SA Health

Management of patients at risk of alcohol withdrawal in acute hospitals

Clinical Guideline

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Version 2.1

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Government of South Australia

SA Health

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Management of patients at risk of alcohol withdrawal in acute hospitals

1. Name of clinical guideline

Management of patients at risk of alcohol withdrawal in acute hospitals clinical guideline

2. Introduction

Alcohol withdrawal is a potentially life-threatening condition. Seizures, delirium tremens and Wernicke-Korsakoff Syndrome can all complicate withdrawal from alcohol. Early active management can significantly reduce the risk of these complications. A comprehensive assessment should be made before making a diagnosis of alcohol withdrawal.

This guideline provides information on the management of alcohol withdrawal and its potential complications in adults admitted to acute hospital services in South Australia and aim only to guide clinical practice. Clinical judgment should be used to determine the optimal medical management for each patient.

When there is doubt about management, less experienced staff should confer with senior colleagues, the Drug and Alcohol Consultation Liaison Service (CLS) in their hospital or the Drug and Alcohol Clinical Advisory Service (DACAS) Ph 7087 1742.

This guideline should be used in conjunction with the appropriate *Alcohol Withdrawal Risk Assessment and Observation* chart for those hospitals not using Sunrise EMR. In Sunrise hospitals the CIWAar observation chart can be accessed.

3. Background

This is version 2 of the Clinical Guideline, the first being released in 2016. The Clinical Guideline provides information on management of alcohol withdrawal and its potential complications in acute hospitals.

It applies to all SA Health employees, including consultants and contractors.

Guidance on ambulatory alcohol withdrawal management in the community can be accessed from the SA Health website. Search "SA Health ambulatory alcohol withdrawal management".

4. Definitions

In the context of this document:

alcohol withdrawal means: a physiological response to abrupt cessation or significant reduction in alcohol intake in a person who has been drinking alcohol heavily for a prolonged period of time and who is dependent. The signs and symptoms of alcohol withdrawal may be grouped into three major classes – autonomic hyperactivity, gastrointestinal, and cognitive and perceptual changes – and may feature uncomplicated or complicated withdrawal.

alcohol withdrawal seizures mean: generalised tonic-clonic type seizures that can occur in the setting of alcohol withdrawal. Their occurrence is somewhat independent of the severity of the withdrawal. They usually occur within 6 to 48 hours of the person's last drink. They tend to be recurrent and become more frequent with successive episodes of alcohol withdrawal.

CIWA-Ar (Clinical Institute Withdrawal Assessment for Alcohol – Revised) means: a revised version observation scale is used to monitor patients withdrawing from alcohol or at risk of withdrawal. Refer to the Alcohol Withdrawal Monitoring Chart for details of the CIWA-Ar.

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delirium tremens means: one of the complications of alcohol withdrawal. The features of alcohol withdrawal delirium (also known as delirium tremens or DTs) are disturbance of consciousness and changes in cognition or perceptual disturbance. The terms 'alcohol withdrawal delirium' and 'delirium tremens' can be used interchangeably. Alcohol withdrawal delirium is an acute organic brain syndrome characterised by confusion and disorientation, agitation, hyperactivity and tremor. Alcohol withdrawal delirium typically commences 2 to 3 days after cessation of alcohol intake and usually lasts for a further 2 to 3 days, although it can persist for weeks.

Wernicke's encephalopathy (WE) means: a form of acute brain injury resulting from a lack of thiamine (vitamin B1) that most commonly occurs in alcohol-dependent people with poor nutrition. In alcohol-dependent patients thiamine deficiency occurs due to poor dietary intake and/or intestinal malabsorption. Its features include confusion [most commonly], ataxia and abnormal eye signs.

5. Priniciples of the standard

The principle of this guideline is to ensure appropriate systems and processes are in place to ensure equitable access to assessment and treatment for patients at risk of alcohol withdrawal in all SA Health acute hospitals to enhance safe and timely patient care.

6. General

This guideline should be used with extreme caution when a patient has severe medical and/or psychiatric comorbidities that may mimic alcohol withdrawal such as sepsis, hypoxia, hypoglycaemia, severe pain, or encephalopathy. Similar signs and symptoms may be seen in some patients after surgery or trauma. In these circumstances discuss management with the Drug and Alcohol Clinical Advisory service (DACAS) (08 70871742 830am - 10pm every day) OR ICU registrar OR physician/medical registrar OR in country areas a specialist physician [metropolitan based if not available within region].

6.1 Description of alcohol withdrawal syndrome

Onset of withdrawal

Early signs of withdrawal usually appear between six and 24 hours after the last intake of alcohol in a person with daily heavy drinking (males > 80g of alcohol per day; females > 60 g of alcohol per day) for a period of more than 2 weeks. The most severe form of withdrawal involving an agitated delirium typically occurs two to six days after the last drink, and may not be preceded by signs of simple alcohol withdrawal.

