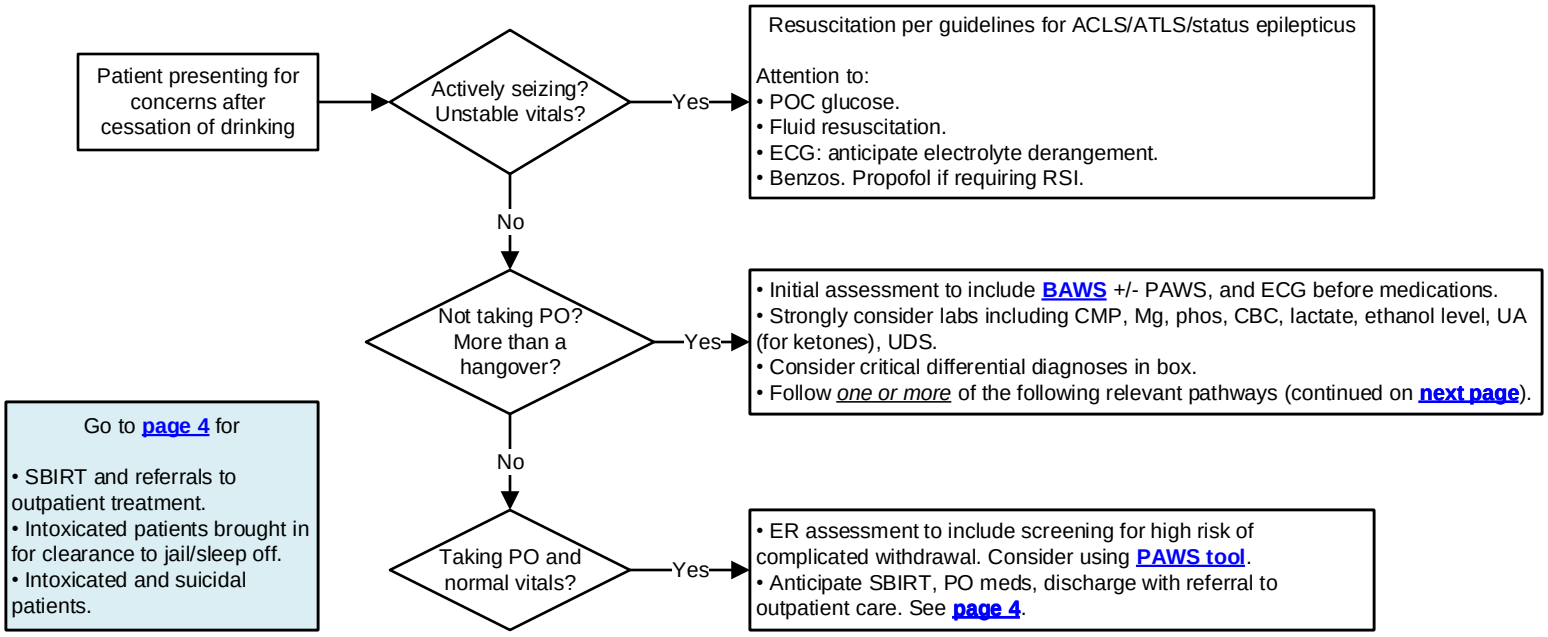
Yukon-Kuskokwim HEALTH CORPORATION

Clinical Guideline

Alcohol Withdrawal & Complications: First Steps



Alcohol withdrawal syndrome (AWS)	Syndrome following cessation of *chronic* alcohol use. Mediated by upregulation of GABA receptors in brain. Potentially life-threatening. Can occur hours after last drink, or while still intoxicated, but generally peaks 2-4 days after last drink.	Tachycardia. Hypertension. Tremulousness. Diaphoresis. Hyperthermia. Clonus. Clouded sensorium/delirium. Seizure. *Clinical diagnosis. Diagnosis of exclusion.*	See page 2. Phenobarbital. Benzodiazepines. Supportive care.
Alcoholic ketoacidosis (AKA)	Syndrome following cessation of heavy alcohol use (especially *binge type*) characterized by malnutrition and dehydration leading to ketoacidosis and electrolyte derangements. Potentially life-threatening. Onset hours after last drink.	Tachycardia. Either hypertension or hypotension. Tachypnea. *Hypovolemia*. Vomiting. Normal sensorium. *Significant lab derangements*: hypoglycemia, metabolic acidosis, elevated lactate, ketones.	See page 3. Aggressive IV rehydration. Correct electrolyte derangements.
Severe hyponatremia	Most common severe electrolyte disturbance in regular drinkers. Mimics AWS, can cause seizures.	Altered mental status, seizures, or completely asymptomatic. Serum sodium < 125.	If Na > 120 and asymptomatic, very thoughtful fluids. Low threshold to consult ICU.
Concomitant seizure disorder	Alcohol intoxication or cessation *lowers the seizure threshold* in someone with a previously known seizure disorder. May be difficult to distinguish from AWS seizure. Potentially life-threatening.	Recurrent seizures or status epilepticus may be more difficult to control if there is concomitant seizure disorder and alcohol use disorder.	Benzos. Phenobarbital. Home anti-epileptics.
Infection or comorbid disease	People who chronically use alcohol have higher rates of various *other life-threatening conditions*: Cirrhosis. GI bleed. Sepsis. Pancreatitis. Wernicke encephalopathy. Aspiration pneumonia. Etc.	Tachycardia. Either hypertension or hypotension. Ill appearance. Always complete thoughtful history & physical to look for signs of comorbid disease or infection. Leukocytosis and lactic acidosis may be from AKA *and/or* sepsis.	Primary issue is to identify and treat the specific pathology (i.e., start antibiotics) while also treating AWS or AKA.
