INESSS
LE SAVOIR PREND FORME

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DRUG

PHARMACOLOGICAL TREATMENTS

ALCOHOL WITHDRAWAL AND RELAPSE PREVENTION

This optimal use guide is intended for health professionals. It is provided for information purposes only and should not replace the judgment of the clinician who performs activities reserved under a statute or regulation. The recommendations concern individuals 18 years of age and older, with the exception of pregnant or breastfeeding women. They were developed using a systematic process and are supported by the scientific literature and by the knowledge and experience of Québec clinicians and experts. For further details, go to the section Trouble lié à l'usage d'alcool at inesss.qc.ca.

GENERAL INFORMATION

- Alcohol use disorder[1] (AUD) is a chronic, recurring disease that requires ongoing, personalized interdisciplinary management.
- Even if the individual does not have AUD, a sudden reduction in or cessation of prolonged, heavy drinking can lead to a withdrawal syndrome that, if left untreated, can cause serious complications.
- The management of AUD involves both treatment for withdrawal and treatment for preventing relapses, both of which should, when applicable, be offered at the same time to ensure the continuity of care.

1. In this guide, the term "alcohol" refers specifically to ethanol.

INITIAL ASSESSMENT

- The following items should be checked or checked for during the initial assessment of a patient with AUD in order to assess their alcohol misuse and risk of withdrawal syndrome and to guide the choice of treatment.
  - Their pattern of alcohol and other psychoactive substances use:
    - The quantity and frequency
    - When last used
    - The use context and impact
  - Risk factors for withdrawal-related complications
  - Their treatment history and goals, and their preferences regarding the different aspects of the treatment
  - The presence of a history of other physical or mental health problems, including signs of depression or suicidal ideation
  - Their social environment
- Alcohol misuse can be assessed by means of a validated instrument like the AUDIT Alcohol Use Disorders Identification Test) or the instrument DÉBA-Alcool (Assessment and Screening of Assistance Needs – Alcohol). However, the diagnosis of AUD is based on DSM-5 criteria.
- The misuse of other psychoactive substances can be assessed with the ASSIST scale (Alcohol, Smoking and Substance Involvement Screening Test).

LABORATORY TESTS

- The following tests should be ordered when assessing the patient's condition or as soon as possible. However, treatment initiation should not be delayed if alcohol withdrawal is suspected and the laboratory test results are not yet available.

BASIC BLOOD WORK

- ☐ Complete blood count (CBC)
- ☐ International normalized ratio (INR)
- ☐ Electrolyte profile
- ☐ Total bilirubin
- ☐ Aspartate aminotransferase (AST)
- ☐ Alanine aminotransferase (ALT)
- ☐ Alkaline phosphatase
- ☐ Albumin
- ☐ Creatinine
- ☐ Glucose
- ☐ Magnesium

AS NECESSARY, DEPENDING ON THE SITUATION

For women of child-bearing potential:

- ☐ Chorionic gonadotropin hormone (β-hCG)

In the presence of risk factors[2]:

- ☐ Hepatitis B
- ☐ Hepatitis C
- ☐ Human immunodeficiency virus (HIV)
- ☐ Syphilis

- A GGT (gamma-glutamyl transferase) assay may sometimes be considered in order to supplement the alcohol use assessment.
- Consider ordering a urine toxicology screen only if you strongly suspect the misuse of other substances.

2. For additional information on sexually transmitted and blood-borne infections (STBBI), consult the MSSS's table ITSS à rechercher selon les facteurs de risque décelés and Guide québécois de dépistage des ITSS, INESSS's STBBI – Syphilis OUG or the INSPQ's algorithmes de sérodiagnostic de la syphilis.

Québec

WITHDRAWAL

CLINICAL PRESENTATION

- Validated instruments are available and should be used when assessing the patient's condition, including:
  - For assessing the risk of alcohol withdrawal-related complications: the PAWSS (Prediction of Alcohol Withdrawal Severity Scale);
  - For assessing the severity of active alcohol withdrawal syndrome[1]
    - The CIWA-Ar (Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised) combined with the measurement of the patient's vital signs, especially their heart rate;
    - Or the Modified CIWA if the care context limits the use of the CIWA-Ar.
- Determine if the patient has Gayet-Wernicke encephalopathy using Caine's criteria.

