

## CLINICAL GUIDELINE

# DETECTION OF ALCOHOL MISUSERS, MANAGEMENT OF ALCOHOL WITHDRAWAL SYNDROME AND WERNICKE'S ENCEPHALOPATHY

Version:	1
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## Management algorithm for the alcohol withdrawal syndrome

**All patients admitted to hospital should be asked about their alcohol intake.**

*Symptoms and Signs* (Non-specific and absence does not exclude withdrawal)

Anxiety/Agitation/Irritability	Nausea/Vomiting/Diarrhoea	Convulsions
Tremor of hands, tongue, eyelids	Insomnia	Hallucinations
Sweating	Fever with or without infection	Delirium
Tachycardia	Hypertension	

Prescribe chlordiazepoxide 25 to 50mg every 2 hours as required on the 'PRN' side & Pabrinex One/Two pairs TDS (See right)

**Nursing observations** and administration of chlordiazepoxide is every 2 hours for 24hours starting at the first signs of withdrawal. **Dose is dependent on CIWA-Ar score.**

If CIWA-Ar scale 0 to 9 or patient asleep **no treatment necessary**

If CIWA-Ar score 10 to 14 give **25mg**

If CIWA-Ar score 15 or above give **50mg**

After initial 24-hour assessment period "PRN" should be discontinued and a standard 5-day reducing regimen should be prescribed based on the baseline dose of chlordiazepoxide

Day 1 total PRN dose	Day 2 (mg)				Day 3 (mg)				Day 4 (mg)				Day 5* (mg)			
	8am	12pm	6pm	10pm	8am	12pm	6pm	10pm	8am	12pm	6pm	10pm	8am	12pm	6pm	10pm
300mg	60	60	60	60	50	50	50	50	30	30	30	30	20	20	20	20
275mg	55	55	55	55	45	45	45	45	30	30	30	30	20	15	15	20
250mg	50	50	50	50	40	40	40	40	25	25	25	25	15	15	15	15
225mg	45	45	45	45	35	35	35	35	25	25	25	25	15	10	10	15
200mg	40	40	40	40	30	30	30	30	20	20	20	20	10	10	10	10
175mg	35	35	35	35	25	25	25	25	20	20	20	20	10	10	10	10
150mg	30	30	30	30	20	20	20	20	15	15	15	15	10	5	5	10
125mg	25	25	25	25	20	20	20	20	15	10	10	15	10	5	5	5
100mg	20	20	20	20	15	15	15	15	10	10	10	10	5	5	5	5
75mg	15	15	15	15	10	10	10	10	5	5	5	5		5	5	5
50mg	10	10	10	10	5	5	5	5		5	5	5			5	5
25mg	5	5	5	5		5	5	5			5	5				5

\*A longer detox may be required if at Day 5 the patient is on a total daily chlordiazepoxide dose of 40mg or larger.

March 2014

## Vitamin Supplementation

Parental Pabrinex is prescribed to treat or avoid Wernicke's Encephalopathy (WE)

Indication	Regimen	Length of course
Known/suspected chronic alcohol misuser	One pair of Pabrinex IVHP ampoules IV three times a day	At least one day
Any Patient displaying symptoms of WE*	TWO pairs of Pabrinex IVHP ampoules IV three times a day	3-7 day

\*Ataxia, hypothermia and hypotension, confusion, ophthalmoplegia or nystagmus, memory disturbances, coma or unconsciousness. The classic triad only occurs in 10% of patients.

**Administration of Pabrinex IVHP:** Each pair of ampoules to be diluted in 50ml to 100ml 0.9% sodium chloride or 5% w/v glucose. Infuse over 30 minutes.  
**Small risk of anaphylaxis. Facilities to manage anaphylaxis must be available.**

### Oral vitamin supplementation & discharge

Thiamine 100mg three times a day and Vitamin B Co Strong 2 tablets daily should be continued for 2 weeks (up to 6 weeks)

Chlordiazepoxide should NOT be prescribed on discharge.

### Further information

- In liver impairment, a shorter acting benzodiazepine may be indicated (1mg lorazepam=25mg chlordiazepoxide)
- oral benzodiazepines should be given on presentation of seizures.
- A fixed dose chlordiazepoxide withdrawal regimen should be prescribed in patients where it's difficult to rate their alcohol withdrawal.

### See full guideline for:

- Difficult to control patients
- Delirious patients
- Psychotic patients
- Alcohol-induced seizures

## 1.2 Management in Unusual Circumstances

### Options that may be considered in difficult to control patients

*Discuss with the medical team and sometimes it may be necessary to consult with Psychiatric Liaison Services.*

- Only give >300mg of chlordiazepoxide per day after medical review.

- **Switching to IV diazepam**

IV diazepam emulsion may be administered as a bolus by peripheral or central route. Administer the undiluted emulsion at a rate of 1ml per minute (5mg per minute). A dose of 10mg every 30-60 minutes may be given until symptoms subside or the patient is markedly sedated.

*Usual maximum dose is 30mg in 24 hours.*

Monitor for symptoms of withdrawal and sedation.

For patients with **liver failure**, IV lorazepam 1mg to 2mg every 5 minutes should be used until the patient is awake but calm.

In elderly patients consider using half the recommended adult dose.