Severe withdrawal is characterized by severe agitation associated with disorientation, delirium, hypertension and tachycardia; profuse sweating and fever. Withdrawal may be delayed if other CNS depressants (e.g. benzodiazepines or sleep medications such as zolpidem) have been taken, or after anaesthesia.

Duration of withdrawal

Variable, between two and seven days. The more severe the withdrawal, the longer its duration. Rarely it can be as long as 12 days.

Clinical features

The alcohol withdrawal syndrome occurs when a person who is alcohol dependent with neuroadaptation characterized by tolerance to alcohol, stops drinking alcohol or drinks substantially less alcohol. It is a syndrome of central nervous system hyperactivity that is characterised by some or all of the following signs and symptoms:

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- hypersensitivity to stimulation
- tremor
- perspiration
- increased pulse, blood pressure
- nightmares

- fear
- insomnia
- depressed mood
- anxiety and/or agitation
- seizures (six to 48 hours or more

- SEIZURES
- HALLUCINATIONS
- CONFUSION/DISORIENTATION

Features of complicated alcohol withdrawal

The presence and severity of each of these symptoms varies with the level of severity of withdrawal. Concomitant illness, injury or other physical trauma, polydrug dependence (eg GHB or benzodiazepines) or recent surgery increases the likelihood of complicated alcohol withdrawal.

6.2 Which patients are at risk of alcohol withdrawal?

Patients at risk of withdrawal from alcohol are those where it has been less than 10 days since their last drink AND who meet at least one of the following criteria:

> Average daily alcohol consumption >80g/day for males and >60g/day for females (see Average Daily Alcohol Consumption Chart – Appendix A)

> Previous history of alcohol withdrawal syndrome

> CAGE questionnaire score ≥2

> Admitted with breath or blood alcohol (BAC) >0.15 g/dL.

Table 1: CAGE questionnaire – score one (1) for each "yes" answer
1. Have you ever felt you needed to **C**ut down on your drinking?
2. Have people **A**nnoyed you by criticising your drinking?
3. Have you ever felt **G**uilty about drinking?
4. Have you ever felt you needed a drink first thing in the morning (**E**ye-opener) to steady your nerves or to get rid of a hangover?

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General management

	Yes	No
Is the patient at risk of alcohol withdrawal?	Commence alcohol withdrawal observations	
Is there a medical, psychiatric or other problem that may exacerbate withdrawal or be worsened by administration of sedatives given for the treatment of alcohol withdrawal?	Discuss with the medical, ICU, psychiatric consultant or registrar or the hospital Drug and Alcohol CLS, or Drug and Alcohol Clinical Advisory Service (phone 7087 1742), as appropriate before prescribing sedatives	Continue alcohol withdrawal observations Prescribe benzodiazepines as recommended

Alcohol withdrawal observations

The Clinical Institute Withdrawal Assessment for Alcohol – revised version (CIWA-Ar) observation scale (see *Alcohol Withdrawal Risk Assessment and Observation* chart) is used to monitor patients withdrawing from alcohol or at risk of withdrawal. It should not be used if there are significant communication problems (e.g. delirium, non- English-speaking patient).

This scale can be modified by the treating doctor to suit individual patient circumstances. For example, nausea and vomiting may be common in the postoperative period and so these scores may be omitted and the total thus adjusted. Similarly, patients with a psychiatric illness may be agitated and so these scores could also be omitted and the total thus adjusted.

If treatment has been required, continue observations until CIWA-Ar alcohol withdrawal score is <8 for 24 hours after the last dose of diazepam.

Consultation with Senior Medical/ICU or regional specialist physician

As a general guide, ask for a Senior Medical/ ICU opinion if:

1. The patient has other medical problems that may cloud conscious state, e.g. neurosurgical condition;
2. The patient has severe withdrawal with delirium and severe autonomic hyperactivity (may require ICU admission);
3. The patient has a sedation score of 2 or more;
4. The patient has other medical condition(s) that make administration of CNS depressants dangerous or complicated, e.g. has COPD, hepatic impairment or is receiving opioids;
5. Patients who are difficult to manage with the usual regimen, (e.g. requiring higher than usual doses of diazepam and/ or restraint) may be better managed in the high dependency/ICU environment. It is well recognised that at times (although rare) these patients may actually require intubation and ventilation to control their withdrawal;
6. Any patient where benzodiazepines will need to be administered intravenously. IV benzodiazepines are **not** recommended on a general ward (unless code blue emergency requires it) – but rather in HDU or ICU where more frequent observations and airway support is readily available.

Admission of the patient to ICU will be at the discretion of the ICU consultant.

In country hospitals transfer from country sites to major hospital maybe required, depending on resources available. Refer to Statewide Emergency Medical Retrieval Service (ph 13 7827).

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Initiation of a medical response emergency call
Initiate a medical emergency response call as appropriate for abnormalities in the patient's vital signs, oxygen saturation and sedation score.

Environment
Low stimulation, reassurance, reorientation, regular lighting and care by the same nurse each shift will help.

A nurse special should be considered – as per local policy – in cases where the client is confused.

