensitive tool for assessment of the patient experiencing alcohol withdrawal. Nursing assessment is vitally important. Early intervention for CIWA-Ar score of 8 or greater provides the best means to prevent the progression of withdrawal.

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Assessment Protocol a. Vitals, Assessment Now. b. If initial score ≥ 8 repeat q1h x 8 hrs, then if stable q2h x 8 hrs, then if stable q4h. c. If initial score < 8, assess q4h x 72 hrs. If score < 8 for 72 hrs, d/c assessment. If score ≥ 8 at any time, go to (b) above. d. If indicated, (see indications below) administer prn medications	Date												
	Time												
	Pulse												
	RR												
	O2 sat												
	BP												
Assess and rate each of the following (CIWA-Ar Scale): Refer to reverse for detailed instructions in use of the CIWA-Ar scale.													
Nausea / vomiting (0 - 7) 0 - none; 1 - mild nausea ,no vomiting; 4 - intermittent nausea; 7 - constant nausea , frequent dry heaves & vomiting.													
Tremors (0 - 7) 0 - no tremor; 1 - not visible but can be felt; 4 - moderate w/ arms extended; 7 - severe, even w/ arms not extended.													
Anxiety (0 - 7) 0 - none, at ease; 1 - mildly anxious; 4 - moderately anxious or guarded; 7 - equivalent to acute panic state													
Agitation (0 - 7) 0 - normal activity; 1 - somewhat normal activity; 4 - moderately fidgety / restless; 7 - paces or constantly thrashes about													
Paroxysmal Sweats (0 - 7) 0 - no sweats; 1 - barely perceptible sweating, palms moist; 4 - beads of sweat obvious on forehead; 7 - drenching sweat													
Orientation (0 - 4) 0 - oriented; 1 - uncertain about date; 2 - disoriented to date by no more than 2 days; 3 - disoriented to date by > 2 days; 4 - disoriented to place and / or person													
Tactile Disturbances (0 - 7) 0 - none; 1 - very mild itch, P&N, ,numbness; 2-mild itch, P&N, burning, numbness; 3 - moderate itch, P&N, burning ,numbness; 4 - moderate hallucinations; 5 - severe hallucinations; 6 – extremely severe hallucinations; 7 - continuous hallucinations													
Auditory Disturbances (0 - 7) 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													
Visual Disturbances (0 - 7) 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													
Headache (0 - 7) 0 - not present; 1 - very mild; 2 - mild; 3 - moderate; 4 - moderately severe; 5 - severe; 6 - very severe; 7 - extremely severe													
Total CIWA-Ar score:													
PRN Med: (circle one) Chlordiazepoxide Lorazepam	**Dose given (mg):**												
	Route												
Time of PRN medication administration:													
Assessment of response (CIWA-Ar score 30-60 minutes after medication administered)													
RN Initials													

Scale for Scoring: Total Score = 0 – 9: absent or minimal withdrawal 10 – 19: mild to moderate withdrawal more than 20: severe withdrawal	**Indications for PRN medication:** a. Total CIWA-AR score 8 or higher if ordered PRN only (Symptom-triggered method). b. Total CIWA-Ar score 15 or higher if on Scheduled medication. (Scheduled + prn method) Consider transfer to ICU for any of the following: Total score above 35, q1h assess. x more than 8hrs required, more than 4 mg/hr lorazepam x 3hr or 20 mg/hr Chlordiazepoxide x 3hr required, or resp. distress.

Signature / Title	Initials	Signature / Title	Initials