Trauma	People who use alcohol may have higher rates of trauma and be unable to give history. Consider especially head trauma.	Tachycardia or bradycardia. Hypertension or hypotension. Decreased respiratory rate. Evidence of head trauma. Abnormal pupils. Abnormal motor exam or posturing.	Obtain head CT. Follow **head injury guideline** if applicable
Hangover	Unpleasant symptoms after drinking heavily, due to direct toxic effects of alcohol metabolites in system.	Likely some degree of tachycardia, hypertension, tremulousness, vomiting. Less severe than above entities.	PO antiemetics. Supportive care. Avoid IV if possible.
Alcoholic hallucinosis	Presence of hallucinations, usually visual or tactile, with clear sensorium (not delirious). Usually occurs hours after cessation of alcohol. Not life threatening.	Hallucinations. Normal sensorium. Not meeting above criteria for AWS.	Reassurance. Consider PO haloperidol or droperidol if severe.

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AWS Management

Village Management

- Vital signs, drinking history, ECG, BG, UA.
- Supportive care: IV LR, antiemetics
- IM phenobarbital 130-260mg if meeting clinical concern for at least moderate AWS.
- Refer to Bethel ER if at least moderate AWS and no longer drinking alcohol.

Determine severity of withdrawal

Clinical determination assisted by scoring system.

Note: AWS scoring systems such as CIWA, MINDS, RASS were designed and validated in inpatient and not ED setting. Do not rely on these scores alone.

Severe AWS

Front-loading strategy
Choose one pathway to start.
Treatment goal is a patient who is drowsy but arousable.

Phenobarbital pathway

Preferred in most patients. Contraindicated in pregnancy.
Consider risk factors for respiratory depression although this is not common.
Dose based on IBW.

- 5-10 mg/kg IV once.
- Can repeat 5 mg/kg Q30min to max 15 mg/kg.

If response inadequate:

- Consider lorazepam, dexmedetomidine, ketamine.
- Consider alternate diagnoses.

Benzodiazepine pathway

Preferred in patients with advanced liver disease.

- Diazepam 10-20 mg IV Q10min OR
- Lorazepam 4 mg IV Q10min (preferred in older patients or those with cirrhosis)

There is not a specific max dose, but some patients may not respond to benzos.

If response inadequate after at least 40 mg diazepam or 24 mg lorazepam:

- Consider phenobarbital at 130-260 mg increments; do not load.
- Consider dexmedetomidine, ketamine.
- Consider alternate diagnoses.