Fluid and electrolytes
Monitor fluid balance and electrolytes.

- Ensure fluid intake (oral or IV) is adequate to maintain acceptable urine output
- Check electrolytes including magnesium; potassium and phosphate. These may require IV replacement.

Beware ethanol-containing hand wash containers. Some patients will consume the contents of these. They should be removed from the immediate vicinity of the patient's bed.

Reassess for presence of concurrent illness
In particular consider hypoxia, sepsis, head injury (subdural hematoma), pneumonia, chronic airflow limitation, and encephalopathy.

6.4 Pharmacological Management

6.4.1 Thiamine

Note: parenteral thiamine must be given before administering IV glucose.

Check Magnesium levels, rectify if low.

Prevention of Wernicke's Encephalopathy (WE)

- Give thiamine:
  - For those with malnutrition and/or severe liver disease (eg INR 1.5 or more, raised bili, reduced albumin) 100 mg parenterally (IM or IV) as soon as possible and continue IV or IM three times a day for 3 days in total.
  - For those without the above, 100mg PO three times per day
- Check coagulation status, including platelets, before IM injection.
- After three days switch to, or continue thiamine 100 mg orally three times a day for 4 weeks as long as abstinence is maintained.

Treatment of Wernicke's encephalopathy (WE)

If there is a possible diagnosis of Wernicke's Encephalopathy (WE) based on Cain's criteria, 2 or more of the following:

- nutritional deficiency;
- confusion;
- cerebellar dysfunction;
- ocular abnormality – nystagmus or lateral rectus opthalmoplegia

…..give thiamine 500 mg TDS IV for 3-5 days.

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May need IV Mg^{++}

If improvement has occurred at the 3-5-day mark, then continue for 1 week total IV.

If no response after 5 days, then cease IV and revert to oral at usual doses.

Please note these recommendations on prevention and treatment of Wernicke/Korsakoff Syndrome are based on consensus rather than rigorous empiric evidence.

Vitamins

Multivitamin or a multivitamin and mineral preparation should be given daily for 4 weeks as long as abstinence is maintained.

6.4.2 Benzodiazepines

If opioids or any other drugs with sedative effects are prescribed at the same time as benzodiazepines, the dose of benzodiazepine should be reduced.

Do not administer any benzodiazepines until:

- a diagnosis of alcohol withdrawal is confirmed
- BAC is less than 0.1 g/100mL
- any concurrent illness has been fully assessed, and
- a full review of current medications has been undertaken (note that the combination of CNS depressants with opioids will significantly increase the risk of respiratory depression).

However once the diagnosis of alcohol withdrawal has been established, patients should be treated without further delay.

Indications

Benzodiazepine medications are given:

a) To lessen or alleviate signs and symptoms of alcohol withdrawal using the 'symptom triggered' regimen described below based on CIWA-Ar alcohol withdrawal score and clinical assessment. When the CIWA-Ar alcohol withdrawal score reaches 8-10 it is likely that a benzodiazepine will be required. The total doses required will be a reflection of the severity of the withdrawal syndrome and the patient's tolerance to benzodiazepine.

b) As a 'preventive' regimen in patients with a past history of seizures related to alcohol withdrawal.

The objective should be to cease benzodiazepines before discharge in order to avoid the development of secondary benzodiazepine dependence. However, concern about benzodiazepine dependence should not delay the management of acute alcohol withdrawal.

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Signs of benzodiazepine intoxication

Sedation is the most common sign of intoxication by benzodiazepines but also be aware that dysarthria, drooling, disinhibition and paradoxical agitation or worsening of delirium can also be signs, which require benzodiazepines to be ceased.

Choice of benzodiazepine

Diazepam

Diazepam should be the first-line choice of benzodiazepine for most patients. It is used because of its cross-tolerance with alcohol, anticonvulsant properties and long half-life. Given orally (it should not be given by IM or IV injection).

Suggested doses and monitoring requirements are listed in Tables 2 and 3 as well as the flowchart (see Appendix 4.9.2).

Lorazepam

Lorazepam has no active metabolites and may be used as a substitute for diazepam in patients with significantly impaired liver function (liver disease with synthetic dysfunction as evidenced by INR ≥ 1.5, bilirubin elevated, reduced albumin).

Lorazepam 0.5 mg is approximately equivalent to diazepam 5 mg.

Suggested doses and monitoring requirements are listed in Tables 2 and 3 as well as the flowchart (see Appendix 4.9.2).

Clonazepam

Clonazepam is used if an IV benzodiazepine is required.

Clonazepam 0.25 mg IV is approximately equivalent to diazepam 5 mg PO.

Clonazepam is preferred to midazolam because of its longer half-life and presence of active metabolites; however, if clonazepam is not available, give IV midazolam (in 1 mg increments) until clonazepam can be obtained.

Suggested doses and monitoring requirements are listed in Tables 2 and 3 as well as Appendix 4.9.2.