1. The SAWS (Short Alcohol Withdrawal Scale) is also available. The questionnaire can be completed by the patient or an outside evaluator.

RISK FACTORS FOR WITHDRAWAL-RELATED COMPLICATIONS

The risk of withdrawal-related complications increases with the presence of several factors, each of which represents an additional risk. Therefore, in addition to the initial assessment of the patient's condition, these factors should be checked for:

- The presence of moderate or severe active withdrawal syndrome on presentation;
- A history of severe withdrawal or withdrawal-related complications (e.g., hallucinations, seizures or delirium tremens);
- Previous multiple withdrawals, especially if close together;
- Age > 65 years;
- Pronounced autonomic nervous system hyperactivity (e.g., tachycardia, diaphoresis and hypertension);
- The presence of physical or medical comorbidities or traumatic brain injury;
- A physiological dependence on benzodiazepines, barbiturates or other GABAergic agents;
- The concomitant use of other psychoactive substances.

TREATMENT PRINCIPLES

- Pharmacological treatment for withdrawal:
  - Should be administered in the presence:
    - Of moderate to severe active withdrawal syndrome (CIWA-Ar score ≥ 8 or Modified CIWA score ≥ 7); **OR**
    - Of a high risk of withdrawal-related complications (PAWSS score ≥ 4).
  - Should be considered in the presence:
    - Of a low risk of withdrawal-related complications (PAWSS score < 4); **AND**
    - Of mild active withdrawal syndrome (CIWA-Ar score < 8 or Modified CIWA score < 7); **OR**
    - Of a risk of developing withdrawal syndrome upon stopping or reducing alcohol use.
    - **For these individuals, consideration should be given to outpatient management.**
- In an outpatient setting
  - Consideration should be given to dose-splitting and a high pharmacy dispensing frequency, both for benzodiazepines and gabapentin, in order to monitor their use (to limit the potential for abuse and the risk of overdose or diversion) and to ensure a better patient follow-up;
  - To ensure a satisfactory follow-up, initiate treatment according to the treatment staff's availability and see to it that a support person is available throughout the withdrawal period.
- In a hospital setting
  - In the case of benzodiazepines, when possible, preference should be given to a symptom-triggered dosage regimen;
  - However, consideration may be given to administering benzodiazepines using a decreasing fixed-dose schedule, especially in the following situations:
    - When close monitoring tailored to the patient's condition is not possible,
    - For patients currently taking benzodiazepines daily,
    - If the patient has an unstable psychiatric comorbidity or a coexisting addiction,
    - If the patient has a history of complicated withdrawal (e.g., delirium tremens or withdrawal-related seizures).