**Monitor ECG, blood pressure, pulse oximetry, respiratory rate and temperature when giving high dose benzodiazepines.**

- Consider extending the PRN dosing beyond 24 hours in patients with delirium tremens.
- Consider using a longer withdrawal regimen if unable to stabilise after 24 hours

**Consider an antipsychotic**

- Usually haloperidol (*consider lower doses in the elderly*) PO/IM 5mg tds
  - (Maximum 15mg IM or 30mg PO in 24 hours)
- Refer the patient to the appropriate psychiatric team who may consider the addition of an antipsychotic to control agitation.

### Poor English, Confused, Delirious or Psychotic Patients

For these patients the CIWA-Ar scale is inappropriate as the patient will not be able to score on anxiety, orientation and clouding of sensorium, tactile, auditory and visual disturbances.

It may be more appropriate to assess physical symptoms objectively and use a FIXED reduction regime immediately.

**Start at Day 2 of the 5 day withdrawal scale**

If using a FIXED reducing regime, it may be necessary to use "prn" Chlordiazepoxide on top of the fixed regime in the first 24 hours to prevent "breakthrough" withdrawal symptoms. If the "prn" doses are utilised a review of the fixed regimen doses are needed after 24 hours. The doses will need to be increased to take into account the "prn" utilisation.

**Elderly patients**

To minimise adverse effects associated with benzodiazepines (e.g. over sedation, confusion and ataxia) in the elderly it is important to bear in mind the start low and go-slow rule. In general it is recommended that half the dose of the benzodiazepine is used.

**Patients with liver failure**

The metabolism of chlordiazepoxide is impaired in liver disease. But it may be used cautiously in mild to moderate impairment (reduce the dose by 50%).

For patients with severe or acute liver impairment, lorazepam may be used as an alternative as its metabolism is not impaired in liver disease.

**Pregnant patients**

As in any patient who may be pregnant or is pregnant, each case is dealt with on an individual basis. It is important to bear in mind the risk of seizure against the risk of foetal exposure to chlordiazepoxide. It is essential the obstetric team is informed if the patient presents during late pregnancy or in labour. The Psychiatric Liaison services can be contacted for advice; please see page 12 for contact details.

Long term regular use of chlordiazepoxide should be avoided.

## 2 The Alcohol Withdrawal Syndrome (AWS)

### 2.1 Symptoms of alcohol withdrawal<sup>34</sup>:

Common Features		Less-common
Hand tremor	Sweating, flushing	Arrhythmias
Minor hallucinations	Tachycardia	Hypertension
Insomnia	Convulsions	Paraesthesiae
Anxiety, agitation, confusion, disorientation	Nausea, vomiting, anorexia, diarrhoea	Hepatic dysfunction
		Suicidal ideation

40% of individuals will develop an acute withdrawal syndrome upon stopping or significantly curtailing alcohol intake. The risk of withdrawal is not directly related to intake.<sup>24,35</sup>

Symptoms are seen within hours (typically 6 to 8) of the last drink and may develop before the blood alcohol level has fallen to zero. Symptoms outlined below may vary in severity, commonly peaking at 10 to 30 hours and usually subsiding by 40 to 50 hours.<sup>1,12,24,34</sup>

#### Alcohol related seizures

This includes epileptiform seizures (normally grand mal) that usually occur within 12 to 48 hours of alcohol cessation and may develop before the blood alcohol level has fallen to zero.<sup>12</sup> Fits are rare beyond 48 hours following alcohol cessation.<sup>24</sup>

#### Delirium tremens (DTs)

DTs occur in about 5% of patients undergoing alcohol withdrawal but accounts for the highest morbidity and mortality. Untreated, DTs is fatal in 15-20% of patients whilst early detection and prompt initiation of treatment usually prevents onset.<sup>4</sup> Appropriate management reduces mortality to around 1%.<sup>1</sup> Onset of DTs is 2 to 5 days (most commonly at 2 to 3 days) following cessation and represents a medical emergency.<sup>1,8,24,36,37</sup>

If untreated, death may result from respiratory and cardiovascular collapse or cardiac arrhythmias. Patients most at risk are those with a high fever (>104°F/39.9°C), tachycardia, dehydration and an associated illness (e.g. pneumonia or pancreatitis), general debility or where the diagnosis is delayed.<sup>12</sup>

#### Characteristic symptoms of DTs<sup>8,12,24,34,35,36</sup>

<input type="checkbox"/> Severe tremor	<input type="checkbox"/> Clouding of consciousness		
<input type="checkbox"/> Delusions	<input type="checkbox"/> Confusion and disorientation		
<input type="checkbox"/> Tachycardia>100/min	<input type="checkbox"/> Agitation, violent behaviour		
<input type="checkbox"/> Delirium	<input type="checkbox"/> Fever, with or without infection: temperature > 101°F/38.3°C		
<input type="checkbox"/> Severe hallucinations, auditory)	often evoke extreme fear (mainly	visual,	may be tactile or

### 2.2 Risk factors for progression to severe withdrawal

There is a risk of progression to severe withdrawal symptoms and delirium tremens if the patient with mild symptoms also has associated 'risk factors':<sup>8,29&35</sup>

<input type="checkbox"/> Fever	<input type="checkbox"/> High levels of anxiety	<input type="checkbox"/> Tachycardia
<input type="checkbox"/> Hypoglycaemia	<input type="checkbox"/> Poor physical health	<input type="checkbox"/> Insomnia
<input type="checkbox"/> Sweating	<input type="checkbox"/> Hypomagnesaemia	<input type="checkbox"/> Hypocalcaemia
<input type="checkbox"/> Other psychiatric disorders	<input type="checkbox"/> Concomitant use of other psychotropic drugs	<input type="checkbox"/> Previous history of severe withdrawal, seizures and/or DTs
<input type="checkbox"/> Hypokalaemia (with respiratory alkalosis)		
<input type="checkbox"/> High alcohol intake, > 15 units per day in a person of normal build		

## 2.3 The detection of alcohol misuse

All patients presenting to A&E or admitted to general medical or surgical wards should be asked about alcohol intake.