Caution: Patients given IV clonazepam or midazolam will require close observation (1:1 nursing) and it is recommended for them to be nursed in a high dependency unit, ICU or Emergency Department. If the patient is not in a high dependency unit, ICU or Emergency Department, a doctor with appropriate airway skills must be immediately available during IV administration of a benzodiazepine and for 30 minutes afterwards.

Oxazepam (not generally recommended)

Oxazepam is **not** recommended because it is less effective for seizure control. It is recommended that oxazepam only be given after specialist Addiction Medicine advice is sought and it is approved for use.

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Benzodiazepine regimens

Table 2: Benzodiazepine doses

Note 1: See Table 3 for timing of administration and monitoring requirements

Note 2: If opioids or other sedative drug are being prescribed concurrently, doses MUST be reduced but can be ordered 1 hourly prn.

Indication	Benzodiazepine	CIWA-Ar score/age	**Prescribed opioids or other CNS depressants#**	NOT prescribed opioids or other CNS depressants#
Symptom-triggered' regimen for treatment of alcohol withdrawal (based on CIWA-Ar scores)	Diazepam (first-line)	CIWA-Ar 8-12	**5mg PO 1 hourly prn**	10mg PO 2 hourly prn
		CIWA-Ar 13-20	**10mg PO 1 hourly PRN**	20mg PO 2 hourly prn
		Age >70yrs	**5mg PO 1 hourly prn**	10mg PO 2 hourly prn
	Lorazepam (use if liver function significantly impaired – INR ≥ 1.5, bili ↑, alb ↓)	CIWA-Ar 8-12	**0.5mg PO hourly prn**	1mg PO 2 hourly prn
		CIWA-Ar 13-20	**1mg PO 1 hourly prn**	2mg PO 2 hourly prn
		Age >70yrs	**0.5mg PO hourly prn**	1mg PO 2 hourly prn
	Clonazepam IV (use if patient unable to take oral benzodiazepines – see precautions above) Notes • a doctor with appropriate airways skills must be present during IV administration of a benzodiazepine and for at least 30 minutes afterwards the patient should be nursed in a high dependency area or ICU	CIWA-Ar 8-12	**0.25mg IV hourly prn**	0.5mg 2 hourly prn
		CIWA-Ar 13-20	**1mg IV hourly prn**	2mg IV 2 hourly prn
		Age >70yrs	**0.25mg IV hourly prn**	0.5mg 2 hourly prn
Preventive' seizure regimen for patients with a past history of seizures related to alcohol withdrawal	Diazepam (first-line)		**5mg PO every 8 hours for 48 hours**	10mg PO every 8 hours for 48 hours
	Lorazepam (use if liver function significantly impaired impaired – INR ≥ 1.5, bilirubin↑, albumin ↓)		**0.5mg PO every 8 hours for 48 hours**	1mg PO every 8 hours for 48 hours
	Clonazepam IV (use if patient unable to take oral benzodiazepines – see precautions above) Notes • a doctor with appropriate airways skills must be present during IV administration of a benzodiazepine and for at least 30 minutes afterwards the patient should be nursed in a high dependency area or ICU		**0.25mg IV every 8 hours for 48 hours**	0.5mg IV every 8 hours for 48 hours

CNS depressants include antipsychotics (e.g. quetiapine, olanzapine) or sedating antihistamines (e.g. promethazine)

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Table 3: Management of alcohol withdrawal using a 'symptom-triggered' benzodiazepine regimen (see Table 2 for doses) and CIWA-Ar scores (See Alcohol Withdrawal Monitoring Chart)