PHARMACOLOGICAL TREATMENTS FOR WITHDRAWAL

	Gabapentine[1,2]	Benzodiazepines	
		Diazepam	Lorazepam[1]
Onset of action (PO)	Slow	Rapid (30 min)	Intermediate (30-60 min)
Duration of action	Intermediate	Long	Intermediate
Active metabolites	No	Yes	No
Mild to moderate withdrawal syndrome with a low risk of complications (CIWA-Ar score < 19 or Modified CIWA score < 12 and PAWSS score < 4) OU **Low risk of developing withdrawal syndrome**	100-300 mg PO TID (+/- PRN). Increase gradually to a maximum of 1800 mg daily as tolerated Renal impairment: **CrCl 30 to 59 ml/min:** Limit to 300 mg PO BID **CrCl 15 to 29 ml/min:** Limit to 300 mg PO QD **CrCl < 15 ml/min:** Initiate and limit to 100 mg PO QD Adjust the dose for patients over 65 years of age[3]	5-10 mg PO q 4 to 6 h PRN **OR** 5-10 mg PO TID or QID (+/- HS PRN) Adjust the dose and, when possible, avoid in patients over 65 years of age, especially in an outpatient setting.[3]	1-2 mg PO/SL q 4 to 6 h PRN **OR** 1-2 mg PO/SL TID or QID (+/- HS PRN) Adjust the dose for patients over 65 years of age[3]
Severe withdrawal syndrome[4] (CIWA-Ar score ≥ 19 or Modified CIWA score ≥ 12)	✗	10-20 mg q 1 to 2 h PRN (preferably via the parenteral route[5])	2-4 mg q 1 to 2 h PRN (preferably via the parenteral route)
High risk of severe withdrawal syndrome or of complications[4]	✗	Initiate treatment very promptly to prevent severe withdrawal syndrome	
Limit dose requiring a reassessment	Not applicable	> 60 mg in 12 hours	> 12 mg in 12 hours
Dose reduction when the patient's condition is stabilized (e.g., CIWA-Ar score < 8 or Modified CIWA score < 7 for 12-24 hours)	Stepwise by 100-200 mg PO TID for 3 to 7 days, unless continued for relapse prevention	Decrease over 3 to 7 days by reducing the dose or frequency	
Duration of treatment	▸ 7 to 10 days ▸ However, consideration may be given to extending the duration of treatment up to a maximum of 4 weeks in the event of persistent withdrawal symptoms, a brief, isolated relapse, or benzodiazepine dependence		

PRECAUTIONS AND CONTRAINDICATIONS

Mild or moderate hepatic impairment	✓	⚠ 6	⚠ 6
Severe hepatic impairment	✓	✗	⚠
Severe or chronic respiratory impairment	✓	✗	⚠
Renal impairment (CrCl in ml/min)	⚠ (< 60)	⚠ 6	⚠ 6
Age > 65 years	⚠	⚠	⚠
Sleep apnea	✓	✗	⚠
Acute closed-angle glaucoma	✓	✗	✗
Myasthenia gravis	✓	✗	✗
Drug interactions	For a list (nonexhaustive), see the table showing the main drug interactions in Appendix I.		

Legend: ✓ :Recommended; ⚠ :May be considered with caution, depending on the risks and benefits; ✗ :Not recommended.

1. These drugs are not approved by Health Canada for the treatment of alcohol withdrawal, but they are commonly prescribed for this purpose and are valid treatment options, based on the clinical expertise of the advisory committee's members.
2. Gabapentin is an even more favorable option for the treatment of withdrawal when its use is also being considered for relapse prevention.
3. In patients over 65 years of age, start with lower doses to reduce the risk of falls or respiratory depression.
4. Phenobarbital is not approved by Health Canada for the treatment of alcohol withdrawal. However, it is sometimes prescribed for this purpose and is a valid treatment option for severe, complicated withdrawal syndrome, based on the clinical expertise of the advisory committee's members. However, its use should be reserved for an experienced prescriber practicing in a hospital setting.
5. For the administration of high diazepam doses, the intrarectal route may be preferable to the IM route when the IV route is not available.
6. For these conditions, initiate treatment with lower doses, with preference to be given to using lorazepam over diazepam.

VITAMINS AND SUPPLEMENTS

- Thiamine[1] 100 to 500 mg/day PO, IV or IM for 1 week. Adjust the dose according to the patient's condition (e.g., the severity of the withdrawal syndrome, their ability to take food, impaired absorption, diarrhea or Wernicke encephalopathy).
- If the patient has confirmed deficiencies, correct the electrolyte abnormalities, especially with regard to magnesium (which is necessary for the absorption of thiamine into cells).

1. Since thiamine is poorly absorbed via the oral route, the parenteral route is to be preferred (in a hospital setting, preference should first be given to the IV route and then to the IM route). If the oral route is used, the daily dose can be split to promote better absorption.

