Dudley and Walsall NHS
Mental Health Partnership NHS Trust

Document Title
Management of Alcohol Withdrawal Guidelines

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Version	Date	Comments
0.1	20/05/2013	Draft
1.0	05/03/2014	Formally ratified by Governance and Quality Committee Chair 05/03/2014
2.0	08/07/2015	Updated decision made to merge the of Policy Concerning the Administration of Parenteral Thiamine (Pabrinex) and the Guidelines on the pharmacological management of alcohol withdrawal 08/07/2015
2.1	19/12/2016	Updated with vitamin B Co Forte removed from prescribing recommendation

Link with National Standards	
National Health Service Litigation Authority	
Care Quality Commission	
National Institute of Clinical Excellence (NICE) Guidance	✓
National Patient Safety Agency	
West Midlands Quality Review	
Essence of Care	
Aims Standards	
IG Toolkit	

Key Dates	Day	Month	Year
Ratification Date	08	07	2015
Review Date	19	12	2018

Executive Summary Sheet
Document Title: Guidelines on the Pharmacological Management of Alcohol Withdrawal

Please tick (☑) as appropriate	This is a new document within the Trust	
	This is a revised document within the Trust	✓

What is the purpose of this document?

To provide guidelines to clinicians on the pharmacological management of alcohol withdrawal in line with local and national guidance.

What key issues does this document explore?

- Diagnosis of alcohol withdrawal
- Risk associated with alcohol withdrawal and their management
- Safe and effective management of alcohol withdrawal
- The diagnosis and treatment of Wernicke's Encephalopathy
- Relapse prevention in alcohol withdrawal

Who is this document aimed at?

All clinicians involved in the management of alcohol withdrawal.
Nursing staff administering medication

What other policies, guidance and directives should this document be read in conjunction with?

Trust Medicines Management Policy
Alcohol use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence (NICE CG115)
Alcohol-use disorders: Diagnosis and clinical management of alcohol-related physical complications (NICE CG100)
Trust Policy for the performance or non-performance of Cardio-Pulmonary Resuscitation

How and when will this document be reviewed?

Every two years

1. Introduction

1.1 Alcohol related illness or injury accounts for 180,000 hospital admissions (Department of Health 2007). The harm to the NHS is estimated to cost the NHS £2.7 billion (Department of Health 2008). An attendance or admission to hospital provides a window of opportunity for screening patients for Alcohol Use Disorders (AUDs).

1.2 **Alcohol Use Disorders (AUD):** Alcohol use disorders cover a wide range of mental health problems as recognized within the international disease classification systems (ICD-10, DSM-IV). These include hazardous and harmful drinking and alcohol dependence (NICE 2010).

1.3 **Hazardous drinking:** A pattern of alcohol consumption that increases someone's risk of harm. Some would limit this definition to the physical or mental health consequences (as in harmful use). Others would include the social consequences. The term is currently used by the World Health Organization (WHO) to describe this pattern of alcohol consumption. It is not a diagnostic term.

1.4 **Harmful drinking:** A pattern of alcohol consumption that is causing mental or physical damage

1.5 **Alcohol dependence:** A cluster of behavioural, cognitive and physiological factors that typically include a strong desire to drink alcohol and difficulties in controlling its use. Someone who is alcohol dependent may persist in drinking, despite harmful consequences. They will also give alcohol a higher priority than other activities and obligations.

2. Scope

2.1 This policy applies to all trust staff involved in prescribing and administering medication to patients.

3. Definitions

3.1 AUD – Alcohol Use Disorders

3.2 CIWA-ar - Clinical Institute Withdrawal Assessment–alcohol revised

3.3 Detoxification – Detoxification is one of the more widely used treatments and concepts in alternative medicine. It is based on the principle that illnesses can be caused by the accumulation of toxic substances (toxins) in the body. Eliminating existing toxins and avoiding new toxins are essential parts of the healing process. Detoxification utilizes a variety of tests and techniques.

3.4 **What is a unit of alcohol?**

- A UK unit is 10ml or 8 grams of pure alcohol. The number of units in a drink depends on the volume, the strength and type of alcohol.
- Units = Volume in ml x strength of the drink in % divided by 1000

3.5 As a minimum, intervention staff should advise patients on the current guidelines for sensible drinking which are:

- men - should not regularly drink more than 3 – 4 units alcohol daily
- women – should not regularly drink more than 2 – 3 units alcohol daily
- pregnant women or women trying to conceive should avoid drinking alcohol (Department of Health 2007)

4. Duties, Roles and Responsibilities

4.1 **Medical Director –** The Medical Director holds the executive responsibility for medicines management within the organisation.

4.2 **Chief Pharmacist –** The chief pharmacist holds the delegated responsibility for implementing appropriate systems and processes in respect to medicines management within the organisation.

4.3 **Medicines Management Committee –** The Medicines Management Committee is the responsible committee for overseeing the implementation of this policy. The committee is also responsible for overseeing the timely review and modification of this policy.

4.4 **Identification of AUDs (by admitting doctor or nursing staff) -** Alcohol use disorders may be identified by using a range of methods including:

- Initial Screening and advice (Nursing and Medical Staff)
- Health professionals should routinely carry out alcohol screening as an integral part of practice (NICE Public Health Guidance, 24, 2010. p.12).
- Drug and Alcohol Liaison Team (DALT) may be contacted for further advice and information.

4.5 Once an AUD has been identified the next step is to decide on the intervention required.

5. Management of detoxification

5.1 Detoxification is only clinically indicated in those individuals who experience physical withdrawal symptoms such as shakes, sweats, panic, anxiety or withdrawal fits after a period of abstinence of alcohol (e.g. Overnight), or in the case of those that drink to avoid such symptoms

5.2 **Mini mental state examination** - this should be performed early in the admission, and then serially if appropriate to monitor cognitive function. Alcohol dependent patients are at high risk of developing the Wernicke-Korsakoff syndrome, and a careful evaluation of memory impairment will guide treatment. Record the results of the MMSE on the relevant form, including the date and time that it was performed**.**

5.3 **Physical Examination** - alcohol can disrupt every organ system in the body, and physical problems must be fully evaluated. Of particular concern is assessment of alcoholic liver disease and features of Wernicke-Korsakoff syndrome. Delirium Tremens is also usually associated with poor physical health. Record the results of the examination on the relevant form along with the date and time.

