PURPOSE

To assist staff involved in the care of inpatients at risk of alcohol withdrawal and to address associated risks of morbidity and mortality. The primary goals of treatment are to prevent seizure and the development of Delirium Tremens through adequate treatment with benzodiazepines and where indicated the prevention or treatment of Wernicke's encephalopathy through parenteral supplementation of thiamine.

This document should be used in conjunction with the Alcohol Detoxification Assessment and Treatment Pathway (9084).

BACKGROUND

Alcohol withdrawal occurs when the abrupt cessation of alcohol use after chronic exposure leads to a hyper-excited neuronal state the severity of which falls on a continuum from mild to severe.

The annual prevalence of alcohol dependence in NZ has been estimated to be 1.3% ([1]). Data from the US, UK and Australia (countries with similar drinking cultures) are consistent with an approximate lifetime prevalence of 4% in the adult population ([2-4]). The prevalence of alcohol dependence in general hospital inpatients has been estimated to be around 12%, and may be as high as 30% in medical and surgical wards and emergency department presentations ([5, 6]).

STANDARDS TO BE MET

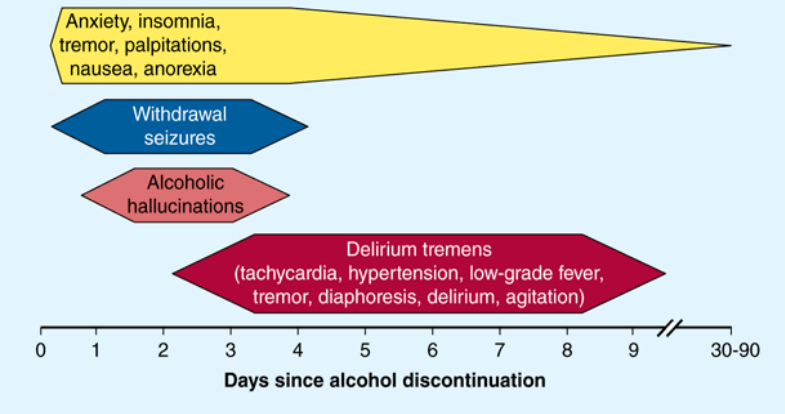
1. Alcohol Withdrawal Syndrome: Features and Time Course

1.1. Clinical Features:

Autonomic Hyperactivity	*Neuro-physical signs and symptoms*	*Gastrointestinal signs and symptoms*
• Sweating • Tremor • Tachycardia • Raised blood pressure • Raised temperature	• Apprehension, anxiety, irritability, agitation, insomnia • Light sensitivity and tactile disturbances, hallucinations	• Nausea • Vomiting

Alcohol withdrawal seizures may occur in 2–5% cases of withdrawal; seizures may herald the onset of delirium tremens. *Adapted from: Oxford Handbook of Addiction Medicine, 2009*

1.2. Time Course of Alcohol Withdrawal Symptoms



Source: Katzung BG, Masters SB, Trevor AJ: *Basic & Clinical Pharmacology, 12th edition*: www.accessmedicine.com

2. Assessment and Management of Alcohol Withdrawal

For a summary of the assessment and management of alcohol withdrawal, refer to Flow Chart for Management of Alcohol Withdrawal.

2.1. AUDIT-C Screen

a) All patients who report consuming alcohol in the past year should be screened for alcohol related problems using the AUDIT-C questionnaire ([7]).

b) The Alcohol Use Disorders Identification Test–C (AUDIT-C) is a three-item questionnaire which reflects the patient's level of risk related to alcohol. In general, the higher the total score on the AUDIT-C, the greater the sensitivity in finding persons with alcohol dependence. An answer of daily or almost daily on the third question of the AUDIT-C identified 79% of heavy drinkers and 81% of patients with active alcohol abuse or dependence ([8])

Questions	0	1	2	3	4	Score
1. How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week	
2. How many drinks containing alcohol do you have on a typical day when drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	
3. How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
					Total	

c) **Scoring and interpreting AUDIT-C**

i Add the scores (shown in the top line) for each of the three questions for a total score out of 12.