SEVERITY OF WITHDRAWAL	ACTIONS
Mild withdrawal **CIWA-Ar alcohol withdrawal score 0–7**	> Frequent reassurance, reorientation and attention to the nursing environment are usually sufficient. > Medication is generally not necessary for mild withdrawal apart from prophylactic thiamine > CIWA-Ar alcohol withdrawal observations should be performed every FOUR hours. > Monitor vital signs.
Moderate to severe withdrawal **CIWA-Ar alcohol withdrawal score 8–19**	> Consider need for 1:1 nursing > For patients without significant concurrent illnesses or conditions, give oral diazepam 1-2 hourly PRN (or oral lorazepam or IV clonazepam if indicated – see Table 2) until either the CIWA-Ar alcohol withdrawal score is <8. > Suggested maximum dose per 24 hours (from the time of first diazepam dose) is 120 mg diazepam equivalent. > Medical officer review after 3 doses. If there are no concerns raised by the nursing staff – then this review can occur via phone but if the nursing staff have raised concerns and would like an MO review face to face then it should occur. Concerns may either be due to over sedation or increasing alcohol withdrawal scores. > If the patient is not in a high dependency area, ICU or emergency department, a doctor with appropriate airways skills must be present during IV administration of a benzodiazepine and for at least 30 minutes afterwards. > CIWA-Ar alcohol withdrawal observations should be performed every TWO hours (CIWA-Ar obs should be done every 1 hour for those who are on CNS depressants) until the score is < 8. When the score is < 8 the frequency of CIWA-Ar observations can be reduced to a 4 hourly interval. If the score rises > 8 again then – 2 hourly observations need to be instituted again. > Monitor sedation scores at the time of administration of a benzodiazepine and one hour later. Notify doctor if sedation score ≥2; do not administer further doses of benzodiazepine (or opioid, if ordered). > Monitor vital signs. > Oxygen administration is recommended and must be given if patient is also receiving an opioid or if sedation score is ≥ 2 > If, after 6 hours or 3 doses of benzodiazepine [whichever comes first], CIWA-Ar alcohol withdrawal score is increasing or remaining ≥8, discuss with medical registrar, ICU registrar, or the hospital Drug and Alcohol Service or DACAS [7 days- 0830 to 2200hrs 7087 1742].
Very severe withdrawal **CIWA-Ar alcohol withdrawal score 20+**	> This is a medical emergency and specialist intensive care, medical, psychiatric or Drug and Alcohol Services assistance should be obtained promptly. > Initiate a medical emergency, Code Blue or Code Black call as appropriate. > Transfer from country hospitals to a major metropolitan hospital may be required, depending on resources available. Refer to Statewide Emergency Medical Retrieval Service (MedSTAR, ph 13 7827). > There is a high risk of respiratory depression and apnoea associated with administration of IV or large oral doses of benzodiazepine. Therefore, there must be 1:1 nursing, preferably in a high dependency or intensive care unit. > Higher doses of oral diazepam may be needed – e.g. up to 20 mg hourly PRN (or equivalent lorazepam dose if indicated – i.e. 2 mg). > If the oral route is not suitable, give a slow IV injection of clonazepam (or midazolam) over 3-5 minutes, repeated if necessary up to four times in the first 30 minutes > continue to administer IV doses at intervals of 10–30 minutes as necessary > higher doses should not be used without specialist advice > if the patient is not in a high dependency area, ICU or emergency department, a doctor with appropriate airway skills must be present during IV administration of a benzodiazepine and for at least 30 minutes afterwards. > Aim to decrease CIWA-Ar score to ≤15. > Monitor CIWA-Ar alcohol withdrawal and sedation scores as well as vital signs at least every 30 mins while CIWA-Ar score is ≥20. > Administer oxygen.

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Monitoring and duration of observations	> **Medical review of all patients is mandatory after the patient has received three doses of benzodiazepine or after 6 hours** (whichever occurs first) before further doses of benzodiazepine can be given. ○ The review should confirm adequate response to diazepam without over-sedation. ○ In country hospitals this review may occur by telephone between the responsible medical officer and the senior nurse on duty. > Once the AWS is < 8 -continue CIWA-Ar alcohol withdrawal score observations every FOUR hours, If the score rises >= 8 again then the CIWA-Ar withdrawal scores need to be done at2 hourly intervals again until the score is < 8. > If treatment has been required, continue observations until CIWA-Ar alcohol withdrawal score is <8 for 24 hours after the last dose of diazepam. > **Treatment should be reviewed if >120 mg diazepam is required in any 24 hour period.**

6.5 Specific situations

Country areas

In country areas clinicians should consider the expertise and resources available locally. The patient may need to be transferred to a metropolitan hospital. Discuss early with Medstar, particularly if a patient has had a complex alcohol withdrawal episode previously.

Elective admission for alcohol withdrawal should be planned. Withdrawal is a necessary first step but after-care, relapse prevention, rehabilitation and/or engagement in peer support groups (AA or Smart Recovery) are important for long term success. It is better to delay an elective admission and have a good plan in place than managing reactively.

When an elective admission is being planned, then:

- liaise with the local Drug and Alcohol Nurse/Counsellor
- discuss ongoing treatment options with ADIS (Alcohol and Drug Information Service) staff – 1300 13 13 40.
- Use the “Know Your Options” website to determine suitable options.

If a complicated withdrawal is anticipated (eg person with previous history of severe alcohol withdrawal needing ICU/high dependency then discuss with DACAS (Drug and Alcohol Clinical Advisory Service – 7087 1742) to determine the best location for this. Planning might need to involve regional hospitals with HDUs, and MEDSTAR.

Of course if a person presents in severe withdrawal or has other medical reasons for admission, then immediate inpatient management is needed.

Patients with severe chronic liver disease

> Generally, if there is decompensated liver disease and/or disturbance of hepatic synthetic functions (for example INR ≥ 1.5, bili↑, alb ↓) , management needs to be modified. The advice of a specialist physicians Addiction Medicine specialist is suggested.

> It is important to distinguish between alcohol withdrawal and hepatic encephalopathy. Inappropriate administration of benzodiazepines may exacerbate confusion and is dangerous.

> The dose of benzodiazepine may need to be much **smaller** because of impaired metabolism.

> Use of lorazepam should be considered as an alternative to diazepam (lorazepam 0.5 mg = diazepam 5 mg) as its shorter half-life and absence of active metabolites may reduce the risk of excessive sedation.

