Armon Molavi, MD, Sulara Guruge, MD, Peter Kelly, MD

Outpatient treatment of alcohol use disorder

An easy-to-use guide produced as part of a UBC Family Practice Resident Scholar Project supports physicians prescribing medications to treat alcohol withdrawal symptoms and prevent relapse.

ABSTRACT: Alcohol use disorder is highly prevalent and has a significant impact on individuals and society. Research suggests that physicians underutilize medications for relapse prevention even though there is good evidence to support pharmacotherapy for this. Moreover, in outpatient settings, benzodiazepines for alcohol withdrawal are sometimes prescribed in ways that may not be safe. The *Quick Guide to Outpatient Treatment of Alcohol Use Disorder* was created as part of a UBC Family Practice Resident Scholar Project. The guide was developed with feedback from physicians who have experience in addiction medicine, and was subsequently reviewed and approved by the British Columbia Centre on Substance Use to ensure it was consistent with the centre's newly released clinical guidelines. The guide focuses on safe management of alcohol withdrawal in an outpatient setting and on relapse prevention. Physicians can use this supplementary resource along with practice guidelines and clinical judgment.

Dr Molavi completed a family medicine residency at UBC's Nanaimo site and enhanced skills training in addiction medicine through UBC, and is now a family physician and a staff addiction medicine physician at Nanaimo Regional General Hospital. Dr Guruge also completed a family medicine residency at UBC's Nanaimo site and is currently practising as a family physician in White Rock. Dr Kelly completed a family medicine residency at UBC's Strathcona site and is currently practising as a family physician in Comox.

This article has been peer reviewed.

Alcohol is the most frequently used intoxicating substance in the world and is responsible for substantial morbidity and mortality.[1] Numerous resources have been committed to managing health issues related to marijuana and opioid use, but in Canada, alcohol use continues to have a much greater societal and economic impact than all illegal drugs combined.[2] Alcohol is legal, highly available, and more socially accepted than other intoxicating substances.

Alcohol use disorder

Alcohol use disorder (AUD) is defined as a problematic pattern of alcohol use leading to clinically significant impairment or distress. It is a common primary care issue affecting approximately 2% to 9% of family practice patients.[3] The 12-month prevalence of AUD in North America is 8.5%.[1] In Canada, at least half of all alcohol consumed is in excess of Canada's Low-Risk Alcohol Drinking Guidelines.[4]

The costs of AUD to individuals and society are immense and include accidents, violence, and suicide, as well as negative impacts on driving, school, work, interpersonal relationships, and physical health.[1]

Treatment of alcohol use disorder

Several studies have shown that treatments for AUD and alcohol withdrawal are underutilized.[5-14] Less than 33% of patients with AUD receive any treatment, and less than 5% receive medications as a part of treatment.[15] Some of the common barriers for physicians include a lack of knowledge about AUD and alcohol withdrawal, a lack of formal training in treating AUD, and a lack of familiarity with different treatment options and the benefits and risks of each option.[5,7-11,13,16,17] There are no clear data on which of these barriers is the most significant in terms of preventing more physicians from treating AUD and alcohol withdrawal in an outpatient setting.

Treatment of AUD includes widely known and well-accepted behavioral intervention programs. However, there is increasing evidence that medications can be used as well for both alcohol withdrawal syndrome and relapse prevention.[6,8,12,14,17-29] The number needed to treat (NNT) to either reduce heavy drinking or increase abstinence from alcohol for the two most commonly used medications (naltrexone and acamprosate) is 10 to 12,[30] which is substantially better than the NNT for medications used for many other medical disorders. However, evidence suggests that these medications are underutilized by prescribers.[5-13,18,19,31]