5.4 **Investigations** - the following tests should be taken as part of a routine screening:

- Alcohol Breath Test before administration of medication
- FBC
- U&E
- LFT
- GGT
- Amylase
- B12
- Folate
- INR- Clotting profile
- Magnesium
- TFT

- ECG

5.4.1 If the patient has any features of alcoholic liver disease, the FBC, U&E and LFT should be ordered urgently, and the result obtained as soon as possible. Extensive damage to the liver leads to poor metabolism of the longer-acting benzodiazepines such as Chlordiazepoxide and Diazepam, and accumulation and toxicity. It is therefore important to know the LFT results as soon as possible.

5.4.2 A full assessment should be made of the patient's hydration status, and an adequate fluid intake should be ensured to maintain electrolyte balance. Prescription of supplement drinks like Fortisip may be necessary but should be reserved only for the malnourished**.**

5.4.3 Alcohol withdrawal may be a presenting feature or occur as an unexplained development in a patient who has been admitted for other reasons and has ceased or reduced their drinking deliberately, or as a consequence of ill health.

5.4.4 Treatment of alcohol withdrawal should be symptom triggered, i.e. tailored to the person’s individual needs and determined by the severity of withdrawal signs and symptoms.

5.4.5 It is important that patients who are identified as alcohol dependent are assessed for alcohol withdrawal syndrome. This should be supported by using the Clinical Institute Withdrawal Assessment–alcohol revised (CIWA-ar), (see appendix 3) in addition to clinical judgment.

5.4.6 Utilizing this tool can help determine the severity of alcohol withdrawal and whether a patient needs to be commenced on a reducing regime of Chlordiazepoxide.

6. Management of Acute Alcohol Withdrawal in hospital

6.1 Physical effects

6.1.1 Severe vomiting may lead to an inability to keep medication down, and in these circumstances it may be necessary to use Prochlorperazine (Stemetil) 12.5mg IM and possibly 5-10mg orally 4-6 hourly up to Three times a day for 24 hours.

6.1.2 Pain should initially be treated with Paracetamol 0.5-1g tds. Use caution when prescribing NSAIDs to patients with possible gastritis or peptic ulcers.

6.1.3 Diarrhoea can be treated with Loperamide 4mg initially, 2mg after each loose stool, up to 16mg per day.

6.2 **Withdrawal symptoms (See appendix 4):**

6.2.1 Chlordiazepoxide is the drug of choice for most detoxification episodes. It is long acting, has low reinforcement potential and can be identified separately from other benzodiazepines on toxicology screening. A maximum daily dose of Chlordiazepoxide should not normally exceed 200mg but may be increased above this when there is a history of alcohol withdrawal seizures.

6.2.2 **Chlordiazepoxide regimens:** (see appendix 5 and 6) Doses may have to be increased in more severely dependent drinkers (by adding 10-20mg qds on a prn basis after establishing a score of 11 or more), whilst smaller or frail/elderly patients may need a decrease. The patient should be carefully monitored for signs of benzodiazepine toxicity.

6.2.3 **Liver impairment:** Oxazepam (see appendix 7 and 8) is not metabolised by the liver and is the drug of choice where there is substantial or suspected impairment of liver function. Oxazepam has a much shorter half- life and is less prone to accumulation and toxicity

6.3 **Anti-convulsants:** If a seizure occurs during withdrawal it is more likely to recur in subsequent episodes of withdrawal. Evidence shows that benzodiazepines significantly reduce the incidence of seizures. ***Adding anticonvulsants to this regime does not add any great advantage***. PRN diazepam per rectum 10-20mg should be prescribed.

6.4 **Delirium Tremens (DTs)**

6.4.1 DTs has a mortality rate of 20% if left untreated and usually develops two to five days after abrupt alcohol cessation, or decreased intake. It is recognized by:

- Increased confusion and disorientation
- Severe tremors with autonomic disturbance
- Visual and auditory hallucinations
- Delusional beliefs

6.4.2 Prompt recognition of the risk of alcohol withdrawal syndrome and treatment with benzodiazepines will usually prevent this. Initial management requires the administration of adequate sedative doses of benzodiazepines (if necessarily intravenously). The aim of treatment is to make the patient calm and sedated but easily roused. If

symptoms persist or oral medication is declined, give parental Lorazepam, or Haloperidol. For further information see NICE clinical guideline 100.

6.4.3 Patients experiencing DTs will lack mental capacity **temporarily** and so should not be allowed to discharge against medical advice, until mental capacity returns. They should be observed and cared for by nursing staff ideally in a side room, on a one to one basis (Mental Capacity Act 2005).

7. Nursing Management

7.1 Observations

7.1.1 During withdrawal the body temperature, respiratory rate, pulse and blood pressure increases. It is therefore important to monitor and record them 4-hourly for the first 72 hours when symptoms are at their most severe. Further withdrawal symptoms are likely to occur for the first seven to ten days. ***After seizures 1 hourly neurological observation is required*.**

7.2 Safety

7.2.1 Many patients experience shakes, drowsiness and ataxia during withdrawal. They need to be monitored closely and require assistance to avoid accidents. Others may be over-sensitive to light and noise and will therefore benefit from staying in a quiet room. Often these symptoms are worse at night.

7.3 Hygiene

7.3.1 Excessive sweating may occur (especially at night-time), and it is recommended that patients wash or bathe a couple of times a day for their comfort. It is important to remember that some patients suffer diarrhoea during their withdrawal; others may be incontinent during intoxication and initial withdrawal.

7.4 Diet

7.4.1 To avoid or correct dehydration, it is important to encourage patients to drink plenty of fluids. Water is best and squash may be added, but orange juice can aggravate nausea. Milk is good for digestive problems. Tea, coffee, cigarettes and cigar smoking should be discouraged as caffeine and nicotine increase the heart rate and anxiety symptoms. Meals should be small and regular and include

plenty of protein and vitamins. Vitamin supplements and build-up drinks or soups may be given if clinically necessary. It is important to establish the BMI of the patient on admission, if there are signs/ symptoms of malnutrition a dietician should be involved to reduce the risks of re-feeding syndrome.

7.5 Leave

7.5.1 The patient is admitted under the agreement of remaining on the ward during the high risk period (48-72hrs) after which ground leave will be discussed with the team according to progress. If the patient decides to take leave against medical advice, this will be considered as self-discharge by the team. After each agreed period of ground leave, the patient should be breathalysed by a member of staff, if positive for alcohol the team should be contacted and a formal discharge from the unit considered.