FOLLOW-UP

- The medication doses and the frequency at which the patient is assessed should be adjusted during treatment according to changes in their withdrawal symptoms (e.g., based on a validated instrument) and according to their health status, history of complications, social support, and environment.
- In an outpatient setting, explain to them the details regarding their treatment (see follow-up sheet):
  - A follow-up should be provided 2 or 3 times a week (minimally within 24 to 72 hours after the start of treatment) by a member of the treatment team, including, among others, the pharmacist, and include checking or checking for the following:
    - The use of alcohol or other psychoactive substances;
    - Evidence of underdosing (marked withdrawal symptoms), overdosing or intoxication with the medication or other substances;
    - Therapeutic compliance;
    - Changes in their emotional status (e.g., suicidal ideation).
  - Additional monitoring should be considered for patients with a benzodiazepine use disorder (current or past).
- In an institutional setting, a close follow-up should be provided at least after the first 2 or 3 doses of the treatment until the withdrawal signs and symptoms are controlled.
  - The level of sedation should be assessed (e.g., the Richmond Agitation Sedation Scale (RASS)).
- A prescription to prevent relapses should be considered pending management for the treatment follow-up.

REFERRAL TO A HOSPITAL or CONSULTATION WITH AN EXPERIENCED COLLEAGUE

- Consideration should be given to referring the patient to a hospital in the following situations:
  - Severe withdrawal syndrome (e.g., hallucinations, CIWA-Ar score ≥ 19 or Modified CIWA score ≥ 13) or a high risk of withdrawal-related complications (PAWSS > 4);
  - Suspected Gayet-Wernicke encephalopathy;
  - Worsening of overall health (e.g., pronounced sedation or unstable vital signs).
- Consideration should be given to consulting an experienced colleague in the following situations:
  - A history of severe withdrawal syndrome or of withdrawal-related complications;
  - A lack of response after 24 to 48 hours of treatment (CIWA-Ar score ≥ 8 or Modified CIWA score ≥ 7);
  - Multiple, severe or unstable physical or psychiatric comorbidities (including suicidal ideation);
  - A concurrent disorder involving the use of another substance, with the exception of tobacco.
- A lower hospital admission threshold may be considered in certain situations, such as for individuals over age 65 or in cases of psychosocial instability.

RELAPSE PREVENTION

TREATMENT PRINCIPLES

- Pharmacotherapy for relapse prevention should be offered to individuals with AUD.
- The following elements in particular should be taken into consideration when choosing a pharmacological treatment:
  - The treatment goals (e.g., a reduction in alcohol use[1] or abstinence, or the treatment of anxiety or sleep disturbances). These goals can change along the way;
  - The patient's past treatment experiences (including tolerance and the maximum dose reached), needs and preferences.
- Diversity should be taken into consideration in the patient's management, both for certain physiological and sociocultural aspects (e.g., the perception of treatments).
- Medication for relapse prevention can be safely introduced when the patient is using alcohol, but its effectiveness may be greater when it is administered at the end of a withdrawal management period.
  - However, it is preferable to have eliminated most of the effects of withdrawal before initiating treatment so that there is no confusion between the clinical picture and the medications' adverse effects, and to adjust the management according to the residual withdrawal symptoms.
- Pharmacotherapy should be accompanied by:
  - Brief interventions and counselling to equip the patient to deal with the difficulties associated with drinking;
  - Motivational support for achieving their goals and encouraging therapeutic adherence;
  - A proposal for psychosocial interventions and support[2], although these interventions are not to be perceived as conditional or mandatory for accessing treatment for AUD.
- Consideration should be given to prescription-splitting and a high pharmacy dispensing frequency, especially at the start of treatment and especially for gabapentin and topiramate, in order to monitor their use and to ensure a better patient follow-up.

⚠ It is important to remind women who are pregnant or of childbearing potential that the use of topiramate during pregnancy carries significant risks for the fetus (support contraception needs, if applicable).

1. Any objective aimed at reducing average alcohol use is likely to be beneficial and should be fostered.
2. If need be, consult the MSSS's Répertoire des ressources en dépendances.