None of the available laboratory markers are sufficiently sensitive or specific to be used as the sole means of detecting alcohol misuse.<sup>29</sup>

**2.3.1 The AUDIT (Alcohol Use Disorders Identification Test) questionnaire** is the most appropriate means of identification of alcohol misusers in general hospitals (See Appendix D).

The minimum score (for non-drinkers) is zero and the maximum possible score is 40. A score of **8** or more indicates a strong likelihood of hazardous or harmful alcohol consumption.<sup>41</sup>

### 2.3.2 The CAGE questionnaire

- The CAGE questionnaire is a very brief assessment, which will only pick up the most severe alcohol misuse.

#### **CAGE is an acronym for four questions:**

- 1) Have you ever felt you ought to **CUT** down on your drinking?
- 2) Have people ever **ANNOYED** you by asking you about your drinking?
- 3) Have you every felt bad or **GUILTY** about your drinking?
- 4) Have you ever had a drink first thing in the morning (**EYE-OPENER**) to steady your nerves or get rid of a hangover?

**A positive answer to 2 questions suggests alcohol dependence**

## 2.4 Medical Management

### 1st choice benzodiazepine: Oral administration of chlordiazepoxide

**Chlordiazepoxide** has a lower potential for abuse than diazepam.<sup>4,29</sup> Intravenous diazepam or lorazepam has a more rapid onset of effect so may be preferred where urgent control is required.

Formulary preparations		
Chlordiazepoxide	Lorazepam	Diazepam
Capsules 5mg & 10mg	Tablets 1mg & Injection 4mg/ml	Tablets 2mg, 5mg, 10mg, oral solution 2mg/5ml, 5mg/5ml, injection (emulsion) 5mg/ml

### Patients with liver failure

Chlordiazepoxide may be used cautiously in liver impairment; reduce the required dose by 50% of the normal dose.

Lorazepam may be used in severe or acute liver impairment; its metabolism is not impaired in liver disease.

Lorazepam has a shorter half-life than chlordiazepoxide which may increase the seizure risk.<sup>29</sup>

### Equivalent benzodiazepine doses (approximate)<sup>31</sup>

**Diazepam 10 mg = chlordiazepoxide 25mg = lorazepam 1mg**

#### 2.4.1 The first 24 hours

Give a stat dose of chlordiazepoxide 25mg to 50mg based on the severity of clinical signs and symptoms. If withdrawal symptoms are mild, an initial dose may not be required.

Subsequent doses during the first 24-hours are administered with a frequency and dosage that depends upon the observations of alcohol withdrawal status rated by the ward staff using the CIWA-Ar scale (see Appendix F).

**If CIWA-Ar scale is 0 to 9: no treatment is necessary**

**If CIWA-Ar scale is 10 to 14: 25mg should be administered**

**If CIWA-Ar scale is 15 or above: 50mg should be administered**

**Prescribe chlordiazepoxide on the "As required section" as written below:**

#### As required medicines

Drug (approved name)	Dose	New dose/route	New dose/route	Indication
Chlordiazepoxide	25 – 50mg every 2 hours as per CIWA-Ar			
Date	Valid period	Route	Date	Date
	24 hours only	PO		
Additional information / pharmacy				
If CIWA-Ar 10 -14 give 25mg				
If CIWA-Ar 15 or above give 50mg				
<b>BEFORE GIVING ABOVE 300MG IN 24H SEEK MEDICAL REVIEW</b>				

### **Observations should be carried out every 2 hours**

Each set of observations consists of:

- applying the alcohol withdrawal scale (CIWA-Ar)
- taking BP
- taking pulse
- monitoring respiratory rate

*If the patient is asleep they should not be woken up to be scored for observations. However, it should be recorded that they were asleep.*

This is also to determine the amount of chlordiazepoxide that should be administered. The cumulative chlordiazepoxide dose administered during the initial 24-hour period assessed is called the **baseline dose**, and this is used to calculate the subsequent reducing regime.

In complicated patients (e.g. DTs) consider increasing the 2 hourly observation and PRN dosing beyond the first 24 hours.

Contact prescriber if patient is tachycardic or hypertensive.

Frequency of observations may need to be altered in discussion with the medical team.

### **2.4.2 Days 2 to 6**

#### **Chlordiazepoxide five-day reducing regimen (days 2 to 5)**

After the initial 24 -hour assessment period patients should be given chlordiazepoxide using a fixed reducing regimen. Ideally no chlordiazepoxide should be prescribed on a PRN basis after the initial 24 hours.

Chlordiazepoxide is given in divided doses, usually four times a day. The dose is reduced by approximately 20% of the initial 24-hour dose per day.

The following table indicates the form that this reducing dose should take, according to the total dosage of chlordiazepoxide in the first 24 hours. These figures are estimates based on the tablet or capsule strength available.