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Patients receiving other CNS depressants such as opioids, antipsychotics and antihistamines

- The combination of a benzodiazepine with other drugs that cause depression of the CNS such as opioids, antipsychotics (e.g. quetiapine, olanzapine) or sedating antihistamines (e.g. promethazine) will significantly increase the risk of respiratory depression.
- Smaller doses of benzodiazepines must be prescribed in order to reduce the risk of excessive sedation/respiratory depression. Sedation scores should be monitored on a regular basis and the sedation score kept below 2 (2 = easy to rouse but cannot stay awake).

Respiratory comorbidities

- Some patients, e.g. those with significant COPD, may be at higher risk or respiratory depression.
- Seek advice from medical registrar [admitting team in hours or senior registrar after hours], ICU registrar, or responsible medical officer in country areas [who may need to confer with DACAS, ph 7087 1742].

Pregnant patients

Alcohol has harmful effects on the fetus and management of withdrawal is complex. Withdrawal increases the risk of spontaneous abortion and pre-term delivery. Seek specialist advice from:

- Obstetrics and Gynaecology registrar where available [regarding obstetric management].

  In country areas, an obstetrician or GP-obstetrician should be involved in their care. If significant withdrawal is predicted the patient should be managed in a hospital with a birthing facility.
- DACAS (ph 7087 1742) regarding alcohol or drug management.

Elderly patients (over 70 years)

- Consider lorazepam rather than diazepam due to shorter half-life and no active metabolites.
- Consider lower doses of benzodiazepines as they are often more sensitive to any sedatives.
- Pulse and BP responses in withdrawal may be altered.

Patients identified as Aboriginal or Torres Strait Islanders and other patients from culturally and linguistically diverse backgrounds

Ensure that:

- They understand any questions asked.
- They are supported by an Aboriginal Liaison Officer or family as appropriate wherever possible.
- An interpreter is used when needed.

Patients who are "Nil by Mouth"

- Will require IV clonazepam
  - The patient should be nursed in a high dependency area, ICU or emergency department.
  - If the patient is not in a high dependency area, ICU or emergency department, a doctor with appropriate airways skills must be present during IV administration of a benzodiazepine and for at least 30 minutes afterwards.
- Seek advice from admitting team medical registrar or ICU registrar or the responsible medical officer in country areas [who may need to confer with DACAS, ph 7087 1742].

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Seizures

- Seizures may be due to alcohol withdrawal or other conditions.
- A full medical assessment is required to exclude other causes of seizures and a short admission to hospital is recommended.
- Give regular diazepam or lorazepam for 48 hours to patients who have a history of alcohol withdrawal seizures even if liver disease is present. Diazepam 10 mg TDS for 2 days (regular) or lorazepam 1 mg TDS for 2 days (regular) in those with decompensated liver disease and/or impaired synthetic liver function eg INR ≥ 1.5, bilirubin↑, albumin ↓). (to be included in the maximum daily dose of 120 mg diazepam, 12mg lorazepam.) Advice can be sought from the DACAS line 70871742 regarding these cases.
- This may mean providing discharge medication if patient is fit to discharge at 48 hours.
- Patients who present to hospital after a seizure that may be related to alcohol withdrawal are at high risk of further seizures and therefore should be admitted for observation for 48 hours. Seizure prophylaxis diazepam10 mg TDS PO regularly for 2 days or lorazepam 1 mg TDS regular in those with decompensated liver disease or impaired synthetic liver function is suggested.

Poor response to benzodiazepines, use of haloperidol or other antipsychotics

- Poor response to benzodiazepines requires urgent medical review. Assess for organic contributors to symptoms (e.g. sepsis; electrolyte abnormalities etc that may be contributing to the score other than alcohol withdrawal.).
- Seek advice from medical registrar [admitting team in hours or senior medical registrar after hours] or the responsible medical officer in country areas [who may need to confer with DACAS, ph 7087 1742].
- Haloperidol or other antipsychotic medications (e.g. olanzapine or risperidone) may be required in addition to a benzodiazepine to control symptoms of alcohol withdrawal, especially when psychotic symptoms such as hallucinations or paranoid ideation (particularly if acted upon with aggression or agitation) are pronounced. Refer to LHN guideline on management of delirium or severe behavioural disturbance.

Violence risk

If violence occurs or situation is assessed as being at high risk of violence, initiate a Code Black call.

Refer to hospital code black procedure.

6.6 Cessation of treatment

Continue CIWA-Ar at frequency indicated in table 3 as well as 4 hourly vital signs, for 24 hours. If treatment has been required, continue observations until CIWA-Ar alcohol withdrawal score < 8 for 24. It can then be discontinued:

- The objective should be to have the patient off benzodiazepines before discharge to avoid the development of secondary benzodiazepine dependence. Concern about benzodiazepine dependence should not delay the management of acute alcohol withdrawal.
- For underlying or ongoing anxiety/agitation the treating team should decide on appropriate treatment/medication.