- 0-5 = Lower-risk drinking – no further action necessary
- 6-10 = Moderate-risk drinking
  Consider screening with the full AUDIT (see Audit C – Alcohol Screening Questionnaire), provide brief advice and offer to refer to Bay of Plenty Addictions Services (BOPAS) ([9], [10]).

- >10 = High-risk drinking
  Warrants further diagnostic evaluation (see 2.2 below) and there is a risk of developing alcohol withdrawal symptoms if ceasing alcohol. Refer to BOPAS.

2.2. Patient assessment

a) History and physical examination – document AUDIT-C and amount of alcohol consumed, pattern of drinking, history of blackouts/memory loss, previous admissions for alcohol withdrawal, liver disease, peripheral neuropathy, cardiac disease or respiratory disorders, history of other substance use.
b) FBC, CRP, electrolytes, creatinine, LFTs, blood alcohol level ± urine toxicology (depending on history taking).
c) Consider additional observation if indicated i.e. telemetry if tachycardia, cardiac arrhythmias, hypertension (in excess of patients' usual blood pressure).
d) **Medical staff should document parameters to indicate when review is required.**

3. General care

3.1. Supportive, non-pharmacological therapy is effective for many patients, especially those with mild to moderate alcohol withdrawal. These measures also represent good care in patients who require pharmacological therapy. In the elderly, these measures may be particularly effective for preventing delirium.

a) Provide patient with a quiet room, free from environmental stimulation, a single room near the nurses' station if possible.
b) Approach the patient with a calm and reassuring manner.
c) Use simple, concrete language and directions.
d) Orient patient to time, place and person during periods of confusion: Inform patient of his or her progress during periods of lucidity.
e) Carefully monitor intake and output. Check for dehydration or over hydration.
f) If the patient is having hallucinations, reassure them that you do not see them and that you will see that they remain safe. If the patient is experiencing illusions, correct the patient's misrepresentation in a calm and matter-of-fact manner.
g) Maintain safety precautions at all times. Try to avoid physical restraints whenever possible.

4. Benzodiazepines for Alcohol Withdrawal Symptoms

4.1. Benzodiazepines remain the drugs of choice in the treatment of alcohol withdrawal. The primary goal is to administer adequate benzodiazepines to treat withdrawal symptoms and/or prevent withdrawal from developing.

4.2. There is insufficient evidence for efficacy and safety of non-benzodiazepine medications such as carbamazepine, gabapentin, baclofen and topiramate for alcohol withdrawal management ([10], [11], [12], [13], [14]).

4.3. In a general hospital setting where there is no addiction specialist support a combination of a fixed dose and PRN regimen is recommended ([15], [16]).

4.4. Once severe withdrawal has developed it is difficult to manage and if progressed to delirium tremens is a medical emergency. If untreated the mortality rate for delirium tremens can be as high as 15%.

4.5. Long-acting benzodiazepines such as diazepam have been found to be more effective at preventing seizure than those which are short or intermediate-acting, but short-acting or intermediate-acting benzodiazepines should be used in patients with significant liver disease, with significant respiratory compromise, or in patients 65 years of age or over.

4.6. Some patients may require upwards of diazepam 100 mg daily in the first 24 hours – if patients on the regimen for moderate to severe alcohol withdrawal do not improve or worsen in their presentation, contact BOPAS Medical Officer or Consult Liaison (After hours contact on-call Psychiatry Services).