8. Monitoring of Mental State during detoxification

8.1 Sleep

8.1.1 Alcohol use disrupts sleep and this will continue to be affected for at least 2 weeks after stopping. Patients should be encouraged to rest but not sleep during the day so that they gradually re-establish a normal sleep pattern. Good sleep hygiene should be encouraged. Pharmacological night sedation should be discouraged and avoided in detox patients.

8.2 Mood

8.2.1 During withdrawal the patient's mood tends to fluctuate. They may feel anxious or depressed for some time and it is important to explain to them that this is part of withdrawal process. Nevertheless, it is vital to monitor the patient's mood and encourage them to express their feelings. If patients appear severely depressed or suicidal, they need to be closely observed and assessed periodically by a member of the medical staff. ***Some patients may be extremely frightened and paranoid and even experience visual, auditory or tactile hallucinations, which require immediate medical intervention ('Delirium Tremens')***. They may also benefit from being kept in a quiet, well-lit environment that does not reinforce hallucinations or illusions. It is vital that staff do not collude with patients distorted perceptions but offer some support, approaching them in a calm manner and providing explanations for any procedures to gain their trust and co-operation.

8.3 **Cravings**

8.3.1 It is important to remember that the patient may experience cravings for alcohol. These occur during and after withdrawal, and do not necessarily mean that patients will act on them. They may find it helpful to discuss their feelings with staff or others, or have something sweet to eat or drink (as they often crave sugar) or keep themselves occupied. They may find it difficult to stick to one activity for too long, as their concentration span is often low for some time.

9. Wernicke's Encephalopathy (Wernicke-Korsakoff Syndrome)

9.1 Vitamin deficiency in alcoholism is common. There is a particular need to replenish thiamine stores due to its crucial role as a co- factor for metabolic enzymes. Thiamine deficiency causes Wernicke's encephalopathy (WE) and is commonly seen in chronic or heavy drinkers with a poor diet. Consideration regarding treatment needs to be given as to whether a patient is at low risk, at high risk or has suspected or actual WE (Lingford-Hughes et al 2004).

9.1.2 Failure to diagnose Wernicke's encephalopathy and initiate adequate parenteral therapy results in death in 20% of patients; 75% will be left with permanent brain damage involving severe short term memory loss.

9.2 **A presumptive diagnosis of Wernicke's Encephalopathy should be made if any of the following occur during detoxification:**

- Ataxia (problems with coordination and balance)
- Confusion
- Memory disturbance
- Hypothermia (an abnormally low body temperature)
- Hypotension (lowered blood pressure)
- Ophthalmoplegia (partial or total paralysis of the eye muscles)
- Nystagmus (uncontrolled movement of the eyes, usually from side to side)
- Coma/unconsciousness

9.2.1 High index of suspicion is necessary **as only 10% of patients** present with the classic triad of confusion, ophtalmoplegia and ataxia.

9.2.2 The presence of Wernicke's encephalopathy represents a medical emergency and should be treated as such.

9.3 **ALL patients requiring medically assisted DETOX will require treatment with parenteral Pabrinex.**

9.3.1 Parenteral thiamine (Pabrinex) is a preparation containing the water soluble vitamins B and C. Vitamins are substances that are required by the body in very small amounts to maintain normal body functions. Vitamin B is involved in many biological activities, such as the development and maintenance of the nervous system (brain and nerves) and the formation of blood cells. This is given to replenish stores of thiamine in the acute phase of alcohol withdrawal.

9.3.2 There are two preparations of parenteral Pabrinex:

- Intramuscular use
- Intravenous use

9.3.3 **IntraMuscular (IM)** (see appendix 10) Pabrinex should be offered in the first instance; if refused by patients or treatment of Wenicke's is required then Intravenous (IV) should be given.

9.3.4 ONLY in extreme cases where patients adamantly refuse should oral thiamine be prescribed. This must be at the dose of 100mg three times a day. Due to the poor absorption of oral thiamine this should be a last resort.

9.3.5 IV Pabrinex must only be administered by doctors who must remain present for the duration of administration.

9.3.6 See appendix 11 and 12 for SOP on the administration of Pabrinex.

10. References

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Appendix 1 - Alcohol use disorder identification test (AUDIT)

ALCOHOL USE DISORDER IDENTIFICATION TEST (AUDIT)

The AUDIT is a 10- item questionnaire that is used **as a screening instrument for hazardous or harmful alcohol consumption** . It covers the domains of alcohol consumption, drinking behaviour, and alcohol related problems. It aims to screen people experiencing alcohol problems who may benefit from further assessment and intervention. This is a simple questionnaire that can be used to screen patients presenting in general settings i.e. General practice or in-patient admissions

Scoring

Questions 1 - 8 are scored 0, 1, 2, 3, or 4.
Questions 9 and 10 are scored 0, 2 or 4 only.
The response coding is as follows:

	0	1	2	3	4
Question 1	Never	Monthly or less	Two to four times per month	Two to three times per week	Four or more times per week
Question 2	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
Questions 3 – 8	Never	Less than monthly	Monthly		

- **The responses for each question are scored from 0 to 4 , giving a maximum possible score of 40.**
- **A diagnosis of *harmful or hazardous alcohol use* is made for those scoring 8 or more.**
- **A score less than 8 means non-hazardous alcohol consumption.**

AUDIT

Please circle the answer that is correct for you

•How often would you have a drink containing alcohol?

Never | Monthly or Less | Two to four times a month | Two to three times a week | Four or more times a week

•How many drinks containing alcohol do you have on a typical day when you are drinking?

1 or 2 | 3 or 4 | 5 or 6 | 7 to 9 | 10 or more

•How often do you have more than 6 drinks on one occasion?

Never | Less than Monthly | Monthly | Weekly | Daily or almost daily

•How often during the last year have you found that you were not able to stop drinking once you had started?

Never | Less than Monthly | Monthly | Weekly | Daily or almost daily

•How often during the last year have you failed to do what was normally expected of you because of drinking?

Never | Less than Monthly | Monthly | Weekly | Daily or almost daily

•How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

Never | Less than Monthly | Monthly | Weekly | Daily or almost daily

•How often during the last year have you had a feeling of guilt or remorse after drinking?

Never | Less than Monthly | Monthly | Weekly | Daily or almost daily

•How often during the last year have you been unable to remember what happened the night before because of drinking?

Never | Less than Monthly | Monthly | Weekly | Daily or almost daily

•Have you or someone else been injured as a result of your drinking?

No | Yes, but not in the last year | Yes, during the last year

•Has a relative or friend, or a doctor or other health worker been concerned about your drinking or suggested you cut down?