PHARMACOLOGICAL TREATMENTS[3]

	1st choice	2nd choice		
	Naltrexone	**Acamprosate[4]**	**Gabapentin[5]**	**Topiramate[5]**
Dosage	25 mg PO QD for 2 to 4 days, then 50 mg PO QD	666 mg PO TID **< 60 kg:** 666 mg AM, 333 mg PM and 333 mg HS	100-300 mg PO TID. Increase gradually to 1200-1800[6] mg PO daily as tolerated	25 mg PO QD. Increase gradually (e.g., increase stepwise by 25 mg a week) to 100-150 mg PO BID as tolerated
		CrCl 30 to 49 ml/min: 333 mg PO TID	**CrCl 30 to 59 ml/min:** Limit to 300 mg PO BID **Clcr 15 to 29 ml/min :** Limit to 300 mg PO QD **Clcr < 15 ml/min:** Initiate and limit to 100 mg PO QD	**Clcr < 70 ml/min :** target dose 50 to 75 mg PO BID

3. The current evidence does not support recommending the use of baclofen for relapse prevention.
4. Acamprosate, an attractive option when the patient's treatment goal is abstinence, is an exception drug in the RAMQ's formulary. The indication for payment is recognized for maintenance of abstinence in patients with alcohol dependence who have abstained from alcohol for at least 5 days and who are part of a comprehensive management program focused on alcohol abstinence. The maximum duration of each authorization is 3 months, for a total maximum duration of authorization of 12 months.
5. Gabapentin and topiramate are not approved by Health Canada for relapse prevention. However, they are commonly prescribed for this purpose and are valid treatment options, based on the clinical expertise of the advisory committee's members.
6. Gabapentin may be effective at 900 mg/day in some patients, but its efficacy appears to be greater at a dose of 1200 mg/day. Following alcohol withdrawal with gabapentin, adjust as needed to the target treatment dose for relapse prevention

PRECAUTIONS AND CONTRAINDICATIONS

	Naltrexone	Acamprosate	Gabapentin	Topiramate
Hepatic impairment	✗	⚠ (Child-Pugh C)	✓	⚠
Opioids: current or anticipated use, withdrawal or opioid use disorder	✗ [1]	✓	⚠	✓
Renal impairment (CrCl in ml/min	⚠ (< 60)	✗ (≤ 30) ⚠ (30-49)	⚠ (< 60)	⚠ (< 70)
Age > 65 years	✓	✓	⚠	⚠
Drug interactions	For a list (nonexhaustive), see the table showing the main drug interactions in Appendix I.			
Duration of treatment	▸ Treatment for relapse prevention should be continued for at least 3 months. ▸ If there is no discernible benefit after 3 months of treatment, the treatment should be reevaluated and alternatives considered. ▸ Six months after the start of treatment, the usefulness of continuing the medication should be reevaluated with the patient on the basis of the perceived or experienced benefits and adverse effects. ⚠ The administration of gabapentin or topiramate should not be stopped abruptly.			

Legend: ✓ :Recommended; ⚠ :May be considered with caution, depending on the risks and benefits; ✗ :Not recommended.

1. Including opioid use during the past ten days, even if the patient is not actively using any.

FOLLOW-UP

- Patients should be monitored closely at the start of treatment (e.g., once a week). This should include checking or checking for the following:
  - The onset or worsening of sleep disturbances, symptoms of depression or anxiety, or suicidal ideation, even without alcohol use;
  - The onset of withdrawal symptoms, especially for patients without prior withdrawal management;
  - Tolerance of and compliance with the treatment, and cravings for alcohol.
- Next, a follow-up should be conducted at least once a month for 6 months by a member of the multidisciplinary team (except the psychosocial workers) and with reduced but regular frequency if the treatment is continued beyond 6 months.
- It may be beneficial to take steps to promote therapeutic compliance:
  - In the event of therapeutic noncompliance (rather than discontinuing the medication);
  - In the event of instability or social precariousness (e.g., homelessness).
- Additional follow-ups, depending on the medication:
  - Topiramate: Monitor the patient for the onset of metabolic acidosis;
  - Naltrexone: A liver profile should be run 4 to 6 weeks after the start of treatment and every 6 months thereafter.
- Consideration could be given to referring the patient to a specialized facility or to intensifying the outpatient follow-up, as the case may be, in the following situations:
  - The onset or worsening of a severe, unstable or complex physical or mental health problem (e.g., bipolar disorder or psychotic disorder, such as schizophrenia);
  - The onset or worsening of another substance use disorder, with the exception of tobacco and cannabis;
  - A deterioration in the social environment or psychosocial destabilization;
  - No benefit obtained despite several adequate treatment attempts.
- Following treatment, the absence of AUD criteria for a period of more than 3 months but less than 12 months is considered early remission, whereas a symptom-free period of more than 12 months is considered sustained remission