4.7. Indications for Management with Benzodiazepines

a) The AUDIT–C score is over 10
AND
b) The patient has previously experienced alcohol withdrawal and the patient is currently drinking daily
OR
c) The patient is presenting in acute alcohol withdrawal or history of withdrawal symptoms (**tremor, agitation and sweating** are the most sensitive markers of alcohol withdrawal).
d) If patient underreporting on Audit C scoring is below 10 however presenting in withdrawal, consider commencing treatment regime

⚠ **Do not delay treatment if there is a history of severe withdrawal symptoms or withdrawal seizures.**

4.8. In patients with an AUDIT-C over 10, without evidence of acute alcohol withdrawal or a history, monitor for alcohol withdrawal symptoms for 72 hours to detect the development of alcohol withdrawal.

4.9. The presence of withdrawal can be monitored with the Clinical Institute Withdrawal Assessment for Alcohol-Revised CIWAA-R Scale ([17])

4.10. Selection of Benzodiazepine Regimen

a) The appropriate withdrawal regimen should be selected based on the number of standard drinks consumed per day and the severity of alcohol withdrawal symptoms. These are indicators of level of alcohol dependence. Refer to fixed dose regimens for guidance.
b) If a patient is intoxicated manage with **PRN** benzodiazepine, review **within** 24 hours then chart a fixed dose regimen. The basis for PRN management is to mitigate risk of additive CNS depressant effects, however prescribing should not be withheld as seizures may still occur when the blood alcohol level is still high in patients with severe alcohol dependence.

⚠
- Complete applicable section in proforma or prescribe entire regimen on national medication chart.
- Do not prescribe “as per CIWAA-R”.
- Do not discontinue on the sole basis that the CIWAA-R score is low – this is an indicator that the fixed dose regimen is having the intended therapeutic effect

5. Diazepam fixed dose regimens

Diazepam contraindications: respiratory failure, significant liver impairment, possible head injury or cardiovascular accident.

- Instead use **lorazepam** (see section 6)
- Patients with evidence of liver failure (jaundice/ascites/encephalopathy) should be discussed directly with the Medical or Gastroenterology Registrar and will require individualised care.

5.1. Mild Withdrawal

a) For patients who require diazepam for management of alcohol withdrawal and who drink less than 10 standard drinks daily and the CIWAA-R is less than 8. Complete applicable section in proforma or prescribe:

b) **Mild Withdrawal Diazepam (oral):**

- **First 24 hours (Day 1):** 5 mg QID
- **Day 2:** 5 mg TDS
- **Day 3:** 5 mg BD
- **Day 4:** 5 mg nocte
- **STOP:** Do not continue benzodiazepine without consultation with Consult Liaison or BOPAS

In addition: chart diazepam 5-10 mg PO Q2H PRN maximum of additional 40 mg/24 hours.
Annotate indication: if CIWAA-R > 8 or tremor, sweating, agitation present.

PRN doses should not be given within 30 minutes of a regular dose.

- Monitor patients 4 hourly for the first 72 hours of the medicated alcohol withdrawal.
- If the CIWAA-R score remains above 8, especially if symptoms of tremor, agitation and sweating do not improve a review of dosing regimen is necessary, and an increase in dose is likely to be required. Consult with Consult Liaison or BOPAS Medical Officer.
- If patient is sedated prior to scheduled dose consider withholding dose.

5.2. Moderate Withdrawal

a) For patients who require diazepam and are drinking 10-20 standard drinks daily or the CIWAA-R score is above 8. Complete applicable section in proforma or prescribe:

b) **Moderate Withdrawal Diazepam (oral):**

- **First 24 hours (Day 1):** 10 mg QID
- **Day 2:** 10 mg TDS
- **Day 3:** 10 mg BD
- **Day 4:** 5 mg BD
- **Day 5**: 5 mg nocte
- **STOP:** Do not continue benzodiazepine without consultation with Consult Liaison or BOPAS

In addition: chart diazepam 5-10 mg PO Q2H PRN maximum of additional 80 mg/24 hours.
Annotate indication: if CIWAA-R > 8 or tremor, sweating, agitation present.

PRN doses should not be given within 30 minutes of a regular dose.