No | Yes, but not in the last year | Yes, during the last year

Appendix 2 – Severity of Alcohol Withdrawal Questionnaire

The Severity of Alcohol Dependence Questionnaire was developed by the Addiction Research Unit at the Maudsley Hospital. It is a measure of the severity of dependence. The AUDIT questionnaire, by contrast, is used to assess whether or not there is a problem with dependence.

The SADQ questions cover the following aspects of dependency syndrome:

- physical withdrawal symptoms
- affective withdrawal symptoms
- relief drinking
- frequency of alcohol consumption
- Speed of onset of withdrawal symptoms.

Scoring

Answers to each question are rated on a four-point scale:
Almost never - 0
Sometimes - 1
Often - 2
Nearly always - 3

A score of 31 or higher indicates "severe alcohol dependence"
A score of 16 - 30 indicates "moderate dependence"
A score of below 16 usually indicates only a mild physical dependency

A Chlordiazepoxide detoxification regime is usually indicated for someone who scores 16 or over.
It is essential to take account of the amount of alcohol that the patient reports drinking prior to admission as well as the result of the SADQ.

There is no correlation between the SADQ and such parameters as the MCV or GGT

First of all, we would like you to recall a recent month when you were drinking heavily in a way which, for you, was fairly typical of a heavy drinking period. Please fill in the month and the year

MONTH……. Year ……..

We would like to know more about your dinking during this and other periods when your drinking was similar. We want to know how often you experienced certain feelings. Please reply to each statement by putting a circle around ALMOST NEVER or SOMETIME or OFTEN or NEARLY ALWAYS after each question. First we want to know about the physical symptoms that you have experienced first thing in the morning during these periods of heavy drinking.

1. During a heavy drinking period, I Wake up feeling sweaty?

Almost Never	Sometimes	Often	Nearly always

2. During a heavy drinking period, my hands shake first thing in the morning

Almost Never	Sometimes	Often	Nearly always

3. During a heavy drinking period, my whole body shakes violently first thing in the morning if I don't have a drink

Almost Never	Sometimes	Often	Nearly always

4. During a heavy drinking period, I wake up absolutely drenched in sweat

Almost Never	Sometimes	Often	Nearly always

Again these Statements refer to the recent period of heavy drinking and the periods like it

5. During a heavy drinking period, I drink more than a quarter of a bottle of spirits per day (4 doubles or 1 bottle of wine or 4 pints of normal beer)

Almost Never	Sometimes	Often	Nearly always

6. During a heavy drinking period, I drink more than half a bottle of spirits per day (2 bottle of wine or 8 pints of normal beer)

Almost Never	Sometimes	Often	Nearly always

7. During a heavy drinking period, I drink more than a bottle of spirits per day (4 bottles of wine or 15 pints of normal beer)

Almost Never	Sometimes	Often	Nearly always

8. During a heavy drinking period, I drink more than two bottles of spirits per day (8 bottles of wine or 30 pints of normal beer)

Almost Never	Sometimes	Often	Nearly always

Appendix 3 Clinical Withdrawal Assessment Tool (CIWA – Ar)

This tool can be used to assess alcohol withdrawal. The frequency of when this tool should be used is up to your own clinical experience. However, if a patient is in the early stages of withdrawal it is recommended that this is used every **90 minutes**.

The tool will enable you to decide whether your patient requires to be given any PRN medication. It is recommended that if the patient scores ≥10 or more ***then the patient should be given their PRN Chlordiazepoxide***. If the patient scores <10 (less than) then no PRN.

Patient name_____ **Date**_____ **Time**_____

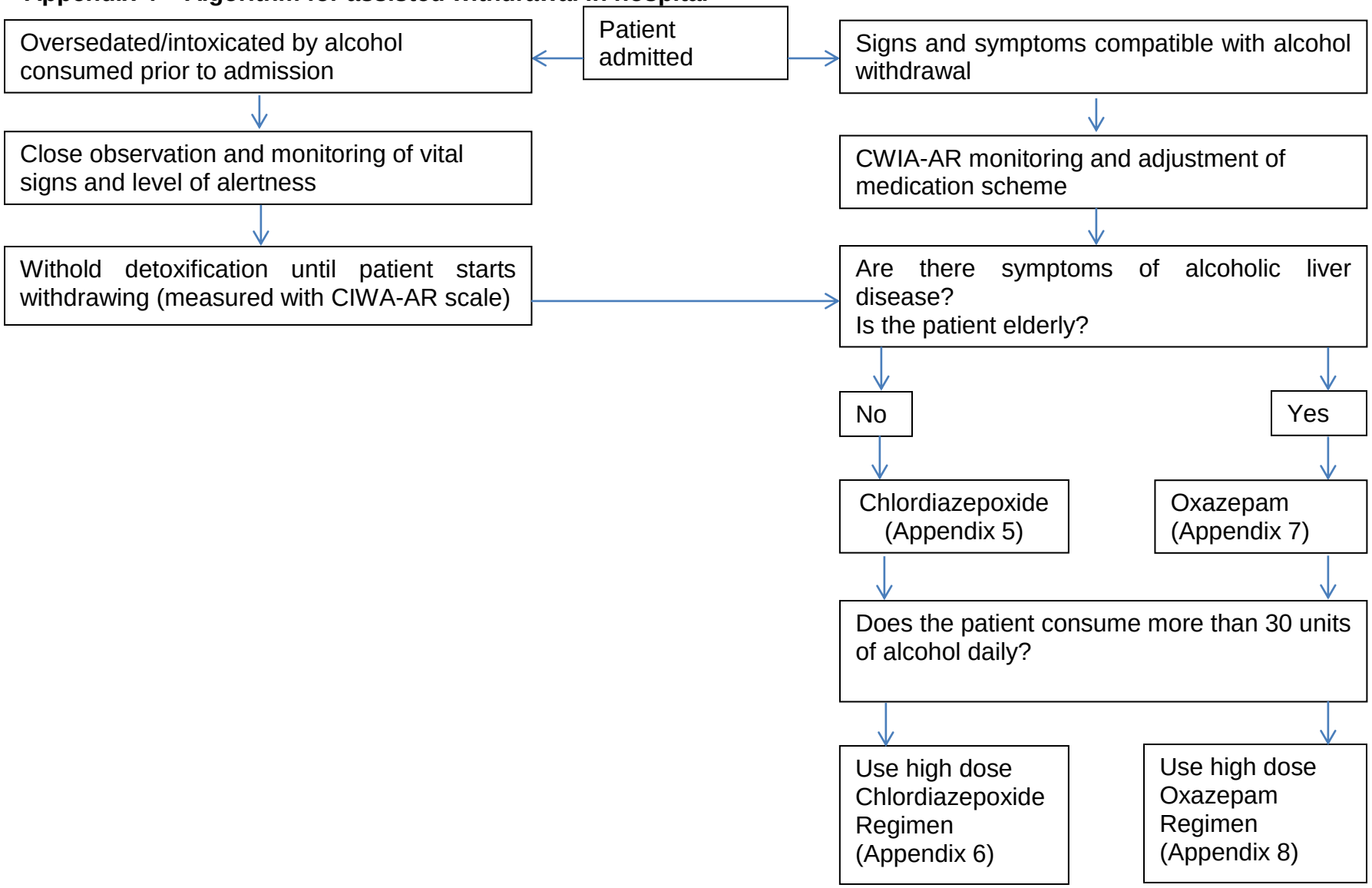
(Circle one observation for each category below)