REFERENCES

To consult the references, see the report in support of the OUG and the state-of- knowledge report.

DRUG INTERACTIONS OF MEDICATIONS RECOMMENDED FOR WITHDRAWAL AND RELAPSE PREVENTION

Drug(s)	Most significant drug interactions	
	Drugs concerned	**Effect or what to do to manage the interaction**
Benzodiazepines • Diazepam • Lorazepam	**All benzodiazepines** • Central nervous system depressants (e.g., opioids, alcohol, anesthetics, antidepressants, sedative antihistamines, antipsychotics and hypnotics)	Increased risk of respiratory depression
	Diazepam • CYP2C19 or CYP3A4 inhibitors, such as: – Azole antifungals (itraconazole, ketoconazole and voriconazole) – Fluvoxamine – HIV protease inhibitors – Boceprevir (hepatitis C virus NS3/A4 protease inhibitor) – Cimetidine – Grapefruit	Possible increase in diazepam concentrations.
	Diazepam • Phenytoin • Digoxin	Altered serum phenytoin and digoxin levels.
Gabapentine	CNS depressants, including opioids, benzodiazepines and alcohol	Increased effects on cognitive functions and gross motor skills and increased risk of sedation and respiratory depression.
	Aluminum hydroxide- and magnesium-based antacids	Decreased gabapentin levels (take 2 hours apart).
Naltrexone	Other potentially hepatotoxic drugs	Increased risk of hepatotoxicity.
	Opioids	Decrease in the effect of opioids and possible precipitation of opioid withdrawal syndrome.
Topiramate	Oral contraceptives	Decreased concentrations and effectiveness of oral contraceptives.
	There are several other significant drug interactions with topiramate	If necessary, consult a member of the interprofessional team.

ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT)

The Alcohol Use Disorders Identification Test (AUDIT) : interview version.

Read questions as written. Record answers carefully. Begin the AUDIT by saying "Now I am going to ask you some questions about your use of alcoholic beverages during this past year."

Explain what is meant by "alcoholic beverages" by using local examples of beer, wine, vodka, etc. Code answers in terms of "standard drinks". Place the correct answer number in the box at the right.

1. How often do you have a drink containing alcohol?
(0) Never
(1) Monthly or less
(2) 2 to 4 times a month
(3) 2 to 3 times a week
(4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
(0) one or two
(1) three or four
(2) five or six
(3) seven to nine
(4) ten or more

3. How often do you have six or more drinks on one occasion?
(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

4. How often during the last year have you found that you were not able to stop drinking once you had started?
(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?
(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?
(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
(0) Never
(1) Less than monthly
(2) Monthly
(3) Weekly
(4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?
(0) No
(2) Yes, but not in the last year
(4) Yes, during the last year

10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?
(0) No
(2) Yes, but not in the last year
(4) Yes, during the last year

Score total : _____ (maximum score = 40)

Source: https://www.who.int/publications/i/item/audit-the-alcohol-use-disorders-identification-test-guidelines-for-use-in-primary-health-care

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PREDICTION OF ALCOHOL WITHDRAWAL SEVERITY SCALE (PAWSS)