- Monitor patients 4 hourly for the first 72 hours of the medicated alcohol withdrawal.
- If the CIWAA-R score remains above 8, especially if symptoms of tremor, agitation and sweating do not improve a review of dosing regime is necessary, and an increase in regular dose of diazepam is likely to be required. Consult with Consultation Liaison Psychiatry or BOPAS.
- If patient is sedated prior to scheduled dose consider withholding dose.

5.3. Severe Withdrawal

a) Risk of severe withdrawal is high in:

- Patients drinking more than 20 standard drinks daily (e.g. 3 bottles of wine or 1L of spirits).
- Patients with past history of a seizure associated with alcohol withdrawal or alcohol withdrawal delirium.
- Patients who have had previous inpatient admissions for alcohol withdrawal (check Regional Clinical Portal)
- Patients who have a history of taking prescribed or illicit benzodiazepines.
- Patients who present with a CIWAA-R over 15

b) Severe Withdrawal Diazepam

- Complete applicable section in proforma or prescribe **diazepam 20 mg PO QID** and monitor CIWAA-R 1-2 hourly.

In addition: chart diazepam 10-20 mg PO Q2H PRN maximum of additional 40 mg/24 hours.
Annotate indication: if CIWAA-R > 8 or tremor, sweating, agitation present.

PRN doses should not be given within 30 minutes of a regular dose.

- Call BOPAS Medical Officer or discuss with Consultation Liaison Psychiatry to discuss on-going regimen. These patients may require high doses of benzodiazepines to manage withdrawal

6. Lorazepam fixed dose regimens

Lorazepam should be prescribed for the following patients:

- Patient ≥ 65 years of age
- Suspicion of hepatic impairment (raised GGT, INR, bilirubin, lowered platelets)
- At increased risk of respiratory depression
- Head injury or cardiovascular accident.

Lorazepam is an intermediate acting benzodiazepine that has no active metabolites and therefore there is reduced risk of over sedation due to accumulation of metabolites.

Average dose equivalence: Oral diazepam 5-10 mg = oral lorazepam 1-2 mg.

Lorazepam regimens have a longer duration to avoid a sudden drop in serum levels and an increased risk of a withdrawal seizure occurring between day 4-6.

6.1. Mild Withdrawal

a) For patients who require lorazepam for management of alcohol withdrawal and who drink less than 10 standard drinks daily and the CIWAA-R is below 8. Complete applicable section in proforma or prescribe:

b) **Mild Withdrawal Lorazepam (oral):**

- **First 24 hours (Day 1):** 1 mg QID
- **Day 2:** 1 mg QID
- **Day 3:** 1 mg QID
- **Day 4:** 1 mg TDS
- **Day 5:** 0.5 mg TDS
- **Day 6:** 0.5 mg TDS
- **Day 7:** 0.5 mg BD
- **Day 8:** 0.5 mg nocte
- **STOP:** Do not continue benzodiazepine without consultation with Consult Liaison or BOPAS

In addition: chart lorazepam 0.5-1 mg PO Q2H PRN maximum of additional 4 mg/24 hours.
Annotate indication: if CIWAA-R > 8 or tremor, sweating, agitation present.
PRN doses should not be given within 30 minutes of a regular dose.

- Monitor patients 4 hourly for the first 72 hours of the medicated alcohol withdrawal.
- If the CIWAA-R score remains above 8, especially if symptoms of tremor, agitation and sweating do not improve a review of dosing regimen is necessary, and an increase in dose of regular lorazepam is likely to be required. Consult with Consultation Liaison Psychiatry or BOPAS
- If patient is sedated prior to scheduled dose, consider withholding dose.