Consider early discussion with ICU regarding transfer if:

- Requiring multiple medication classes to control AWS.
- History of ICU admission for AWS.
- Concomitant severe medical diagnosis (e.g., severe AKA, head trauma, pancreatitis).
- Clinical judgment of high risk for complicated severe AWS.

Anticipate hospitalization once CIWA ≤ 15 and HR ≤ 130 maintained over 1-2 hours.

Mild-Moderate AWS

Phenobarbital 65-260 mg IV
or
Diazepam 10-20 mg IV or PO Q1hr

2nd line:
Lorazepam 2-4 mg IV or PO Q1hr

Until CIWA ≤ 8

Determine disposition

Hospitalization if indicated for another concomitant diagnosis (e.g., aspiration pneumonia, suicidality).

Anticipate ED discharge if:

- AWS resolved.
- Sober caregiver present.
- Concomitant diagnoses addressed with reasonable expectation of successful outpatient management.
- Plan made for outpatient treatment & follow up.

Consider discharge with:
3-5 doses of diazepam 10 mg PO Q4-6h PRN;
10 doses of chlordiazepoxide 50 mg over 4 day taper;
and/or 3-5 days of gabapentin 300-900 mg TID.

- Admit with telemetry, q4h vital signs, and CIWA protocol until stability demonstrated per clinician judgment.
- Consider IV thiamine 100-500 mg daily.
- Remember other causes of delirium besides AWS and be judicious with benzodiazepines/ phenobarbital.
- Follow CIWA protocol with symptom triggered dosing of diazepam, lorazepam, or chlordiazepoxide as needed. Or consider PO phenobarbital taper (various regimens available online).
- Manage other medical diagnoses.
- Upon discharge, go to page 4 for referrals to outpatient care.

Note: Clinicians have managed patients in ED for alcohol related issues for 8+ hours if management expected to avoid transfer or hospitalization.

If patient was involuntarily admitted for psychiatric assessment, they can be medically cleared for transfer to BH unit when no longer requiring prn doses of benzodiazepines for 24 hours.

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Clinical Guideline
AKA Management

Village management

- Vital signs, drinking history, ECG, BG, UA.
- PO ondansetron and/or PR prochlorperazine.
- If unable to tolerate PO and/or HR > 130, IV LR 1-2L bolus.
- Home with supportive care meds, or to Bethel if persistent symptoms or risk of withdrawal.

Clinical suspicion for AKA (binge drinking, poor oral intake, vomiting).

Consider antiemetic and PO challenge if appropriate.

Note:

- Distinguishing AKA from AWS is challenging, and both syndromes can coexist.
- Consider that in both settings patients may be tachycardic, nauseated, and tremulous.
- Probably most important is to establish how long they have been drinking – three day binge is more likely to lead to AKA than AWS.

Remember to give thiamine (IV or IM, 100-500 mg) prior to dextrose containing fluids if concern for Wernicke encephalopathy.

- Establish IV. Start LR (not NS).
- Place on monitors.
- Antiemetics after ECG (metoclopramide is the least QT prolonging).
- POC blood glucose.
- Labs: CBC, CMP, Mg, Phos, VBG, lactate, UA (for ketones), ethanol level. Others as clinically indicated.
- ECG (attention to intervals).

Severe Derangements

pH < 7.20
HCO3 < 15
Lactate > 4
BG < 60
Na < 125
K < 3
Phos < 2
Prolonged QTc or QRS

Severe derangements? (see box)

Yes → Consult Emergency RMT provider if in SRC. Consult ER physician if in Bethel. Consider consult to ANMC ICU regarding transfer.

- Anticipate starting IV D5-LR, IV thiamine 100-500 mg, and additional electrolyte replacement as indicated.
- Consider alternate/additional diagnoses (e.g. sepsis).
- Anticipate trending labs Q2h.
- Track urine output.

No

- Replete electrolytes as indicated.
- Continue boluses of IV D5-LR titrated to goal HR < 120, urine output > 0.5 ml/kg/hour, lactate improved* (see box).
- Trend labs Q2h.
- Okay to PO challenge at any point. Continue antiemetics as needed.