#### **Observations should be carried out at a *minimum* of twice daily**

Observations (**not including CIWA-Ar**) may be carried out more frequently if any complications are seen.



### Chlordiazepoxide 5-day reducing regimen

Day 1 total PRN dose	Day 2 (mg)				Day 3 (mg)				Day 4 (mg)				Day 5* (mg )			
	8am	12pm	6pm	10pm	8am	12pm	6pm	10pm	8am	12pm	6pm	10pm	8am	12pm	6pm	10pm
300mg	60	60	60	60	50	50	50	50	30	30	30	30	20	20	20	20
275mg	55	55	55	55	45	45	45	45	30	30	30	30	20	15	15	20
250mg	50	50	50	50	40	40	40	40	25	25	25	25	15	15	15	15
225mg	45	45	45	45	35	35	35	35	25	25	25	25	15	10	10	15
200mg	40	40	40	40	30	30	30	30	20	20	20	20	10	10	10	10
175mg	35	35	35	35	25	25	25	25	20	20	20	20	10	10	10	10
150mg	30	30	30	30	20	20	20	20	15	15	15	15	10	5	5	10
125mg	25	25	25	25	20	20	20	20	15	10	10	15	10	5	5	5
100mg	20	20	20	20	15	15	15	15	10	10	10	10	5	5	5	5
75mg	15	15	15	15	10	10	10	10	5	5	5	5		5	5	5
50mg	10	10	10	10	5	5	5	5		5	5	5			5	5
25mg	5	5	5	5		5	5	5			5	5				5

\*If on Day 5 the patient is on a total daily chlordiazepoxide dose of 40mg or larger consider a longer reducing regimen by following the chart.

### 2.4.3 Difficult to control patients

**Consider increasing daily chlordiazepoxide dose above 300mg per day after medical review.**  
Consider referral to the psychiatric liaison team for advice.

#### Consider parenteral benzodiazepines.

IV diazepam emulsion may be administered as a bolus by peripheral or central route.

A dose of 10mg every 30- 60 minutes may be given until symptoms subside or the patient is markedly sedated. *Usual maximum dosage is 30mg in 24 hours.*

Administer the undiluted emulsion at a rate of 1ml per minute (5mg per minute).

Monitor for symptoms of withdrawal and sedation. Use of flumazenil in patients receiving benzodiazepines for management of alcohol withdrawal symptoms must be discussed with the Clinical Toxicology Team. Note that patients requiring parenteral benzodiazepines may require level 2 admission.

For patients with liver failure, IV lorazepam 1mg to 2mg every 5 minutes should be used until the patient is awake but calm.<sup>38</sup>

In the elderly, in general only half the benzodiazepine dose is recommended.

**Monitor ECG, blood pressure, respiratory rate pulse oximetry and temperature when giving high dose benzodiazepines.**

#### Consider antipsychotic

Refer the patient to the appropriate psychiatric team who may consider the addition of an antipsychotic such as haloperidol or olanzapine to control agitation.

e.g. Haloperidol po/im 2.5-5mg tds (Maximum 15mg IM or 30mg po in 24 hours), an ECG should be taken if haloperidol is given, the QTc should be <440ms in men and <470ms in females.

All antipsychotics have the additional risk of lowering the seizure threshold, which is a particular concern in alcohol withdrawal.

### 2.4.4 Management of Alcohol Withdrawal related seizures

Prophylactic treatment of seizures in patients with a prior history of withdrawal seizures should be managed with diazepam 20mg or chlordiazepoxide 50mg administered orally upon presentation, followed by a further 2 doses at 1 hour intervals.<sup>1</sup>

It may be suitable to then use CIWA-Ar scale along with a flexible 24 hour chlordiazepoxide regimen. Frequency of observations may need to be altered in discussion with the medical team.

**If status epilepticus occurs, usually this is managed with:**

IV Diazepam 2mg/min. Maximum 10-20 mg.

IV Lorazepam 2mg/min. Maximum 4-8 mg.

There is little evidence to support the use of antiepileptics in the prophylaxis or treatment of alcohol withdrawal-induced seizures.<sup>29</sup>

#### **2.4.5 Patients who are difficult to assess using the CIWA-Ar score**

Prescribe a **Fixed Schedule Reducing Regimen**  
Start at **Day 2** of the 5 day Withdrawal Scale

**These include patients who are delirious, confused, cannot speak English or are unable to communicate effectively.**

For these patients the CIWA-Ar scale is inappropriate as the patient will not be able to score on anxiety, orientation and clouding of sensorium, tactile, auditory and visual disturbances. If a score is inappropriate it is difficult to give the correct dose of chlordiazepoxide.

Therefore, it is recommended to use a **Fixed Schedule Reducing Regimen**.

It may be necessary to chart PRN chlordiazepoxide for the first 24 hours in case of breakthrough symptoms. If the PRN doses are utilised a review of the fixed regimen doses is needed after 24 hours. The doses will need to be increased to take into account the PRN utilisation.

#### **2.4.6 Elderly Patients**

To minimise adverse effects associated with benzodiazepines (e.g. over sedation, confusion and ataxia) in the elderly it is important to bear in mind the start low and go-slow rule. In general it is recommended that half the dose of the benzodiazepine is used.<sup>9</sup>

#### **2.4.7 Pregnant Patients**

As in any patient who may be pregnant or is pregnant, each case is dealt with on an individual basis. It is important to bear in mind the risk of seizure against the risk of foetal exposure to chlordiazepoxide. It is essential the obstetric team is informed if the patient presents during late pregnancy or in labour. The Psychiatric Liaison services can be contacted for advice - please see page 17 for contact details.