Nausea and Vomiting Ask "Do you feel sick to your stomach? Have you vomited?" 0 no nausea and 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	**Tremor** Arms extended and fingers spread apart. 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
Auditory disturbances Ask "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 you know are not there?" 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	**Tactile disturbances** Ask "Have you any itching, pins and needles sensations, any burning, any numbness, or do you feel bugs crawling on or under your skin?" 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

Paroxysmal sweats 0 no sweat visible 1 barely perceptible sweating, palms moist 2 3 4 beads of sweat obvious on forehead 5 6 7 drenching sweats	**Anxiety** Ask “Do you feel nervous?” 0 no anxiety, at ease 1 mild anxious 2 3 4 moderately anxious, or guarded, so anxiety is inferred 5 6 7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions
Headache, fullness in head 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. 0 no present 1 very mild 2 mild 3 moderate 4 moderately severe 5 severe 6 very severe 7 extremely severe	**Visual disturbances** Ask “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 you know are not there?” 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
Agitation 0 normal activity 1 somewhat more than normal activity 2 3 4 moderately fidgety and restless 5 6 7 paces back and forth during most of the interview, or constantly thrashes about	**Orientation and clouding of sensorium “What day is this? Where are you? Who am I?”** 0 oriented and can do serial additions 1 cannot do serial additions or is uncertain about date 2 disoriented for date by no more than 2 calendar days 3 disoriented for date by more than 2 calendar days 4 disoriented for place/or person

Total CWIA-AR score_____
Testers Intitals _____

Appendix 4 – Algorithm for assisted withdrawal in hospital



Appendix 5 – <u>Standard</u> Chlordiazepoxide Regimen

Special caution is necessary in the case of severe liver impairment, respiratory disease and the elderly. Doses should also be reduced in female patients. Patients who misuse alcohol are at higher risk of intracranial haematoma. If a patient has received a head injury or is suspected of having an intracranial haemorrhage advice should be sought from either a Consultant or Registrar as to whether to prescribe Benzodiazepines as this could significantly alter neurological observations.

The patient's response to treatment should be closely monitored and dosage adjusted where over-sedation or severe breakthrough symptoms occur.

Name: ……Unit No:…… Ward: ……..NHS No: ……Consultant: ……..

Day	Date	0800am	1400pm	1800pm	2200pm	10-20mg PRN QDS up to a total daily dose of 120mg on Day 1					
1		20mg	20mg	20mg	20mg	Time:	Time:	Time:	Time:	**Total:**	Consider Adjust Dose/ Use "High Regime"?
						Dose:	Dose:	Dose:	Dose:		
2		20mg	20mg	20mg	20mg	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
3		15mg	15mg	15mg	15mg	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
4		15mg	15mg	15mg	15mg	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
5		10mg	10mg	10mg	10mg	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
6		10mg	--	10mg	--	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
7		--	--	--	--	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		

On discharge, up to 2 days treatment can be given on TTOs once patients have been assessed as suitable by the alcohol liaison team or Consultant.

Appendix 6 – <u>High</u> Chlordiazepoxide regimen

This regime is usually suitable for patients with chronic alcohol dependence with a daily alcohol intake of over 30 units. Special caution is necessary in the case of severe liver impairment, respiratory disease and the elderly. Doses should also be reduced in female patients. Patients who misuse alcohol are at higher risk of intracranial haematoma. If a patient has received a head injury or is suspected of having an intracranial haemorrhage advice should be sought from either a Consultant or Registrar as to whether to prescribe Benzodiazepines as this could significantly alter neurological observations.

The patient's response to treatment should be monitored and dosage adjusted where over – sedation or severe breakthrough symptoms occur.

Name: ……Unit No: …… Ward: ……..NHS No: ……Consultant: ……

Day	Date	0800am	1400pm	1800pm	2200pm	10-20mg PRN qds up to a total daily dose of 200mg on Day 1					
1		30mg	30mg	30mg	30mg	Time:	Time:	Time:	Time:	**Total:**	Consider Adjust Dose/
						Dose:	Dose:	Dose:	Dose:		
2		30mg	30mg	30mg	30mg	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
3		20mg	20mg	20mg	20mg	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
4		15mg	15mg	15mg	15mg	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
5		10mg	10mg	10mg	10mg	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
6		10mg	--	10mg	--	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		
7		--	--	--	--	Time:	Time:	Time:	Time:	**Total:**	
						Dose:	Dose:	Dose:	Dose:		

Appendix 7 - Standard Oxazepam Regimen

This regime is suitable for patients with alcohol dependence. It is suitable for patients with **hepatic impairment** and/or **COPD** and is also suitable for the **elderly**. Oxazepam is used in patients with signs and symptoms compatible with moderate to severe liver impairment (ascites, peripheral oedema, jaundice etc) Patients who misuse alcohol are at higher risk of intracranial haematoma. Any patient who has sustained a head injury within the previous 48 hours should not receive benzodiazepines, which could significantly alter neurological observations. **The patient's response to treatment should be monitored and dosage adjusted where over – sedation or severe breakthrough symptoms occur.**

Name: …… Unit No: …… Ward: ……..NHS No: ……Consultant: ……..