Traditionally, alcohol withdrawal has been treated with benzodiazepines (BZDs), but there is increasing awareness of problems associated with their use.[8,9,28,29] This has motivated researchers to find safer but still effective alternatives to use in outpatient settings. Evidence for gabapentin in treating mild to moderate alcohol withdrawal symptoms is increasing.[8,14,19-21,23,25,26,32] Head-to-head trials that have compared gabapentin and BZDs have

shown gabapentin is as effective as lorazepam or chlordiazepoxide in treating mild to moderate alcohol withdrawal symptoms.[28,29] Naltrexone, an opioid antagonist, is considered first-line therapy for relapse prevention; it works by reducing the pleasurable and reinforcing effect of alcohol. Acamprosate, a GABA agonist/glutamate antagonist, is also commonly used for relapse prevention; it works by rebalancing neuronal brain changes that occur from chronic alcohol use.[33]

Prior to the 2019 release of the British Columbia Centre on Substance Use (BCCSU) *Provincial Guideline for the Clinical Management of High-Risk Drinking and Alcohol Use Disorder*,[34] there was little readily available information on outpatient management of alcohol withdrawal. The previous BC guidelines outlined an approach for identifying and managing alcohol withdrawal in an outpatient setting, but this approach focused on using benzodiazepines in a home setting.[33] The pharmacological treatment listed in the previous BC guidelines involves using diazepam for acute withdrawal symptoms and then naltrexone, acamprosate, or disulfiram for long-term relapse prevention. UpToDate has information on treating mild alcohol withdrawal with either BZD or gabapentin in an outpatient setting, and provides options for relapse prevention.[35] Other position papers provide information only on BZD use; they have not been updated to include gabapentin or other treatments.[3]

Guide to treating AUD

To address knowledge gaps regarding the treatment of AUD, we created a clinical resource for family physicians to use when considering treatment for a patient with suspected AUD. The *Quick Guide to Outpatient Treatment of Alcohol Use Disorder* **[Figures 1A and 1B]** was developed as part of a UBC Family Practice Resident Scholar Project. The guide focuses on the assessment, treatment, and monitoring of AUD, and relies on the Prediction of Alcohol Withdrawal Severity Scale (PAWSS) scoring system **[Figure 2]** for assessing the risk of alcohol withdrawal syndrome.[36] A 2018 study by St. Paul's Hospital in Vancouver examined the usefulness of various predictive alcohol withdrawal severity scales and found the PAWSS score to be the most useful.[37]

The guide emphasizes the importance of behavioral interventions and provides details on medications that can be used to manage alcohol withdrawal safely in an outpatient setting and how to prevent relapse. Information on using BZDs in withdrawal management and cautions that should be exercised are also provided. Instructions for accessing PharmaCare coverage are included.

The guide is based on previous guidelines,[33] research, and expert opinion from local addiction medicine physicians, and was reviewed and approved by the BCCSU to ensure it was consistent with the 2019 provincial guideline.[34] Development of the guide was inspired by a similar quick reference guide to buprenorphine/naloxone.[38]

The guide was designed for easy use and distribution so that a wide range of primary care providers can become familiar with prescribing certain medications to treat AUD. This will make AUD treatment more accessible and affordable for patients and will improve treatment outcomes. AUD treatment should not have to be limited to specialized care. However, the guide was not designed to be a comprehensive resource, and its users are encouraged to seek support for challenging cases. There may be other treatment options that were excluded from the guide for the sake of simplicity.

While we were unable to critically assess the impact of the guide on prescribing practices during the Resident Scholar Project, we hope that we or another resident group will be able to do so in the future.

Summary

Alcohol is the most frequently used intoxicating substance in the world, and alcohol use disorder is a common primary care issue. Our guide was created to support family physicians in safely treating AUD and managing mild to moderate alcohol withdrawal. The guide focuses on pharmacotherapy and emphasizes the importance of using concurrent behavioral interventions. It can be used as a supplementary resource in an office setting, along with current practice guidelines and clinical judgment. ■

Acknowledgments

We would like to thank Dr Roger Walmsley, our residency project preceptor and ER physician with a focus on addiction medicine, as well as Dr Hector Baillie and Dr Heather Yule, academic site leads, for their input and guidance throughout the residency project. We would also like to thank Dr Theodore Jankowski, Dr Ramm Hering, and Dr Christy Sutherland, addiction medicine physicians who kindly provided input on the handout, as well as Ms Emily Wagner and Ms Amanda Giesler from the BC Centre on Substance Use for their generous help in reviewing and editing the handout.