**Long term regular use of chlordiazepoxide should be avoided.**

### 3 Wernicke's encephalopathy (WE)

Inappropriately managed WE<sup>22</sup> is the primary contributory cause of death in 17% of affected patients and results in permanent brain damage in 85% of survivors. Post-mortem analysis has demonstrated that WE may occur in as many as 12.5% of chronic alcohol misusers, although WE or Korsakoff's psychosis has historically been diagnosed during life in only 5-20% of patients.<sup>2,13,14</sup>

The classically described triad of signs acute confusion (82%), ataxia (23%) and ophthalmoplegia (29%) actually occurs in only 10% of patients.<sup>14</sup>

As a result the triad cannot be used as the basis of a diagnosis.

#### 3.1 Treatment

Wernicke's encephalopathy is reversible in the early stages with rapid restoration of CNS B-vitamins (in particular thiamine) and treatment should be initiated immediately a diagnosis is suspected.<sup>6,24,39</sup>

The diagnosis should be based on the presence of any **one** or more of the following signs in the absence of another more probable explanation of these features.<sup>4,6,7,24</sup>

- Acute confusion
- Decreased consciousness level including unconsciousness or coma
- Memory disturbance
- Ataxia/unsteadiness
- Ophthalmoplegia (eye muscle paralysis causing squint or double vision)
- Nystagmus (involuntary rhythmic oscillation of one or both eyes)
- Unexplained hypotension with hypothermia.

#### **Treatment of Wernicke's encephalopathy**

**Pabrinex IVHP 2 pairs of ampoules three times daily for 3 to 7 days**

*Treatment should be continued after 3 days until no further improvement is seen.*

**Pabrinex can be given intramuscularly in very exceptional circumstances – each pair has a volume of 7mL.**

**It is extremely painful and the risk of haematoma is significant.**

**Under these circumstances it may only be possible to give ONE pair (7mL) IM at a time and this dose repeated as often as the patient will tolerate. Consider reverting to intravenous therapy as soon as possible.**

### 3.2 Prophylaxis

All patients undergoing alcohol withdrawal should be treated prophylactically for WE. This includes anyone admitted for other reasons who are subsequently found to require detoxification,<sup>7</sup> as well as those with a known/suspected history of alcohol misuse.<sup>4,6,10,24,29&40</sup>

#### **Prophylaxis against Wernicke's encephalopathy**

**Pabrinex IVHP 1 pair of ampoules three times a day for 1 day**

#### **Administration**

Each pair of ampoules should be diluted in 50ml to 100ml sodium chloride 0.9% or glucose 5% and infused over 30 minutes.

**Pabrinex can be given intramuscularly in very exceptional circumstances – each pair has a volume of 7mL. It is extremely painful and the risk of haematoma is significant. Under these circumstances it may only be possible to give ONE pair (7mL) IM at a time and this dose repeated as often as the patient will tolerate. Consider reverting to intravenous therapy as soon as possible.**

### Safety of parenteral B-vitamins

Parenteral thiamine administration is associated with a very small risk of anaphylaxis (5 cases per 1 million IV ampoules).

As a result the Committee on the Safety of Medicines (CSM) advises that<sup>3</sup>:

- use be restricted to patients in whom parenteral treatment is essential. (parenteral treatment is considered essential for all patients in alcohol withdrawal)
- intravenous injections be administered slowly
- facilities for treating anaphylaxis be available

### 3.3 Oral B-vitamin absorption in alcohol misusers

Absorption of oral thiamine is limited and not sufficient to treat WE.

Absorption of thiamine appears to be independently affected by both alcohol and malnutrition. Absorption is reduced by around 70% in abstemious malnourished alcohol misusers. Absorption is reduced further in the presence of alcohol.<sup>6</sup>

An inadequate diet combined with reduced absorption frequently results in insufficient thiamine to meet daily requirements with a consequent depletion of body stores.

**Thiamine 100mg three times a day plus oral vitamin B compound strong 2 tablets once a day should be considered after parenteral administration of B vitamins for 14 days or until review by the GP.**

**Thiamine 100mg three times a daily  
and Vitamin B compound strong 2 tablets daily**

***Continue at discharge for 14 days and then GP to review.  
Oral should be continued for at least 6 weeks***

### 3.4 Discharging Patients with benzodiazepines for alcohol detoxification

Discharging alcohol detox patients with benzodiazepines increases the risk of some of such patients continuing to drink alcohol at discharge in addition to taking the **benzodiazepines**, which could result in excessive sedation.

Patients **must not** be discharged with benzodiazepines and that they must complete the five day withdrawal regimen as in-patients, and must not be discharged with any part of the benzodiazepine (e.g. Chlordiazepoxide) withdrawal regimen if not yet completed and not before the five days is completed

#### 4 VERSION HISTORY TABLE

Version	Date	Author	Ratified by	Comment/Reason for change
1	March 2014	Dr Mike Mendall, Dr Sri Perecherla	Medicines Management Committee	New

## APPENDIX A – EQUALITY IMPACT ASSESSMENT

To be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval.