6.2. Moderate Withdrawal

a) For patients who require lorazepam and are drinking 10-20 standard drinks daily and/or the CIWAA-R is above 8 on presentation complete applicable section in proforma or prescribe:

b) **Moderate Withdrawal Lorazepam (oral):**

- **First 24 hours (Day 1):** 2 mg QID
- **Day 2:** 2 mg QID
- **Day 3:** 1 mg QID
- **Day 4:** 1 mg TDS
- **Day 5:** 1 mg TDS
- **Day 6:** 1 mg BD
- **Day 7:** 0.5 mg BD
- **Day 8:** 0.5 mg BD
- **Day 9:** 0.5 mg nocte
- **STOP:** Do not continue benzodiazepine without consultation with Consult Liaison or BOPAS

In addition: chart lorazepam 1-2 mg PO Q2H PRN maximum of additional 6 mg / 24 hours.
Annotate indication: if CIWAA-R > 8 or tremor, sweating, agitation present.
PRN doses should not be given within 30 minutes of a regular dose.

a) Monitor patients 4 hourly for the first 72 hours of the medicated alcohol withdrawal. If the CIWAA-R score remains above 8 especially if symptoms of tremor, agitation and sweating do not improve a review of dosing regimen is necessary, and an increase in dose of regular lorazepam is likely to be required. Consult with Consultation Liaison Psychiatry or BOPAS.

b) If patient is sedated prior to scheduled dose consider withholding dose.

1.2. Severe Withdrawal

a) Risk of severe withdrawal is high in:

- Patients drinking more than 20 standard drinks per day (e.g. approximately 3 bottles of wine or 1 L of spirits).
- Patients with past history of a seizure associated with alcohol withdrawal or alcohol withdrawal delirium.
- Patients who have had previous inpatient admissions for alcohol withdrawal (check Regional Clinical Portal - RCP)
- Patients who have a history of taking prescribed or illicit benzodiazepines.
- Patients who present with a CIWAA-R over 15

b) Severe Withdrawal

- Complete applicable section in proforma or prescribe **lorazepam 3 mg PO QID** and monitor CIWAA-R 1-2 hourly

In addition: chart lorazepam 1-2 mg PO Q2H PRN maximum of additional 6 mg/24 hours.
Annotate indication: if CIWAA-R > 8 or tremor, sweating, agitation present.
PRN doses should not be given within 30 minutes of a regular dose.

- Call BOPAS Medical Officer or discuss with Consultation Liaison Psychiatry to discuss ongoing regimen. These patients may require high doses of benzodiazepines to manage withdrawal

Monitor all patients for over-sedation or increasing severity of withdrawal and review benzodiazepine dosage IF REQUIRED

7. Clinical assessment of alcohol withdrawal

7.1. Tremor, agitation and sweating are the most sensitive markers of alcohol withdrawal and may be used as primary indicators of withdrawal severity and are indicative of acute withdrawal ([17]). Diazepam or lorazepam should be commenced promptly or the withdrawal regimen reviewed urgently where these symptoms are present.

7.2. Rating scales are not diagnostic instruments and assessment can be difficult if the assessor is inexperienced in assessing alcohol withdrawal or the patient is medically unwell. The use of withdrawal scales may result in under-treatment of alcohol withdrawal if medical staff are not familiar with their use. The CIWAA-R consists of 10 items and can be completed in about 5 minutes. A CIWAA-R score of less than 8 indicates mild withdrawal, 8 to 15 moderate to severe withdrawal, and more than 15 very severe withdrawal.

7.3. In patients admitted to hospital with an AUDIT–C over 10, without evidence of acute alcohol withdrawal or a history indicating the need for benzodiazepine management, monitoring for alcohol withdrawal symptoms should continue for 72 hours to detect the development of alcohol withdrawal.

7.4. **If medication for withdrawal is prescribed:**
Assess withdrawal with the CIWAA-R on admission and every hour for the first 4 hours, followed by 4-hourly during the first 72 hours of the medicated alcohol withdrawal. Continue to do a CIWAA-R QID until the alcohol withdrawal regimen

is completed.