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6.7 Discharge and follow-up

Once withdrawal is complete, patients should be informed about the long-term treatment and other rehabilitation options available for management of alcohol dependence. The discharge letter to their general practitioner should include the diagnosis of alcohol dependence and give information about referral options.

Alcohol dependence is generally a chronic relapsing condition. Patients should receive information about services in the community and arrangements made for follow up.

Discuss with the Drug and Alcohol CL Service (if available) or with DACAS, (7 days 0830-2200hrs: 08 7087 1742). Advice about accessing community-based services can be obtained from the Alcohol and Drug Information Service 1300 13 13 40.

Consider:

- Self-help groups
  - Alcoholics Anonymous [24 hour phone number, 1300 222 222 or 8227 0334]
  - Smart Recovery 08 8305 9393
- Specific counselling
- Motivational interviewing
- Anti-craving therapy with naltrexone or acamprosate

6.8 Other Comments

Use of alcohol

There is no place for the prescription of alcoholic beverages in the treatment of alcohol withdrawal.

Of note there are a group of alcohol dependent clients who may consume alcohol-based hand sanitizers when admitted to hospital. These clients may require an assessment by an ICU registrar due to over sedation and airway compromise; renal insufficiency etc (dependent on the type of alcohol-based hand sanitizer ingested.)

Legal options for treatment without consent

Alcohol withdrawal delirium is considered an illness under the *Mental Health Act*. A patient who has delirium related to alcohol withdrawal and who is aggressive, non- adherent with treatment or at risk of absconding, may be treated under the *Medical and Palliative Care Act* in emergency situations.

An Inpatient Treatment Order [ITO] may also be used under the *Mental Health Act*. Refer to the SA Health Policy Directive *Providing Medical Assessment and/or Treatment where consent cannot be obtained* for more information.
Patients in these situations require close nursing supervision.

The instigation of an ITO must be reported to the hospital psychiatric team.

Restraint

Agitated patients may need to be restrained physically. Restraint should not occur without an ITO, and protocols for restraining patients must be adhered to.

Driving

If a treating medical practitioner has reasonable cause to believe the patient may be likely to endanger the public, if the person drove a motor vehicle, then the Registrar of Motor Vehicles should be notified.

Refer to the AustRoads Guidelines (https://austroads.com.au/drivers-and-vehicles/assessing-fitness-to-drive) or Seek advice from DACAS [7087 1742].

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7. Determining risk factors

See 6.2 above.

8. Models of Care

Home teams or ED consultant are responsible for management of alcohol withdrawal in patients in their care.

DASSA advice can be obtained through the Drug and Alcohol Clinical Advisory Service 7087 1742.

In hospitals where a DASSA Consultation Liaison Service is available, home teams can seek advice through this service if management becomes complex.

All patients experiencing alcohol withdrawal should be Considered for a referral to either DASSA, an NGO or peer support group such as AA or Smart Recovery

9. Workforce implications

This management can be undertaken with current staffing.

10. Safety, quality and risk management

National Standard 1 Governance for Safety and Quality in Health Care	National Standard 2 Partnering with Consumers	National Standard 3 Preventing & Controlling Healthcare associated infections	National Standard 4 Medication Safety	National Standard 5 Patient Identification & Procedure Matching	National Standard 6 Clinical Handover	National Standard 7 Blood and Blood Products	National Standard 8 Preventing & Managing Pressure Injuries	National Standard 9 Recognising & Responding to Clinical Deterioration	National Standard 10 Preventing Falls & Harm from Falls
☒	☐	☐	☒	☐	☐	☐	☐	☒	☐

11. Pathway / protocol

See main guideline section 6

12. General considerations

See main guideline section 6

13. Eligibility criteria

People presenting to acute hospitals at risk of alcohol withdrawal. See section 6.2 above.

14. Administration

This Clinical Guideline (as previous version) will be available on LHN intranets.

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15. Observations

See main guideline section 6.3 p 14 and section 6.4 pages 19 and 20.

16. Implementation and monitoring

Implementation of the new Clinical Guideline will be assisted by in-service training of nursing and medical staff by DASSA's Consultation Liaison Service.

The Consultation Liaison Service also monitors adherence to the guideline and regularly reviews any critical incidents relating to this.

17. Appendices

Appendix A: Average Daily Alcohol Consumption Chart

Use this chart to estimate the patient's alcohol consumption. The number of standard drinks in common serving sizes of alcohol is shown. One standard drink is equal to 10 grams of alcohol.



Based on Australian Government, Standard Drinks Guide, available from
http://www.alcohol.gov.au/internet/alcohol/publishing.nsf/content/drinksguide-cnt

Types of alcohol	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
Beer								
Table wine								
Spirits								
Fortified wine								**Weekly total (drinks)**
Daily total (drinks)								
Average standard drinks per day in past week (Weekly total divided by 7)								
Average daily alcohol consumption during the past week in grams (standard drinks times 10)								

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Appendix B Alcohol Withdrawal Management Summary

ASK ◆ Is this alcohol Withdrawal? ◆ Is BAC <0.1g/dL? ◆ Seizure history? ◆ Impaired hepatic synthesis? ◆ other CNS sedatives?◆ patient over 70yrs? ◆ Wernicke's?