		Yes/No	Comments
<b>1.</b>	<b>Does the policy/guidance affect one group less or more favourably than another on the basis of:</b>		
	Race	No	
	Ethnic origins (including gypsies and travellers)	No	
	Nationality	No	
	Gender	No	
	Culture	No	
	Religion or belief	No	
	Sexual orientation including lesbian, gay and bisexual people	No	
	Age	No	
	Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
<b>2.</b>	<b>Is there any evidence that some groups are affected differently?</b>	No	
<b>3.</b>	<b>If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?</b>	N/A	
<b>4.</b>	<b>Is the impact of the policy/guidance likely to be negative?</b>	No	
<b>5.</b>	<b>If so can the impact be avoided?</b>	N/A	
<b>6.</b>	<b>What alternative are there to achieving the policy/guidance without the impact?</b>	N/A	
<b>7.</b>	<b>Can we reduce the impact by taking different action?</b>	N/A	

## APPENDIX B CONSULTATION TEMPLATE

1.	Procedural Document's Name:	DETECTION OF ALCOHOL MISUSERS, MANAGEMENT OF ALCOHOL WITHDRAWAL SYNDROME AND WERNICKE'S ENCEPHALOPATHY	
2.	Procedural Document Author:	Dr Mike Mendall, Consultant Gastroenterologist; Dr Sri Perecherla, Consultant Liaison Psychiatrist	
3.	<b>Group/Committee Consulted</b>	<b>Date</b>	
	MMC	12/03/2013	
4	<b>Name and Title of Key Individuals Consulted</b>	<b>Date</b>	
5	<p>Comments received</p> <p>Appendices 4.3 and 4.4 to be copied and attached to the drug chart to ensure completion.</p> <p>Additional section should be included giving guidance on prescribing on discharge titled something like <b><u>'Discharging Patients with Benzodiazepines for alcohol detoxification'</u></b>. The section should clearly state that patients must not be discharged with benzodiazepines and that they must complete the five day withdrawal regimen as in-patients, and must not be discharged with any part of the benzodiazepine (e.g. chlordiazepoxide) withdrawal regimen if not yet completed and not before the five days is completed.</p> <p>The guideline should be in CUH trust format with all the sections –</p> <p>(Introduction, Purpose, Definitions, Accountabilities, Procedures, Training,</p> <p>Equality impact statement, monitoring compliance, associated documentation, version history sections are missing)</p> <p>Amend references to Guys and St Thomas documents e.g. pp 9 section 2.4.4: If status epilepticus says 'please refer to GSTT policy on ..'</p>		

## **APPENDIX C – REFERRING PATIENTS**

### **Who to refer?**

Refer all patients with the alcohol misuse to the **Alcohol Liaison Team** at the earliest opportunity; working hours and contact details: **Monday – Friday, 9am – 5pm Bleep 270**

### **Other inpatient contacts**

#### **Your ward Pharmacist** (normal working hours)

During the working hours of Alcohol Liaison Team - patients with co-morbid mental health problems requiring Psychiatric Liaison input, referrers should first contact Alcohol Liaison Team who may then redirect referrals to Liaison Psychiatry Team.

Outside the working hours of Alcohol Liaison Team - referrers should contact Adult Liaison Psychiatry Team directly.

#### **Adult Liaison Psychiatry team (16-65 during office hours and all ages during out of hours)**

Extension 4499 (normal working hours) or Bleep 486 (24 hours)

#### **Older Adults Liaison Psychiatry team (over 65)**

Tel: 02032280122

### **Local Community contacts**

Contact the community team as early as possible after the patient's admission.

The community team will only accept patients who are residents in their catchment area.

#### **Drug and Alcohol Service (Croydon)**

Lantern Hall,  
190 Church Road, Croydon CR0 1SE. Tel: 02086047104

#### **Westminster Drug Project (WDP) Outreach Team**

Action House,  
28 Sydenham Road, CR0 2EF. Tel: 0845 0560 099

#### **Croydon Turnaround Centre** (for under 18s):

51/55 South End Croydon CR0 1BF

Tel: 020 8760 5530

Centre is open Monday, Tuesday, Thursday and Friday 10am to 5pm and on Wednesday between 1pm and 5pm.





**APPENDIX E - CLINICAL INSTITUTE WITHDRAWAL ASSESSMENT OF ALCOHOL SCALE, REVISED (CIWA-AR)**

Using the descriptions below rate each withdrawal symptom then add the scores together.

**If CIWA-Ar result is between 10 to 14 give 25mg chlordiazepoxide If CIWA-Ar result is above 15 give 50mg of chlordiazepoxide.**