Serum Lactate in Context of Alcohol Use

- Serum lactate is not a specific marker for tissue perfusion.
- This is especially true in context of alcohol use and liver dysfunction.
- Use clinical judgment regarding other causes for elevated lactate, and anticipate that trending till normal is unlikely clinically useful.

Clinical improvement?

No → Severe derangements? (see box)

Yes → Determine disposition.

Consider discharge home if:

- Labs normalized.
- Tolerating PO.
- HR < 120.
- Plan for outpatient follow up.

Consider YK admission if:

- Overall trend for improvement with no severe derangements but anticipated need for > 12 hours IV fluids and monitoring.
- Improved AKA but additional diagnosis suspected (e.g. sepsis or AWS).

- Place in observation vs admission
- Continue IV LR or D5-LR and antiemetics. Consider IV PPI.
- Trend labs and UOP.
- Discharge when meeting criteria to left.

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Clinical Guideline
Alcohol: Referrals to Treatment and Special Situations

Every patient seen at YK with complications of alcohol use should receive SBIRT.

Screening, Brief Intervention, and Referral to Treatment

- Remember empathy and patient autonomy.
- Provide feedback about consequences of alcohol use.
- Provide advice about recommended levels of drinking. This is not the same as advising abstinence only.
- Ask for patient reflections, questions, and motivation to make a change.

Step 1: Universal prescreening questions. "Do you think your drinking has negatively impacted your health and safety?" and "Are you interested in decreasing the amount you drink?"

Step 2: If yes to prescreening questions, perform **AUDIT-C** (will be available as adhoc form).

Step 3: Review and offer the menu of options below.

Menu of options for treatment of alcohol use disorder at YKHC		
Routine outpatient follow up	• ED clerk can schedule next day OPC appointment. • Place order "Refer to Bethel Follow-Up" for future appointments. • Chart communication to PCP or appropriate CM pool.	• All outpatient providers can assess for and manage AUD. • They can also refer to BH or addiction medicine as needed.
Medication assisted treatment/ Addiction medicine clinic	• Not a current avenue for next day follow up. • Send chart communication to "Addiction Medicine Case Manager." • Place order for "Refer to Addiction Medicine."	Physicians with special training in addiction medicine assess for and manage AUD and comorbid diseases, including thoughtful use of medicines like naltrexone, disulfiram, etc.
Outpatient behavioral health	• Place order for "Refer to Behavioral Health Internal." • If expedited follow up is desired, contact "BH Emergency" clinician on Tiger Text and/or send chart communication to Priscilla Pavilla and/or Pauline Fisher (BH case managers).	Behavioral health clinicians provide support around substance use and comorbid depression, anxiety, trauma, etc.
Inpatient/residential substance use disorder treatment	The patient will need a comprehensive assessment by Behavioral Health, so needs "Refer to Behavioral Health Internal" order *and* chart communication to Priscilla Pavilla and Pauline Fisher.	AHC is the Bethel-based residential substance use treatment center. There are other residential facilities located around Anchorage.

Special Situation

- Police or public safety personnel escort intoxicated person into ER for "medical clearance"
- This situation is inherently not suited for a guideline, but it comes up frequently and can make providers uncomfortable.
- See below for some considerations.

Is this person so intoxicated they are not ambulatory or unable to speak except in incomprehensible sounds?

Is there evidence of a potentially life, limb, or eyesight threatening injury?

Are they expressing suicidal or homicidal ideation?

- Don't discharge to sleep off.
- Admit to ER and provide appropriate care.
- Patient may require sedation in order to complete indicated workup if emergent or may require monitoring in department until sober enough to participate in care.

Does your gut say this person could probably just sleep on your couch then wake up and go home in the morning?

Yes

- Send to sleep off or jail.
- Patient won't be monitored 1:1 but will be checked on periodically.

Not sure

- Consult a colleague, especially if feeling pressure from PD or other staff.
- We can send someone to sleep off and ask them to come back the next day when sober. Consider how concerned you would be if they didn't return to the ER.
- One can consider severe intoxication to be grave disability impairing ability to care for self.
- However, the department would not function if we keep every potentially injured intoxicated person for hours.