Part A: Threshold criteria	**Yes or no (no points)**
Have you consumed any amount of alcohol (i.e., been drinking) within the last 30 days?	
Did the patient have a positive blood alcohol level on admission?	
If the answer to either question is Yes, proceed with test.	
Part B: Based on patient interview	**(1 point each)**
Have you been recently intoxicated/drunk, within the last 30 days?	
Have you ever undergone alcohol use disorder rehabilitation treatment or treatment for alcoholism? (i.e., in-patient or out-patient treatment programs or AA attendance)	
Have you ever experienced any previous episodes of alcohol withdrawal, regardless of severity?	
Have you ever experienced blackouts?	
Have you ever experienced alcohol withdrawal seizures?	
Have you ever experienced delirium tremens or DT's?	
Have you combined alcohol with other "downers" like benzodiazepines or barbiturates, during the last 90 days?	
Have you combined alcohol with other substance of abuse, during the last 90 days?	
Part C: Based on clinical evidence	**(1 point each)**
Was the patient's blood alcohol level on presentation greater than 43 mmol/l? OR Have you consumed any alcohol in the past 24 jours?	
Is there any evidence of increased autonomic activity? (e.g., heart rate > 120 bpm, tremor, sweating, agitation or nausea)	
Total score	
Notes: Maximum score =10. This instrument is intended as a screening tool. The greater the number of positive findings, the higher the risk for the development of alcohol withdrawal syndrome. A score ≥ 4 suggests high risk for moderate to severe (complicated) alcohol withdrawal syndrome.	

Source: Maldonado JR, Sher Y, Das S, Hills-Evans K, Frenklach A, Lolak S, et al. Prospective validation study of the Prediction of Alcohol Withdrawal Severity Scale (PAWSS) in medically ill inpatients: A new scale for the prediction of complicated alcohol withdrawal syndrome. Alcohol Alcohol 2015;50(5):509-18.

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CLINICAL INSITITUTE WITHDRAWAL ASSESSMENT ALCOHOL REVISED SCALE (CIWA-Ar)

Heart rate: _____/ min Blood pressure: _____ / _____

Nausea and vomiting: Ask "Do you feel sick to your stomach? Have you vomited?" Observe.

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

Tactile disturbances: Ask «Have you any itching, any pins and needles, any burning or any numbness, or do you feel bugs crawling on or under your skin?»

0 No disturbances of this type
1 Very mild itching, pins and needles, burning or numbness
2 A mild degree of the above-mentioned disturbances
3 A moderate degree of the above-mentioned disturbances
4 Moderately severe hallucinations
5 Severe hallucinations
6 Extremely severe hallucinations
7 Continuous hallucinations

Tremors: Evaluate with arms extended and fingers in front of the examiner. Observe.

0 No tremors
1 Not visible, but can be felt at the fingertips
2
3
4 Moderate, with the patient's arms extended
5
6
7 Severe, even with arms not extended

Auditory disturbances: Ask «Are you more aware of the sounds around you? Are they harsher? Do they frighten you? Are you hearing any sound that is disturbing to you? Are you hearing things you know are not there?»

0 No disturbing sounds
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

Paroxysmal sweats: Observe.

0 No sweat visible
1 Sweat barely perceptible, palms moist
2
3
4 Beads of sweat on forehead
5
6
7 Drenching sweats

Visual disturbances: Ask «Does the light appear to be too bright? Is its color 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 No disturbances of this type
1 Very mild sensitivity
2 Mild sensitivity
3 Moderate sensitivity
4 Moderately severe hallucinations
5 Severe hallucinations
6 Extremely severe hallucinations
7 Continuous hallucinations

Anxiety: Ask "Do you feel nervous?" Observe.

0 No anxiety, at ease.
1 Mildly 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

Headaches: 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. Focus instead on severity.

0 No headache
1 Very mild
2 Mild
3 Moderate
4 Moderately severe
5 Severe
6 Very severe
7 Extremely severe

Agitation: Observe.

0 Normal activity
1 Somewhat more than normal activity
2
3
4 Moderately fidgety and restless
5
6
7 Paces back and forth during the evaluation or thrashes about

Orientation disturbances: Ask "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 Gets date wrong by no more than 2 days
3 Gets date wrong by more than 2 days
4 Disoriented for place and/or person

Score total : _____ (Score maximum = 67)

When interpreting the score, one must take into account the data from the clinical evaluation and any confounding factors (e.g., the effect of medications, medical conditions, communication difficulties).