8. Delirium tremens: Features and Risk Factors

8.1. Delirium tremens or alcohol withdrawal delirium occurs in 3-5% of all people experiencing alcohol withdrawal and untreated it has a significant mortality associated with sympathetic over-activity ([18]). It may develop under two circumstances. Firstly, when a patient with established withdrawal, or who is at risk of developing withdrawal, receives ineffective treatment or secondly, when a patient presents late with established symptoms and no previous treatment. Delirium tremens can be difficult to diagnose as other medical conditions can have a similar presentation e.g. sepsis, CNS infections, drug toxicity, and so a broad differential should always be considered.

8.2. Risk factors for the development of delirium tremens include:

a) Long history of alcohol dependence
b) History of alcohol withdrawal delirium
c) Age over 60 years old
d) Concomitant acute medical illness
e) Presentation in severe alcohol withdrawal
f) Presence of significant alcohol withdrawal in the presence of an elevated alcohol level
g) Prior history of seizures or has had a seizure during current withdrawal episode

8.3. Time course:

a) Onset: 48–72 hours after the last drink (may occur up to 5 days after)
b) Duration: 3–10 days

8.4. Generally preceded by other signs of alcohol withdrawal

8.5. Seizures may herald the onset of delirium tremens

8.6. **Clinical features:**

a) As per severe alcohol withdrawal:
   i Autonomic hyperactivity: tachycardia, sweating, tremor, hypertension, fever
   ii Severe anxiety, marked agitation
   iii Dehydration, electrolyte imbalances may be present

   Plus:

   iv Clouding of consciousness / delirium (disorientation and confusion, fluctuating mental state)
   v Hallucinations: typically visual or tactile
   vi Paranoid delusions
   vii Cardiovascular collapse may occur

Delirium tremens is a manifestation of very severe alcohol withdrawal and is a **MEDICAL EMERGENCY**

Source: Oxford Handbook of Addiction Medicine, 2009

8.7. Management of Delirium Tremens

a) Intravenous diazepam or lorazepam are likely to be necessary to manage this condition, and management should always occur in consultation with ICU and with supervision by a consultant or senior registrar.

9. Wernicke's Encephalopathy and Korsakoff Psychosis

9.1. Wernicke's Encephalopathy and related Korsakoff Psychosis can present during alcohol withdrawal or whilst the individual is still drinking.

9.2. **Patients are at higher risk of developing Wernicke's encephalopathy during admission to hospital due to improved nutrition during their stay on a background of thiamine deficiency.**

9.3. Chronic alcohol use results in impaired thiamine intake, absorption, storage and metabolism. Additionally, alcohol withdrawal increases central thiamine demand, which is further increased by the presence of glucose. Due to the lack of thiamine cofactors needed to process nutrients when patients are being fed in hospital, high levels of free radicals can result in brain damage.

9.4. The classical symptom triad of ataxia, ophthalmoplegia and confusion are rarely present together in Wernicke's encephalopathy and the syndrome is much more common than is widely understood. As a consequence, alcohol-related brain disease is routinely missed, with failure to prevent further damage.

9.5. Clinical features of Wernicke's encephalopathy (acute):

a) Confusion
b) Ataxia: (wide based gait, inability to stand or walk without assistance)
c) Nystagmus: ophthalmoplegia (paralysis of one or more extra-ocular muscles responsible for eye movements, diplopia). Also, painless vision abnormality
d) Strabismus

⚠ Note: not all of these symptoms must be present to indicate treatment.

9.6. Clinical features of Korsakoff psychosis

a) Retrograde amnesia (severe memory loss)
b) Confabulation
c) Anterograde Amnesia
d) Lose interest in things quickly
e) Lost "patient feels lost"

9.7. Maintain a high index of suspicion of Wernicke's encephalopathy in any patient presenting intoxicated, in acute withdrawal or with a head injury. **Consider treating empirically.**

9.8. Oral thiamine does not provide an adequate central thiamine delivery to treat or prevent Wernicke's encephalopathy in alcohol withdrawal. Parenteral thiamine is required.