<p><b>Nausea and Vomiting:</b> Ask "Do you feel sick to your stomach? Have you vomited?"</p> <p><b>Observation</b> 0 no nausea with no vomiting 1 mild nausea with no vomiting 2 3 4 intermittent nausea with dry heaves 5 6 7 constant nausea, frequent dry heaves and vomiting</p>	<p><b>Tactile (touch) Disturbances:</b> Ask "Have you any itching, pins and needles sensations, any burning, any numbness, or do you feel bugs crawling on or under your skin?"</p> <p><b>Observation</b> 0 none 1 very mild itching, pins and needles, burning or numbness 2 mild itching, pins and needles, burning or numbness 3 moderate itching, pins and needles, burning or numbness 4 moderately severe hallucinations 5 severe hallucinations 6 extremely severe hallucinations 7 continuous hallucinations</p>
<p><b>Tremor:</b> Arms extended and fingers spread wide apart.</p> <p><b>Observation</b> 0 no tremor 1 not visible, but can be felt fingertip to fingertip 2 3 4 moderate, with patients' arms extended 5 6 7 severe, even with arms not extended</p>	<p><b>Auditory (hearing) Disturbances:</b> Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing you? Are you hearing things you know are not there?"</p> <p><b>Observation</b> 0 not present 1 very mild harshness or ability to frighten 2 mild harshness or ability to frighten 3 moderate harshness or ability to frighten 4 moderately severe hallucinations 5 severe hallucinations 6 extremely severe hallucinations 7 continuous hallucinations</p>
<p><b>Paroxysmal Sweats:</b></p> <p><b>Observation</b> 0 no sweat visible 1 barely perceptible sweating, palms moist 2 3 4 beads of sweat obvious on forehead 5 6 7 drenching sweats</p>	<p><b>Visual (sight) Disturbances:</b> Ask "Does the light appear to be too bright? Is its colour different? Does it hurt your eyes? Are you seeing anything that's disturbing you? Are you seeing anything that you know is not there?"</p> <p><b>Observation</b> 0 not present 1 very mild sensitivity 2 mild sensitivity 3 moderate sensitivity 4 moderately severe hallucinations 5 severe hallucinations 6 extremely severe hallucinations 7 continuous hallucinations</p>
<p><b>Anxiety:</b> Ask "Do you feel nervous?"</p> <p><b>Observation</b> 0 no anxiety, at ease 1 mildly anxious 2 3 4 moderately anxious or guarded, so anxiety is suggested 5 6 7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic states</p>	<p><b>Headache, Fullness in Head:</b> Ask "Does your head feel different? Does it feel like there is a band around your head? Do not rate for dizziness or light-headedness. Otherwise, rate severity.</p> <p><b>Observation</b> 0 not present 1 very mild 2 mild 3 moderate 4 moderately severe 5 severe 6 very severe 7 extremely severe</p>
<p><b>Agitation: Observation</b> 0 normal activity 1 somewhat more than normal activity 2 3 4 moderately fidgety and restless 5 6 7 paces back and forth during interview, or thrashes about</p>	<p><b>Orientation and Clouding of Sensorium:</b> Ask "What day is this? Where are you? Who am I?" 0 orientated and can do serial additions 1 cannot do serial additions or is uncertain about date 2 disorientated for date by no more than 2 calendar days 3 disorientated for date by more than 2 calendar days 4 disorientated for place or person</p>

## APPENDIX F - ALCOHOL WITHDRAWAL NURSING OBSERVATION CHART (BASED ON CIWA-AR SCALE)

Begin using this chart at the first sign of withdrawal symptoms.

<b>Name:</b> (or affix label)						<b>Ward:</b>					
						<b>Consultant:</b>					
						<b>Sheet Number:</b>					
<b>Date:</b>											
<b>Time:</b> 24hour clock (Hrs)											
<b>Respiratory Rate:</b> (breaths per minute) <b>If below 10 inform medical team</b>											
<b>Nausea / Vomiting (0-7)</b>											
<b>Tremor (0-7)</b>											
<b>Sweats (0-7)</b>											
<b>Anxiety (0-7)</b>											
<b>Agitation (0-7)</b>											
<b>Tactile disturbances (0-7)</b>											
<b>Auditory disturbances (0-7)</b>											
<b>Visual Disturbances (0-7)</b>											
<b>Headache (0-7)</b>											
<b>Orientation (0-4)</b>											
<b>TOTAL SCORE (MAX 67)</b>											
<b>Dose given (mg)</b> <b>PLEASE SIGN DRUG CHART</b> <i>If CIWA-Ar scale is 10 - 14 Give 25mg of chlordiazepoxide If CIWA-Ar scale ≥ 15 Give 50mg of chlordiazepoxide</i>											
<b>Nurses Signature</b>											
<b>Total Dose of chlordiazepoxide in 24 hours =</b>											
Do not exceed maximum dose of 300mg in 24 hours. This acts as the baseline dose. Then proceed to calculate 5 day (or longer if required) reducing regimen.											

**Appendices E and F to be copied and attached to the drug chart to ensure completion**

## **APPENDIX G - PATIENT INFORMATION**

### **National Services**

#### **Alcohol Concern**

[www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk)

This website has lots of useful information in their library and publication section as well as "factsheets" that could be given directly to patients.

#### **Drinkline**

Tel 0800 917 8282 (Available 24 hours 7 days a week) [www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk)

#### **Alcoholics Anonymous**

Tel 0845 769 7555 (Available 7 days a week 10am – 10pm) [www.alcoholics-anonymous.org.uk](http://www.alcoholics-anonymous.org.uk)

#### **The London Drug and Alcohol**

**Network** [www.ldan.org.uk](http://www.ldan.org.uk)

The Tool "find a service" allows you to find a community alcohol centre that is local to the patients address.