Day	Date	0800 am	1400 pm	1800 pm	2200pm	10-20mg PRN qds up to a total daily dose of 200mg on Day 1									
1		20mg	20mg	20mg	20mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	Consider/adjust Dose Use "high dose"?
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
2		20mg	20mg	20mg	20mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
3		15mg	15mg	15mg	15mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
4		15mg	15mg	15mg	15mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
5		10mg	10mg	10mg	10mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
6		10mg	--	10mg	10mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	--	sign	sign	Dose:		Dose:		Dose:		Dose:			
7		10mg	--	--	10mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	--	--	sign	Dose:		Dose:		Dose:		Dose:			
8		5mg	--	--	5mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	--	--	sign	Dose:		Dose:		Dose:		Dose:			

Doctors signature: …… Date: …… Doctors name and Initials: ……

Appendix 8 – High Oxazepam Regimen

This regime is suitable for patients with alcohol dependence with a daily alcohol intake of over 30 units. It is suitable for patients with hepatic impairment and/or COPD and is also suitable for the elderly. Oxazepam is used in patients with signs and symptoms compatible with moderate to severe liver impairment (ascites, peripheral oedema, jaundice etc) Patients who misuse alcohol are at higher risk of intracranial haematoma. Any patient who has sustained a head injury within the previous 48 hours should not receive benzodiazepines, which could significantly alter neurological observations.

The patient's response to treatment should be monitored and dosage adjusted where over – sedation or severe breakthrough symptoms occur.

Name: …… Unit No: …… Ward: ……..NHS No: ……Consultant: ……..

Day	Date	0800am	1400pm	1800pm	2200pm	10-20mg PRN qds up to a total daily dose of 200mg on Day 1									
1		30mg	30mg	30mg	30mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	Consider Adjust Dose?
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
2		30mg	30mg	30mg	30mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
3		20mg	20mg	20mg	20mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
4		15mg	15mg	15mg	15mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
5		10mg	10mg	10mg	10mg	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign	sign	sign	sign	Dose:		Dose:		Dose:		Dose:			
6		10mg	--	10mg	--	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
		sign		sign		Dose:		Dose:		Dose:		Dose:			
7		--	--	--	--	Time:	Sign:	Time:	Sign:	Time:	Sign:	Time:	Sign:	**Total:**	
						Dose:		Dose:		Dose:		Dose:			

Doctors signature: ……Date: …… Doctors name and Initials: .....……

Appendix 9 – Biological Markers

- Biological markers are useful tools for the early diagnosis and treatment of alcohol related problems.
- **State markers** reflect chemical changes occurring in the body as a result of recent or long-term alcohol use.

They are useful:

- In detecting levels of alcohol consumption that are likely to be harmful if continued
- As they can be utilised as a motivational tool in brief interventions

Liver Enzymes

• Three liver enzymes are commonly used in screening for alcohol problems: aspartate amino transferase (AST), alanine aminotransferase (ALT), and gamma glutamyl transferase (GGT).

• The amino transferases are found in many body tissues apart from the liver, but it **is the ability of alcohol to damage liver cells that provides their utility as a marker of excessive drinking.**

• **ALT is more specific for liver damage than AST**, and is therefore a more useful test of excessive drinking.

• There are many causes of liver disease other than alcohol, and a range of factors gives rise to increases in amino transferases. However, an **AST:ALT ratio of >2 in a patient with liver disease diagnosed on clinical grounds is highly suggestive of alcohol as a cause**. The sensitivity of AST and ALT are low for alcohol problems (30-50%), but both have a higher specificity (80%).

• **GGT is a microsomal enzyme mainly found in the liver**, although it is distributed widely in most organs except for muscle. GGT is more sensitive to enzyme induction by alcohol than ALT or AST in excessive drinkers, but can also be elevated by liver damage. False-positive results can be produced by enzyme-inducing drugs (e.g. anticonvulsants), but the sensitivity (50-70%) and specificity (75-85%) of GGT is typically higher for AST and ALT.

• In practice, GGT is the most useful and widely available of the three tests for the detection of alcohol problems. Where AST, ALT or GGT are elevated due to alcohol misuse they normally return to normal after 1-2 months of abstinence (although this is subject to individual variation and depends on the starting level).

Mean Corpuscular Volume (MCV)

- MCV is commonly used as a marker for excessive drinking in screening.
- Macrocytosis (increased size of red blood cells) may result as direct toxicity of alcohol to immature cells in the bone marrow, but may also be due to vitamin B12 or folate deficiency.
- The sensitivity of MCV is typically less than for GGT (25-50%), with specificity ranging between 85 and 95%.
- It takes longer than liver enzymes to return to normal following abstinence, and depending on the initial starting level it may take anywhere between 1 and 3 months.