Alcohol withdrawal CIWA-ar and Sedation Score Frequency

CIWA-ar score	Frequency CIWA-ar	Frequency Sedation Score
<8	4 hourly	4 hourly
8-19	2 hourly	2 hourly plus 1 hr after administration of benzodiazepine
20+	At least every 30 minutes	At least every 30 minutes; needs MO review STAT
If benzodiazepine treatment has been required cease when scores <8 for more than 24 hours after the last dose		

Benzodiazepines - oral (if IV required, consult with Intensive Care – needs full resuscitation capacity)

Do not administer benzodiazepines until >> a diagnosis of alcohol withdrawal is confirmed >> BAC is < 0.1 g/dL, >> any concurrent illness has been fully assessed?

	NO history of seizure	History of **seizure**
Hepatic synthesis **NORMAL**	CONCURRENT OPIOIDS OR CNS SEDATIVES being administered	
	☐ Diazepam PO 1 hourly (withhold if SS is 2+): - CIWAar 8-12 5mg - CIWAar 13-19 10mg - CIWAar 20+ seek advice - > 70 yrs 5mg ☐ Oxygen	☐ Diazepam 10mg PO 8 hourly for 2 days (withhold if SS is 2+) ☐ Diazepam PO 1 hourly (withhold if SS is 2+): - CIWAar 8-12 5mg - CIWAar 13-19 10mg - CIWAar 20+ seek advice - > 70 yrs 5mg ☐ Oxygen
	NO concurrent opioids or CNS sedatives being administered	
	☐ Diazepam PO 2 hourly (withhold if SS is 2+): - CIWAar 8-12 10mg - CIWAar 13-19 20mg - CIWAar 20+ seek advice - > 70 yrs 10mg	☐ Diazepam 10mg PO 8 hourly for 2 days (withhold if SS is 2+) ☐ Diazepam PO 2 hourly (withhold if SS is 2+): - CIWAar 8-12 10mg - CIWAar 13-19 20mg - CIWAar 20+ seek advice - > 70 yrs 10mg
Hepatic synthesis **ABnormal** (eg INR ≥ 1.5, bili ↑, alb ↓)	CONCURRENT OPIOIDS OR CNS SEDATIVES being administered	
	☐ Lorazepam PO 1 hourly (withhold if SS is 2+): - CIWAar 8-12 0.5mg - CIWAar 13-19 1mg - CIWAar 20+ seek advice - > 70 yrs 0.5mg ☐ Oxygen	☐ Lorazepam 1mg PO 8 hourly for 2 days (withhold if SS is 2+) ☐ Lorazepam PO 1 hourly (withhold if SS is 2+): - CIWAar 8-12 0.5mg - CIWAar 13-19 1mg - CIWAar 20+ seek advice - > 70 yrs 0.5mg ☐ Oxygen
	NO concurrent opioids or CNS sedatives being administered	
	☐ Lorazepam PO 2 hourly (withhold if SS is 2+): - CIWAar 8-12 1mg - CIWAar 13-19 2mg - CIWAar 20 seek advice - >70 yrs 1mg	☐ Lorazepam 1mg PO 8 hourly for 2 days (withhold if SS is 2+) ☐ Loazepam PO 2 hourly (withhold if SS is 2+): - CIWAar 8-12 1mg - CIWAar 13-19 2mg - CIWAar 20+ seek advice - >70 yrs 1mg

Thiamine -

Routine **prevention**	**Treatment** of possible or probable Wernicke's Encephalopathy (including delirium, confusion)
☐ Thiamine 100mg IV 8 hourly for 3 days for malnourished and/or severe liver disease. Oral for others 100mg PO 8 hourly ☐ Check and correct Mg^{++} ☐ Then orally 100mg PO 8 hourly after IV if indicated ☐ Multivitamin PO 1 daily	☐ Thiamine 500mg IV 8 hourly for up to 7 days (see main guideline) ☐ Check and correct Mg^{++} ☐ Then orally 100mg PO 8 hourly ☐ Multivitamin PO 1 daily

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18. Associated policies / guidelines / clinical guidelines / resources

SA Health Policy Directive Dealing with Intoxicated Patients

SA Health Policy Directive Providing Medical Assessment and or Treatment Where Patient Consent Cannot be Obtained

SA Health Policy Guideline Management of seizures in the context of harmful drinking

19. Reference

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20. Document Ownership

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21. Document History

Version	Date approved	Approved by	Amendment notes
1	24/04/2016	SA Health Safety and Quality Strategic	Original approved
2	25/01/2022	Domain Custodian, Clinical Governance, Safety and Quality	Revised and Updated
2.1	13/08/2025	Clinical Guideline Domain Custodian	Minor Update *Page 9 of 18: Added an explanatory sentence stating that CIWA-Ar alcohol withdrawal observations should be performed every 1 hour for those who are on CNS depressants

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