Severity of alcohol withdrawal syndrome as assessed by the CIWA-Ar			
Severity	**Mild**	**Moderate**	**Severe**
Score	< 8	8 to 18	≥ 19

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MODIFIED CLINICAL INSTITUTE WITHDRAWAL ASSESSMENT ALCOHOL REVISED SCALE (MODIFIED CIWA-Ar)

MODIFIED CIWA-Ar SCALE	
Heart rate	
< 80	**0**
80 to 90	**1**
> 90	**2**
Blood pressure	
< 150/90	**0**
150/90 to 180/95	**2**
> 180/95	**3**
Nausea or vomiting	
No nausea or vomiting	**0**
Mild nausea with dry heaves	**1**
Constant nausea with vomiting	**2**
Tremors	
No tremors	**0**
Palpable at fingertips only	**1**
Moderate and grossly visible	**2**
Severe, even with arms at side	**3**
Anxiety	
No anxiety or agitation	**0**
Mildly anxious with increased activity	**1**
Moderately anxious with restlessness	**2**
Severely anxious with near-panic reaction	**3**
Disorientation/confusion	
Oriented	**0**
Mild — uncertain about date or place	**1**
Moderate — disoriented as to time, place and person and surrounding events	**2**
Severe — completely disoriented as to time, place and person or has auditory, tactile or visual disturbances	**3**
Perspiration	
None	**0**
Mild – barely perceptible with moist palms	**1**
Severe — drenching sweats	**2**
Total score (Maximum score =18)	

Modified version of the Clinical Institute Withdrawal Assessment for Alcohol Scale (Modified CIWA-Ar)

Source : WOJTECKI CA, MARRON J, ALLISON EJ JR, KAUL P, TYNDALL G. *Systematic ED assessment and treatment of alcohol withdrawal syndromes: a pilot project at a Veterans Affairs Medical Center. J Emerg Nurs. 2004 Apr; 30(2):134-40.*

Severity of alcohol withdrawal syndrome as assessed by the Modified CIWA-Ar			
Severity	**Mild**	**Moderate**	**Severe**
Score	0 to 6	7 to 12	≥ 13

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RICHMOND AGITATION-SEDATION SCALE (RASS)

Instruction	Description/Definition	Level
Observe the patient quietly		
If he/she shows spontaneous motor activity, assess the level of agitation:	Combative: immediate danger to staff	+ 4
	Very agitated: pulls or removes tubes or catheters and/or is aggressive toward staff	+ 3
	Agitated: frequent non-purposeful movements and/or fights ventilator	+ 2
	Restless: anxious or apprehensive, but movements oriented, infrequent and not vigorous or aggressive	+ 1
If he/she is calm and responds or not to simple commands:	Alert and calm: eyes open spontaneously Conscious: RASS 0 + responds to simple commands	0
If he/she is calm and eyes are open: assess the level of hypoalertness (or drowsiness), state the patient's name, but without touching him/her, in an increasingly louder voice and in an especially loud voice if he/she might be hearing-impaired (elderly patient, prolonged stay in resuscitation: a plug of earwax, antibiotic or furosemide toxicity):	Drowsy: not fully alert but has sustained awakening, with eye contact to voice (> 10 s)	– 1
	Slight sedation: briefly awakens, with eye contact to voice (< 10 s)	– 2
	Moderate sedation: movement or eye opening to voice , but no eye contact	– 3
If the patient makes no movement, including when his/her name is called loudly: rub the shoulder and then the sternum in a non-nociceptive manner:	Deep sedation: no movement in response to voice, but movement or eye opening to physical stimulation (non-nociceptive rubbing of the shoulder or sternum)	– 4
	Unarousable: no response to voice or physical stimulation (non-nociceptive rubbing of shoulder and sternum)	– 5

Source: CMQ, 2015. *La sédation-analgésie, lignes directrices.*

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