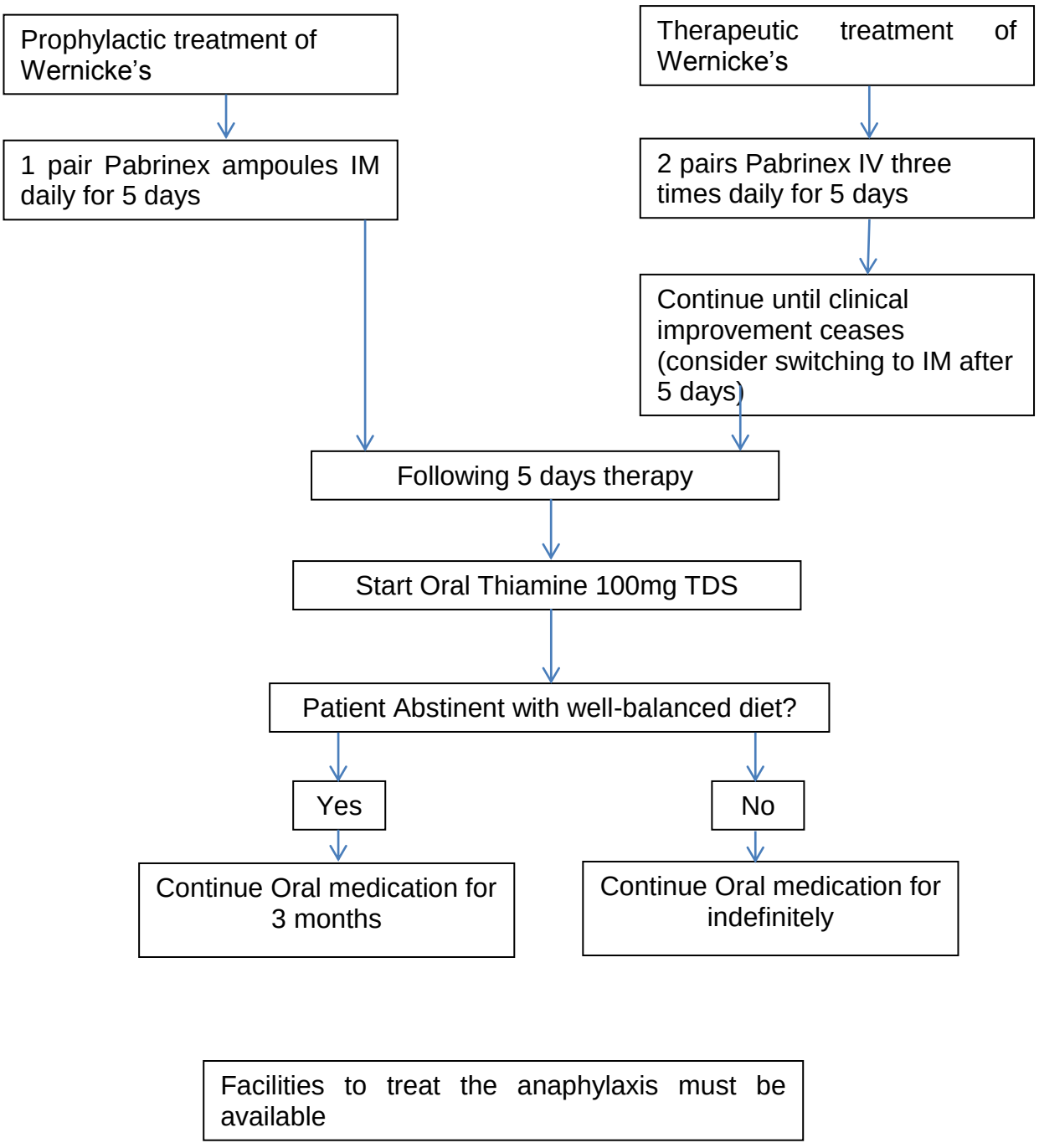
Interpretation of results

	INCREASED	DECREASED
Serum Magnesium and Potassium Mag. N – 0.78 – 1.03 m.mol/l Potassium N – 3.8 – 5.2 m.mol/1		When blood alcohol level is rising it depresses the anti-diuretic hormone in the posterior pituitary and leads to diuresis (increased formation of urine) the patient secretes a lot of magnesium and potassium levels are found to be lower than normal.
Serum Calcium Cal. N = 2.15 – 2.60 m.mol/l		Serum calcium also could be lower than normal in some alcoholics.
Blood Glucose (fasting 3-5.5 m.m//t)	Chronic alcoholics on admission may present with hypoglycaemia because excessive alcohol intake inhibits gluco-neogensis (formation of glucose from non-carbohydrate substances). So it is essential to ensure adequate glucose intake (plenty of sweet drinks) for alcoholics on admission and during detoxification period. Hypoglycaemia usually presents with sweating, high blood pressure, disorientation, bizarre behaviour, mental confusion etc and if low blood glucose persists for a few more minutes it could lead to permanent and irreversible brain damage.	

FBC	INCREASED	DECREASED
Haemoglobin 12-18 G/DL (100ml)	Higher Polycythaemia	Lower Anaemia
Red Cells 4.5-6		
White Cells 4-11	Higher: ?infection	
Platelets 150-350.000		Could be lower than normal due to the effect of alcohol on the bone marrow
MCV (Mean corpuscular volume) 82-100	More than normal: increased size of red cell due to Folate deficiency and or direct effect of alcohol on the blood cells causing vaculation inside them	Lower than normal: decreased size of cells. Iron deficiency anaemia may be due to bleeding (grastroduodenal in alcoholics)
MCHC (Mean corpuscular haemoglobin concentration) 32-26%	Cannot be higher than normal because it is mean value	Lower than normal could be iron deficiency
Reticulocytes Immature cells in the making 0-2%	Increased reticulocytes indicates the presence of bleeding somewhere in the body (? Gastric and duodenal bleeding in chronic alcoholics). First warning sign of bleeding.	
Serum folate (N = 6 – 21mg/ml) Red cell folate (N = 160 – 640mg/ml)		Folic acid is a member of Vit.B complex group. Folic acid deficiency in alcoholics is due to inadequate diet and is present in more than 50% alcoholics on admission. Folate deficiency may lead to increased M.C.V.
Serum B12 (N = 160 – 900 mcg/ml) It is a member of Vit B complex group. It is stored in the liver and the amount is 3mg. The daily need is 3mg (1mg – 1/1000 part of meg.) and hence the liver store is about 2 ½ - 3 years even if no vit. B12 is taken in the diet.	It could be higher than normal in some on admission. As it is stored in the liver, its increased level in the blood indicates that liver cells have been destroyed due to alcohol-induced injury in alcoholics and as a result vitamin B12 stored in the liver cells has come out in the blood.	It is rarely low in alcoholics

LFTs (Liver function tests) suggestion of liver damage but not always definitely diagnostic of alcoholic liver disease.	INCREASED	DECREASED
Serum Bilirubin 3-17 mmol/lt	Higher: indicates jaundice due to liver damage.	
Serum Enzymes Alkaline Phosphatase ALP = 20 – 100 I.U Aspartate Transaminase AST= 5 – 40 I.U Y-glutamyl transpeptidase (GGT) N = 10 – 50 I.U	These enzymes are produced in the liver and also in some other organs and stored in the liver cells as well. When liver is injured due to diseases or to direct action of alcohol on the hepatocytes or to fatty changes, hepatitis and/or cirrhosis, these stored enzymes come out in the blood and raise levels higher than normal. All of these enzymes may be within normal limits in spite of liver damage. All could be increased due to liver damage	
Serum Albumin (N = 30 – 45g/1) Albumin is produced in the liver.		In the liver damage due to any cause, including cirrhosis its production could be decreased. Low albumin leads to accumulation of fluid in the abdomen, (ascites) due to reduction of osmotic pressure in the blood. It also binds different drugs and hence its low level could lead to increased amount of free drug hanging around in the circulation, particularly sedatives. Hence in presence of low serum albumin sedatives even in normal dose could be an overdose in patients with liver cirrhosis.
Serum Globulin (N = 18 – 38g/1)	Could be high in alcoholics due to stimulating effects of alcohol on the immune system.	
Serum amylase (70 – 300 I.U)	Usually high (about 3 or 4 times the upper normal limit) in both chronic and acute pancreatitis due to chronic ingestion or any other cause. Could be very low if pancreas is destroyed due to any reason. Amylase is an enzyme necessary for the metabolism of starch. It is secreted by the pancreas and the salivary glands.	
Prothrombin time This is a measure of the bleeding status. It is expressed in secs. If the difference between the patient's prothrombin time and the control is more than 3 secs, no major or minor operation should be undertaken because that might lead to bleeding internally and externally.		Prothrombin is a protein which is essential for the clotting of blood and is produced in the liver with help of vitamin K. In the alcoholic liver disease its production in the liver may be decreased due to hepatic dysfunction. If the prothrombin time is abnormal the patient is given vitamin K intramuscularly 10 mg daily till prothrombin time returns to normal.