Competing interests

None declared.

References

1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th ed. Washington, DC: APA;2013. doi:10.1176/appi.books.9780890425596.744053.
2. Rehm J, Baliunas D, Brochu S, et al. The costs of substance abuse in Canada 2002. Ottawa, ON: Canadian Centre on Substance Use and Addiction, 2006. Accessed 14 January 2018. www.ccsa.ca/sites/default/files/2019-05/ccsa-011332-2006.pdf.
3. Muncie HL, Yasinian Y, Oge L. Outpatient management of alcohol withdrawal syndrome. Am Fam Physician 2013;88:589-595.
4. Stockwell T, Zhao J, Thomas G. Should alcohol policies aim to reduce total alcohol consumption? New analyses of Canadian drinking patterns. Addict Res Theory 2009;17:135-151.
5. Ducharme LJ, Knudsen HK, Roman PM. Trends in the adoption of medications for alcohol dependence. J Clin Psychopharmacol 2006;26:S13-S19.
6. Donoghue K, Elzerbi C, Saunders R, et al. The efficacy of acamprosate and naltrexone in the treatment of alcohol dependence, Europe versus the rest of the world: A meta-analysis. Addiction 2015;110:920-930.
7. Finlay AK, Ellerbe LS, Wong JJ, et al. Barriers to and facilitators of pharmacotherapy for alcohol use disorder in VA residential treatment programs. J Subst Abuse Treat 2017;77:38-43.
8. Goh ET, Morgan MY. Review article: Pharmacotherapy for alcohol dependence—the why, the what and the wherefore. Aliment Pharmcol Ther 2017;45:865-882.
9. Harris AHS, Ellerbe L, Reeder RN, et al. Pharmacotherapy for alcohol dependence: Perceived treatment barriers and action strategies among Veterans Health Administration service providers. Psychol Serv 2013;10:410-419.
10. Mark TL, Kranzler HR, Poole VH, et al. Barriers to the use of medications to treat alcoholism. Am J Addict 2003;12:281-294.
11. Martinez CP, Vakkalanka P, Ait-Daoud N. Pharmacotherapy for alcohol use disorders: Physicians' perceptions and practices. Front Psychiatry 2016;7:182.
12. Mirijello A, D'Angelo C, Ferrulli A, et al. Identification and management of alcohol withdrawal syndrome. Drugs 2015;75:353-365.

References continued on page 276

QUICK GUIDE TO OUTPATIENT TREATMENT OF ALCOHOL USE DISORDER

General Approach – Page 1

START HERE

Assessment

Confirm alcohol use disorder (AUD) using *DSM-5* criteria:[1]
A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following: more use than intended, difficulty cutting down, lots of time spent drinking, cravings, tolerance, withdrawal, continued use despite physical or mental consequences, failure to fulfill major obligations, interpersonal problems, activities given up, use in physically hazardous situations
Mild: 2–3, Moderate: 4–5, Severe: 6 or more (within 12-month period)

↓

Substance use history with special attention to other sedatives (e.g., opioids, benzodiazepines), past treatments, patient's goals, and barriers

↓

Consider **complete physical** to assess medical complications of alcohol use

↓

Review **investigations** (special consideration to ALT, AST, GGT, creatinine/GFR, MCV, urine drug screen, HIV, hepatitis C)

↓

Treatment

Consider detox if patient is willing and if appropriate (see next page)

↓

Moderate to severe AUD: Offer trial of naltrexone or acamprosate to reduce drinking/support patient's abstinence while considering contraindications and patient factors. Provide all patients with information on and referrals to **psychosocial treatments** and community-based supports

↓

Trial medication: titrate or switch as needed

↓

Monitoring

Aim to continue medication for **6–24 months**

↓

Regular **follow-up** appointments to offer support, monitor progress and relapses

↓

Encourage engaging in recovery community and **psychosocial supports**

Psychosocial supports:

- Patients benefit from access to comprehensive treatment approach, including medication, primary care visits, and community-based psychosocial supports
- **Psychosocial supports:** counseling, group therapy, mutual help groups (12-step [e.g., AA] or secular [e.g., SMART Recovery, LifeRing]), inpatient treatment facilities, intensive outpatient day programs
- Motivational interviewing is an evidence-based approach that family physicians can use to help patients achieve their goals
- Family physicians can consider billing counseling and mental health planning fees

Medication coverage:

- **Collaborative Prescribing Agreement**:[2] Search Internet for "BC Naltrexone"
- Obtain complete coverage of naltrexone and acamprosate for patients who are covered by PharmaCare
- Consider completing **Plan G** if not under PharmaCare already
- Complete one form per prescriber; does not need to be redone for each patient
- One-page form that takes 1 minute to complete

Medications:

Naltrexone:

- Opioid antagonist; reduces pleasurable effect of alcohol
- NNT = 10–12 to reduce heavy drinking
- Typically first line due to simple dosing
- **25 mg PO daily × 3 days, then increase to 50 mg**
- Usual dose is 50 mg, rarely up to 150 mg; sometimes used as PRN on drinking days when stable
- Can start at any time **(no need to abstain from alcohol)**
- Contraindications: concurrent opioid use (consider Rx or illicit), severe liver dysfunction
- Side effects: N/V, headache, fatigue
- Check liver enzymes at baseline and 6 weeks; use caution if enzymes elevated at baseline

Acamprosate:

- GABA agonist/glutamate antagonist; rebalances neuronal brain changes from chronic alcohol use
- NNT = 10–12 to increase days of abstinence
- **333 mg PO TID × 1 week, then 666 mg PO TID**
- Can start at any time but may be more effective if started after at least 4 days of abstinence
- Contraindications: severe renal failure
- Side effects: diarrhea (common), nausea, headache

Medication notes:

- If patient relapses, they should still continue medication
- Disulfiram (Antabuse) rarely used anymore; exceptions include patient request and/or use in supervised setting
- Emerging evidence for topiramate and gabapentin
- Pregnancy: safety of either is not well established; balance risk of ongoing use

[1]Please refer to full *DSM-5* criteria
[2]https://www2.gov.bc.ca/assets/gov/health/health-drug-coverage/pharmacare/acamprosate_and_naltrexone_cpa_1_year.pdf

FIGURE 1A. Guide created to address knowledge gaps regarding outpatient treatment of alcohol use disorder (page 1 of 2).

QUICK GUIDE TO OUTPATIENT TREATMENT OF ALCOHOL USE DISORDER

Alcohol Withdrawal as an Outpatient – Page 2

Considering patient for detox from alcohol

↓

Assess Prediction of Alcohol Withdrawal Severity Scale[1] (PAWSS) score

↓

PAWSS < 4

↓

Low risk for severe alcohol withdrawal syndrome

↓

Suitable for trial of outpatient treatment if no contraindications. Follow guidelines below; consider using gabapentin for symptomatic relief

PAWSS ≥ 4

↓

High risk for severe alcohol withdrawal syndrome

↓

Refer for inpatient treatment in detox facility or hospital

Tips for managing outpatient alcohol withdrawal

- Patient should have a reliable caregiver or access to intensive community support program (e.g., Daytox)
- Start early in the week and assess the patient daily × 3–4 days for vitals, withdrawal symptoms, hydration, orientation, sleep, and general condition
- Consider prescribing **gabapentin 300 mg PO TID** for withdrawal symptoms; can add 300 mg PRN per dose to a maximum of 1800 mg and consider daily dispensing, caution in renal impairment
- Prescribe **thiamine 100 mg PO TID × 1 week**, then daily × 2 months, as well as a daily multivitamin (may need to pay out of pocket)

Contraindications to outpatient management include:

- Any history of withdrawal seizure or delirium
- Unstable medical or psychiatric conditions
- Concurrent sedative use disorders
- Pregnancy
- Multiple failed attempts
- Lack of safe setting, caregiver, or intensive community support program

Note on benzodiazepines:

- Benzodiazepines are the gold standard for managing alcohol withdrawal
- However, they pose significant risk in an unsupervised setting, including abuse, oversedation, respiratory depression, falls, delirium (especially if patient relapses to drinking)
- 80% of alcohol withdrawal syndrome does not require aggressive medical intervention, such as with benzodiazepines; hence why we screen with PAWSS
- Anticonvulsants, such as gabapentin, have been shown to be safer and are effective for mild to moderate withdrawal symptoms

References and Resources:

- Created by Armon Molavi, MD, Sulara Guruge, MD, and Peter Kelly, MD, BC family physicians
- Adapted from *Provincial Guideline for the Clinical Management of High-Risk Drinking and Alcohol Use Disorder* (http://www.bccsu.ca/care-guidance-publications/) with clinical input from addiction medicine specialists
- For consultative support, contact the RACE line for Addiction Medicine: **1-877-696-2131**
- To test your knowledge and/or provide feedback on the handout, go to https://www.surveymonkey.com/r/D2YKM97

[1]Prediction of Alcohol Withdrawal Severity Scale is an evidence-based screening tool for assessing the likelihood that a patient will experience severe alcohol withdrawal syndrome: https://www.mdcalc.com/prediction-alcohol-withdrawal-severity-scale
A digital copy can be accessed at https://tinyurl.com/audhandout

FIGURE 1B. Guide created to address knowledge gaps regarding outpatient treatment of alcohol use disorder (page 2 of 2).

Prediction of Alcohol Withdrawal Severity Scale (PAWSS)

Maldonado et al., 2014

Part A: Threshold criteria: (1 point each)

1. Have you consumed any amount of alcohol (i.e., been drinking) within the last 30 days? OR did the patient have a "+" BAL upon admission? _____

IF the answer to either is YES, proceed with test:

Part B: Based on patient interview: (1 point each)

2. Have you ever experienced previous episodes of alcohol withdrawal? _____
3. Have you ever experienced alcohol withdrawal seizures? _____
4. Have you ever experienced delirium tremens or DTs? _____
5. Have you ever undergone of alcohol rehabilitation treatment? (i.e., in-patient or out-patient treatment programs or AA attendance) _____
6. Have you ever experienced blackouts? _____
7. Have you combined alcohol with other "downers" like benzodiazepines or barbiturates during the last 90 days? _____
8. Have you combined alcohol with any other substance of abuse during the last 90 days? _____

Part C: Based on clinical evidence: (1 point each)

9. Was the patient's blood alcohol level (BAL) on presentation > 200? _____
10. Is there evidence of increased autonomic activity? (e.g., HR > 120 bpm, tremor, sweating, agitation, 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 syndromes. A score of ≥ 4 suggests HIGH RISK for moderate to severe AWS; prophylaxis and/or treatment may be indictated.

FIGURE 2. Prediction of Alcohol Withdrawal Severity Scale developed by Maldonado and colleagues.[36]