⚠ Parenteral thiamine must be administered **prior to glucose infusion (unless used for hypoglycaemia)** in any individual at risk of alcohol withdrawal or with altered mental status to avoid exacerbating Wernicke's encephalopathy

9.9. Contact Consultation Liaison Psychiatry if Wernicke's encephalopathy is suspected.

9.10. Treatment of suspected or diagnosed Wernicke's encephalopathy:

a) **Preferred:** Pabrinex 1 & 2 - 2 pairs of 5 mL ampoules (20 mL total) IV TDS for at least three days.

Then:

i. If no response, discontinue treatment

ii. If signs/symptoms respond, continue Pabrinex 2 pairs IV BD for a further 5 days or as long as improvement continues.

a) **In exceptional circumstances where IV access is not available prescribe:** Thiamine 200 mg IM STAT – then obtain IV access
Note: IM is contraindicated if platelets < 50 x10^9 or if INR > 1.5

b) After parenteral therapy completed: prescribe oral thiamine 100 mg BD for at least one month.

9.11. Prevention of Wernicke's Encephalopathy: For All Other Patients Treated for Alcohol Withdrawal

c) **Preferred:** Pabrinex 1& 2 - 1 pair of 5 mL ampoules (10 mL total) IV once daily for 3 days

d) **When IV access not available:** thiamine 200 mg IM once daily for 3 days
Note: IM is contraindicated if platelets < 50 x10^9 or if INR > 1.5

e) After parenteral therapy completed: prescribe oral thiamine 100 mg BD for at least one month.

10. Alcohol Withdrawal Seizures

10.1. Alcohol withdrawal may account for 10-25% of adult emergency department presentations for seizure.

10.2. Seizures are best prevented with early and adequate benzodiazepine treatment in alcohol withdrawal.

10.3. Risk factors for the development of seizure are the number of previous detox hospitalisations, history of withdrawal seizures and the co-prescription of psychotropic drugs or sedative hypnotics.

10.4. Withdrawal seizures usually occur 6-72 hours after cessation of drinking and are classically single, generalised, grand mal tonic clonic seizures without focal features and with associated loss of consciousness. Status epilepticus is rare.

10.5. Seizures can occur when the blood alcohol level is still high in patients with severe alcohol dependence.

10.6. Consider differential diagnosis.

10.7. Long term prophylaxis with anticonvulsants is ineffective in preventing seizure recurrence related to alcohol withdrawal.([20])

10.8. In those who develop alcohol withdrawal seizure and are already on a benzodiazepine taper regimen, **administer an additional dose of diazepam (IV or rectal administration may be appropriate) or lorazepam and refer to the local policy on seizure management. Review withdrawal symptoms and benzodiazepine regimen**.

10.9. Consult ICU regarding possible treatment with parenteral benzodiazepines.

10.10. Seizures may herald the onset of Alcohol Withdrawal Delirium. Consult with Consultation Liaison Psychiatry or BOPAS.

11. Management of Agitation and Hallucinations

11.1. Mild perceptual disturbances usually respond to an increase in dose of oral benzodiazepine.

11.2. If agitation or hallucinations continue despite apparent adequate benzodiazepine doses and the provision of non-medication measures such as a low-stimulus environment, seek advice from Consultation Liaison Psychiatry.

⚠ Antipsychotics can reduce seizure threshold and there is greater risk of adverse effects in those who are elderly, with low body weight, dehydration and no prior exposure to antipsychotics.

12. Pregnancy

Pregnant women who are dependent on alcohol should be discussed with either Consultation Liaison Psychiatry or BOPAS. The use of benzodiazepines in pregnancy can be complex. A foetus that is exposed to regular alcohol consumption should be closely monitored for withdrawal symptoms at birth. Also seek specialist advice from an obstetrician (and paediatrician if clinically appropriate).