Appendix 10 - Flowchart for thiamine supplementation for alcohol dependent inpatients



Facilities to treat the anaphylaxis must be available

Appendix 11- Administration of IM Pabrinex

Preparation

Check dates on vials.

Snap open tops

Draw contents in to 10 ml syringe to mix. Total volume 7mls.

Additionally nursing staff should inform the doctor that the procedure is going to take place.

Ensure that patient is comfortable

Take and record patient's physical observation (temperature, pulse, blood pressure and respirations) as a baseline, as medication can cause hypotension.

Pabrinex is also available as an Intravenous Injection. Therefore before administration ensure that both the Summary of Product Characteristics and ampoule labels refer to the INTRAMUSCULAR injection

Implementation

Confirm patient identity and script validity

Obtain consent for procedure

Ask patient to lie on bed in prone position

Select and prepare injection site.

Clean site using alcohol swab in circular motion of 5cm, for 30 seconds.

Allow to dry.

Put gloves on. With thumb and finger of non-dominant hand gently stretch back skin and hold taut.

The contents of one ampoule number 1 and one ampoule number 2 of Pabrinex Intramuscular High Potency (total 7ml) are drawn up into a syringe to mix them just before use.

Remove needle sheath. Position at 90- degree to skin surface away from skin.

Inform patient they will notice injection

The appropriate site for this type of administration is the gluteus medious/ventro gluteal used for deep intramuscular (I.M) using the Z - track injections technique. This is identified as the upper outer quadrant of the buttock. This site is used to lower risk of hitting the sciatic nerve and the superior gluteal arteries. The Z tracking method involves pulling the underlying skin down wards or on to one side of the injection site, inserting the needle at a right angle to the skin, which moves the subcutaneous and cutaneous muscle tissues by

approx. 1-2 cm. The injection is given and the needle withdrawn, whilst releasing and retracting the skin at the same time. This manoeuvre seals of the puncture tract at the junction at each tissue layer.

Pabrinex needs to be injected slowly high into the gluteal muscle, 5cm below the iliac crest.

When repeatedly injecting vary sites as much as possible and avoid previous sites by 2.5cm.

Licensed practice is to administer a single 7 ml injection unless patient preference/clinical need require splitting the dose. However if the patient prefers the injection can be administered between 2 sites. Give approximately half the dose in the 1st site (as described above) then change the safecap needle and administer the remaining volume into the 2nd site. The exact volume given to each site is inconsequential.

Qualified nurse to remain with patient throughout and for 15min following completion of the procedure.

Observe patient and watch for any adverse effects and speak to patient also to assess for adverse effects

Dispose of all equipment, packaging and sharps appropriately (in accordance with Trust policy and guidance)

Retake physical observations 15 minutes after the procedure (temperature, pulse, blood pressure and respirations) and ensure that there is no significant difference from readings taken previously

Qualified nurse inform the Doctor present of any concerns identified in relation to physical observation

Document fully in nursing and medical records the procedure when completed including any concerns

Continue to monitor client until team are satisfied that they have recovered.

Aftercare

Observe for anaphylactic- type reaction for 30 mins.

Sign medication card and make entry in patient records.

Ice can be used to numb the injection site, or lower pain if appropriate for patient comfort

Appendix 12 – Administration of IV Pabrinex

IV Pabrinex must always be administered by a doctor.

Preparation

Check dates on vials.

Snap open tops

Draw contents in to 10 ml syringe to mix. Total volume 7mls.

Ensure that patient is comfortable

Take and record patient's physical observation (temperature, pulse, blood pressure and respirations) as a baseline, as medication can cause hypotension.

Pabrinex is also available as an Intramuscular Injection. Therefore before administration ensure that both the Summary of Product Characteristics and ampoule labels refer to the INTRAVENOUS injection

Implementation

Open 100 ml Sodium Chloride 0.9% solution bag and IV giving set pack

Doctor to draw up Pabrinex No.1 and Pabrinex No. 2 ampoules into syringe through the needle and mix in the syringe. Therefore before administration ensure that both the Summary of Product Characteristics and ampoule labels refer to the INTRAVENOUS injection (the IV preparation is NOT routinely kept on the wards).

Doctor then to inject the Pabrinex solution, as prescribed, into the saline bag through the additive port of the bag

Ensure that saline bag has additive label attached identifying the dose of the Pabrinex that has been added.

Ensure that gate is closed on IV giving set

Hold saline bag with tube attachments facing upwards. Snap off plastic covering saline bag opening and insert IV giving set (pointed plastic end) into this opening.

Suspend saline bag from drip stand.

Open gate on IV giving set and slowly run fluid through giving set, ensuring that there are no air bubbles in the tube

When solution reaches the end of the giving set close the gate again

Wait for doctor to insert cannula into patient's vein and secure this in place. The cannula must be flushed with Sodium Chloride 0.9% before the doctor attaches the giving set to the cannula.

Open gate slowly and ensure that drip flows through. Again, ensure there are no air bubbles in the tube.

Close gate

Open gate on IV giving set again and allow fluid to flow through calculating drops/mins to give 100 mls in 30 mins (3-4 mls/min)

Qualified nurse to remain with patient throughout.

Doctor to remain with the patient throughout the administration of Pabrinex and until vital signs are retaken and there are no concerns associated with the patient's physical health.

Ensure solution continues to flow through freely

Observe patient and watch for any adverse effects and speak to patient also to assess for adverse effects

Following administration, when bag is empty, close gate on giving set, remove giving set replace cap on cannula (cannula should remain in situ until all treatments are completed unless resisting is necessary). Cannula must be flushed with Sodium Chloride 0.9%.

Dispose of all equipment, packaging and sharps appropriately (in accordance with Trust policy and guidance)

Retake physical observations (temperature, pulse, blood pressure and respirations) and ensure that there is no significant difference from readings taken previously.

Qualified nurse inform the doctor present of any concerns identified in relation to physical observation

Document fully in nursing and medical records the procedure when completed including any concerns

Continue to monitor client until team are satisfied that they have recovered