References continued from page 273

13. Roman PM, Abraham AJ, Knudsen HK. Using medication-assisted treatment for substance use disorders: Evidence of barriers and facilitators of implementation. Addict Behav 2011;36:584-589.
14. Kranzler HR, Soyka M. Diagnosis and pharmacotherapy of alcohol use disorder: A review. JAMA 2018;320:815-824.
15. Spithoff S, Turner S, Gomes T, et al. First-line medications for alcohol use disorders among public drug plan beneficiaries in Ontario. Can Fam Physician 2017;63:e277-e283.
16. Thomas CP, Wallack SS, Lee S, et al. Research to practice: adoption of naltrexone in alcoholism treatment. J Subst Abuse Treat 2003;24:1-11.
17. Matusow H, Dickman SL, Rich JD, et al. Medication assisted treatment in US drug courts: Results from a nationwide survey of availability, barriers and attitudes. J Subst Abuse Treat 2013;44:473-480.
18. Holbrook AM, Crowther R, Lotter A, et al. Diagnosis and management of acute alcohol withdrawal. CMAJ 1999;160:675-680.
19. Jonas DE, Amick HR, Feltner C, et al. Pharmacotherapy for adults with alcohol use disorders in outpatient settings: A systematic review and meta-analysis. JAMA 2014;311:1889-1900.
20. Anton RF, Myrick H, Wright TM, et al. Gabapentin combined with naltrexone for the treatment of alcohol dependence. Am J Psychiatry 2011;168:709-717.
21. Bonnet U, Banger M, Leweke M, et al. Treatment of acute alcohol withdrawal with gabapentin: Results from a controlled two-center trial. J Clin Psychopharmacol 2003;23:514-519.
22. Elholm B, Larsen K, Hornnes N, et al. Alcohol withdrawal syndrome: Symptom-triggered versus fixed-schedule treatment in an outpatient setting. Alcohol Alcohol 2011;46:318-323.
23. Hammond CJ, Niciu MJ, Drew S, Arias AJ. Anticonvulsants for the treatment of alcohol withdrawal syndrome and alcohol use disorders. CNS Drugs 2015;29:293-311.
24. Krystal JH, Cramer JA, Krol WF, et al. Naltrexone in the treatment of alcohol dependence. N Engl J Med 2001;354:1734-1739.
25. Leung JG, Hall-Flavin D, Nelson S, et al. The role of gabapentin in the management of alcohol withdrawal and dependence. Ann Pharmacother 2015;49:897-906.
26. Leung JG, Rakocevic DB, Allen ND, et al. Use of a gabapentin protocol for the management of alcohol withdrawal: a preliminary experience expanding from the consultation-liaison psychiatry service. Psychosomatics 2018;59:496-505.
27. Molero Y, Zetterqvist J, Binswanger IA, et al. Medications for alcohol and opioid use disorders and risk of suicidal behavior, accidental overdoses, and crime. Am J Psychiatry 2018;175:970-978.
28. Myrick H, Malcolm R, Randall PK, et al. A double-blind trial of gabapentin versus lorazepam in the treatment of alcohol withdrawal. Alcohol Clin Exp Res 2009;33:1582-1588.
29. Stock CJ, Carpenter L, Ying J, Greene T. Gabapentin versus chlordiazepoxide for outpatient alcohol detoxification treatment. Ann Pharmacother 2013;47:961-969.
30. Rösner S, Hackl-Herrwerth A, Leucht S, et al. Opioid antagonists for alcohol dependence. Cochrane Database Syst Rev 2010;12:CD001867.
31. Kirkey S. Pills can help people control risky drinking, so why aren't doctors prescribing them? The National Post, 2019. Accessed 5 March 2019. https://nationalpost.com/news/pills-can-help-people-control-risky-drinking-so-why-arent-doctors-prescribing-them.
32. Mason BJ, Quello S, Shadan F. Gabapentin for the treatment of alcohol use disorder. Expert Opin Investig Drugs 2018;27:113-124.
33. Government of British Columbia. BC guidelines. Problem drinking, 2013. Accessed 10 December 2018. www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/problem-drinking.
34. British Columbia Centre on Substance Use. Provincial guideline for the clinical management of high-risk drinking and alcohol use disorder. 2019. Accessed 19 August 2020. www.bccsu.ca/wp-content/uploads/2020/03/AUD-Guideline.pdf.
35. Holt SR, Tetrault JM. Ambulatory management of alcohol withdrawal. UpToDate. Accessed 2 February 2019. www.uptodate.com/contents/ambulatory-management-of-alcohol-withdrawal.
36. Maldonado JR, Sher Y, Asshouri JF, et al. The "Prediction of Alcohol Withdrawal Severity Scale" (PAWSS): Systematic literature review and pilot study of a new scale for the prediction of complicated alcohol withdrawal syndrome. Alcohol 2014;48:375-390.
37. Wood E, Albarqouni L, Tkachuk S, et al. Will this hospitalized patient develop severe alcohol withdrawal syndrome? The rational clinical examination systematic review. JAMA 2018;320:825-833.
38. Caddy P, Smith K. A quick-reference guide for prescribing buprenorphine/naloxone (Suboxone) in the outpatient setting. BCMJ 2018;60:392-397.