## APPENDIX H - REFERENCES

1. Adinoff B et al. *Medical Toxicology* 1988; 3: 172-196.
2. Blansjaar BA & Van Dijk JG. *Alcohol & Alcoholism* 1992; 27 (4): 435-437.
3. BNF No 55, March 2008; Pharmaceutical Press, Bedfordshire.
4. Chick J. *Hospital Pharmacist* 2000; 7: 251-254.
5. Cook CCH et al. B-Complex vitamins in the prophylaxis and treatment of Wernicke's Korsakoffs Syndrome. *British Journal of Hospital Medicine*, 1997 (57) 9.
6. Cook CCH et al. *Alcohol & Alcoholism* 1998; 33 (4): 317-336.
7. Cook CCH. *Alcohol & Alcoholism* 2000; 35 (Suppl 1): 19-20.
8. Glen I et al. The management of alcohol withdrawal & delirium tremens: A good practice statement. CRAG/SCOTMEG Working Group on Mental Illness. Final report June 1994.
9. Greenblatt DJ et al. Clinical Pharmacokinetics of anxiolytics and hypnotics in the elderly. Therapeutic considerations (Part I). *Clinical Pharmacokinetics*, 1991 Vol21(3), 165-177.
10. Corrigan, JD et al. [1995], *J Head Trauma Rehabilitation*, 10(3): 29-46
11. Guirguis a, Kenna G. Treatment considerations for alcohol withdrawal syndrome, 2000. *US Pharmacist*.
12. Hall W & Zador D. *Lancet* 1997; 349: 1897-1900.
13. Harper C. *Journal of Neurology, Neurosurgery and Psychiatry* 1979; 42: 226-231.
14. Harper CG et al. *Journal of Neurology, Neurosurgery and Psychiatry* 1986; 49: 341-345.
15. Hillburn M et al. Seizures in alcohol dependent patients. *Therapy in Practice. CNS Drugs* 2003, 17(14): 1013-1030.
16. Korsten T, O'Connor P. Management of Drug and Alcohol Withdrawal, *The New England Journal of Medicine*, May 1,2003; 348; 1786-1795
17. Lange-Arschenfeldt et al, 2003. Symptom triggered vs standard chlormethiazole treatment of inpatient alcohol withdrawal, *European Addiction Research*; 9; 1-7.
18. Lingford-Hughes AR, Welch S, Nutt DJ. Evidence-based guidelines for the pharmacological management of substance misuse, addiction and co-morbidity: recommendations from the British Association for Psychopharmacology. *J of Psychopharmacology* 2004; 18(3): 293-335.
19. Martin PR et al. The role of thiamine deficiency in alcoholic brain disease. *Alcoholic Research and Health* 2003, 27(2).
20. Markowitz J et. Al. Oral nutritional supplementation for the alcoholic patient: a brief overview. *Annals of Clinical Psychiatry* 2000, 12(3).
21. Malcolm R. Alcohol withdrawal, relapse prevention. *Psychiatric Annals*; 3; 33-39.
22. McIntosh C et. Al. Parenteral Thiamine use in the Prevention and Treatment of Wernicke's Korsakoffs Syndrome, *Psychiatric Bulletin* 2005 (29); 94-97.
23. McKay G. Thiamine Treatment of Wernicke's Encephalopathy: Guidelines and Issues.
24. Morgan MY & Ritson B. *Alcohol and Health* 1998. Medical Council on Alcoholism, London.
25. Office for National Statistics (ONS) 2000. *Living in Great Britain: results for the 1998 General Household Survey*, the Stationary Office, London.
26. *Pabrinex IVHP, Summary of Product Characteristics*, April 2005.
27. Reoux JP, Miller K, 2000. Routine hospital alcohol detox compared with symptom triggered management with CIWA-Ar. *The American Journal on Addictions* 9; 135-144.
28. Ritson B. ABC of alcohol. Treatment of alcohol related problems. *BMJ* 2005 Vol 330.
29. Royal College of Physicians (RCP). *Alcohol – can the NHS afford it?* Royal College of Physicians of London 2001.
30. Smith M. *Pharmacological Management of Alcohol Withdrawal : A meta-analysis and evidence based practice guidance*, 1997, 278 (2).
31. Taylor et al (2007) *The South London and Maudsley NHS trust 2007*, 9<sup>th</sup> Edition Prescribing guidelines, Taylor & Francis, London
32. Thomson AD et al. Patterns of S-Thiamine hydrochloride absorption in the malnourished alcoholic patient. *J Lab Clinical Medicine*, July 1970.
33. Thomson AD et al. The Royal College of Physicians report on alcohol; Guidelines for managing Wernicke's Encephalopathy in the A & E department, *Alcohol and Alcoholism* (37); 6.
34. Wills S (2005) *Drugs of abuse 2<sup>nd</sup> edition*, Pharmaceutical Press, London.
35. *Drug and Therapeutics Bulletin*, [1991], 29(18): 69-71
36. Erwin WE, Williams DB, Speir WA. Delirium tremens. *South Med J*. 1998, 91(5): 425-432.
37. Rubino, FA. Neurologic complications of alcoholism. *Psychiatry Clinical, North America*, (1992) 15(2): 359-372.
38. Turner A et al [1989] *J General Intern Medicine*, 4: 423-444.
39. *BMJ. Wernicke's encephalopathy. Br Med J* 1979;2;291-292
40. Ferguson, R. K., Soryal, I. N. and Pentland, B. (2000) Wernicke-Korsakoff syndrome in head injury: a missed insult. *Alcohol and Alcoholism* 35 (Suppl. 1), 16-18.
41. Saunders, J.B., Aasland, O.G., Babor, T.F., De La Fuente, J.R. and Grant, M., 1993. Development of the Alcohol Use disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption. II. *Addiction* 88, pp. 791-804.