13. Older Adults

The severity of alcohol dependence may be greater among older adults due to delay in seeking help as a result of denial, shame and stigma and there is evidence that older adults are more likely to experience physical health problems secondary to alcohol, including alcohol related brain injury, cardiovascular disorders, liver impairment, gastrointestinal problems and falls. Physical changes with aging can affect the metabolism of both alcohol and benzodiazepines, especially diazepam, and diazepam should be avoided in patients over 65 years old.

14. Young people

Young people should be linked with youth-specific services if possible. The youth service in Bay of Plenty is Sorted.

15. Discharge Planning and Referral

15.1. Patients who have experienced a seizure and/or severe withdrawal during this admission should be advised that any future attempts to cease drinking should occur with medical supervision, preferably as inpatients.

15.2. Every patient following an inpatient detox should be provided with a detox-plan, made in collaboration. This plan may include a referral to BOPAS, Hanmer, The Salvation Army Bridge programme, Te Manu Toroa Mental Health and Addiction Service or other relevant NGOs. See below for contact details.

16. Prescribing of Medications on Discharge:

16.1. **Benzodiazepines**: It is strongly discouraged to discharge a patient on benzodiazepines if the alcohol withdrawal tapering benzodiazepine regimen is not complete. It is advised that the patient remains an inpatient until detox complete. Contact BOPAS detox services if this is not possible. There is a risk that

benzodiazepines provided upon discharge may be consumed concurrently with alcohol, thereby resulting in accidental overdose or over-sedation.

16.2. **Oral thiamine** 100 mg BD for at least one month. (If compliance is likely to be an issue the entire dose can be given once daily)

16.3. **Medications for the treatment of alcohol dependence** (naltrexone, disulfiram) may be appropriate and it is recommended they should be discussed with all patients identified as alcohol dependent, refer to BOPAS. Medications for alcohol dependence are best prescribed with appropriate psychosocial supports.

17. Referral for post-withdrawal support and contacts

Linking patients with services after withdrawal is associated with reduced relapse rates and improved treatment outcomes.

After hours crisis service	0800 800 508
BOPAS Tauranga	For clinical advice contact the on call BOPAS registrar, Detox RN or Psychiatric Liaison registrar during working hours, or Crisis team after hours.
BOPAS medical detox services (Registrar) / RN Detox / counselling / Community Home Detoxification Service	0800 800 508 (business hours)
Consultation Liaison Psychiatry (business hours)	Extension 8853 Cellphone: 027 550 7013 Pager 1255
Hanmer Clinic	07 579 6470
Salvation Army Bridge Programme	07 5789329
Te Manu Toroa Mental Health and Addiction Service	07 577 4911
Get Smart for young people	0800 571 3712
Sorted (for young people)	07 557 5052 or 0800 BAYSORT (0800 229 7678)

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ASSOCIATED DOCUMENTS

- Te Whatu Ora Hauora a Toi Bay of Plenty policy 1.1.1 Informed Consent
- Te Whatu Ora Hauora a Toi Bay of Plenty policy 2.5.2 Health Records Management
- Te Whatu Ora Hauora a Toi Bay of Plenty policy 4.1.0 Infection Prevention and Control Management
- Te Whatu Ora Hauora a Toi Bay of Plenty Alcohol Detoxification Assessment and Treatment Pathway (9084) - *viewable only. Order through Design & Print Centre*
- Te Whatu Ora Hauora a Toi Bay of Plenty Form Audit C – Alcohol Screening Questionnaire (8735) - *viewable only. Order through Design & Print Centre*
- Te Whatu Ora Hauora a Toi Bay of Plenty Form FM.R4.90 Referral – Bay of Plenty Addiction Service (BOPAS)

Appendix 1: Patient Presenting to Hospital and Reports Consumption in Alcohol in the past month