Provincial Guideline for the Clinical Management of

High-Risk Drinking and Alcohol Use Disorder

BRITISH COLUMBIA | Ministry of Health

BRITISH COLUMBIA CENTRE ON SUBSTANCE USE
Networking researchers, educators & care providers

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Target Audience: Physicians, nurses and nurse practitioners, pharmacists, allied health care professionals, and all other clinical and non-clinical personnel with and without specialized training in addiction medicine, who are involved in the care and management of individuals, families, and communities affected by alcohol use.

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Land Acknowledgement
The British Columbia Centre on Substance Use would like to respectfully acknowledge that the land on which we work is the unceded territory of the Coast Salish Peoples, including the territories of the xʷməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish), and səl̓ílwətaɬ (Tsleil-Waututh) Nations.

About the BC Centre on Substance Use

The BC Centre on Substance Use (BCCSU) is a provincially networked organization with a mandate to develop, help implement, and evaluate evidence-based approaches to substance use and addiction. The BCCSU seeks to improve the integration of best practices and care across the continuum of substance use through the collaborative development of evidence-based policies, guidelines, and standards. With the support of the Province of BC, the BCCSU aims to transform substance use policies and care by translating research into education and care guidance, thereby serving all British Columbians.

The BCCSU seeks to achieve these goals through integrated activities of its three core functions: research and evaluation, education and training, and clinical care guidance.

Research and Evaluation—Leading an innovative multidisciplinary program of research, monitoring, evaluation and quality improvement activities to guide health system improvements in the area of substance use.

Education and Training—Strengthening addiction medicine education activities across disciplines, academic institutions, and health authorities, and training the next generation of interdisciplinary leaders in addiction medicine.

Clinical Care Guidance—Developing and helping implement evidence-based clinical practice guidelines, treatment pathways, and other practice support documents.

About the Canadian Research Initiative in Substance Misuse

The Canadian Research Initiative in Substance Misuse (CRISM) is a national research consortium uniquely focused on translational and implementation research targeting substance use and related harms, funded by the Canadian Institutes of Health Research (CIHR). The CRISM network comprises four regional Research Nodes: British Columbia, the Prairie Provinces, Ontario, and Quebec/Maritimes. The British Columbia CRISM Node is an expert network with over 50 members spanning the province, including knowledge users, service providers, community leaders, and research scientists. All members are firmly committed to translating the best scientific evidence into practice and policy change, promoting evidence-based approaches to addiction, and training the next generation of leaders through our comprehensive education programs.

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Health System Reviewers and Partners

College of Pharmacists of British Columbia

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Disclaimer for Health Care Providers

The recommendations in this guideline represent the view of the provincial guideline committee, arrived at after careful consideration of the available scientific evidence and following external expert peer review. The application of the recommendations in this guideline does not override the responsibility of health care professionals to make decisions that are appropriate to the needs, preferences, and values of an individual patient, in consultation with that patient and their family members or guardian(s), and, when appropriate, external experts (e.g., specialty consultation). When exercising clinical judgment in the treatment of high-risk drinking and alcohol use disorder, BC health care professionals are expected to take this guideline fully into account while upholding their duty to adhere to the fundamental principles and values of the Canadian Medical Association Code of Ethics, especially compassion, beneficence, non-maleficence, respect for persons, justice and accountability, as well as the required standards for good clinical practice as set by the College of Physicians and Surgeons of British Columbia and any other relevant provincial regulatory body. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

Legal Disclaimer

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The Guideline is intended to give an understanding of a clinical problem, and outline one or more preferred approaches to the investigation and management of the problem. The Guideline is not intended as a substitute for the advice or professional judgment of a health care professional, nor is it intended to be the only approach to the management of a clinical problem. We cannot respond to patients or patient advocates requesting advice on issues related to medical conditions. If you need medical advice, please contact a health care professional.

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Executive Summary

Despite the relatively high prevalence of high-risk drinking, alcohol use disorder (AUD), and alcohol-related harms in British Columbia (BC), these conditions frequently go unrecognized and untreated in the health care system. Research has shown that primary care providers can play an important role in the early detection and treatment of high-risk drinking and AUD, and in connecting patients and families with specialized care services and recovery-oriented supports in their communities. However, the lack of an evidence-based guideline for the clinical management of high-risk drinking and AUD has resulted in low awareness and use of the full range of available treatment interventions among primary care providers in BC.

To address this gap, the BCCSU convened a provincial guideline committee to review the research evidence and reach consensus on recommendations for the clinical management of high-risk drinking and AUD. A set of 13 recommendations were derived by the committee, spanning the identification and clinical management of high-risk drinking and AUD in youth (aged 12-25 years) and adult patient populations, with a focus on primary care practice. The purpose of this guideline is to support health care providers with the implementation of evidence-based prevention, harm reduction, and treatment interventions for high-risk drinking and AUD in their scope of practice.

Specifically, this guideline aims to:

- Describe principles of care and general considerations for screening, intervention, management and continuing care of high-risk drinking and AUD
- Review strategies for alcohol use screening and brief intervention for adult and youth patients who are drinking above recommended low-risk limits
- Recommend a clinical algorithm for alcohol withdrawal management, where an individual's risk of developing severe complications is used to triage that individual to an appropriate care setting and management approach
- Provide guidance on outpatient withdrawal management, with attention to limiting or avoiding use of benzodiazepines where appropriate and indicated
- Recommend strategies for continuing AUD care supported by evidence, including use of pharmacotherapy, psychosocial treatment interventions, and specialist-led and community-based services and supports
- Provide advice for managing transitions along the continuum of care, with an emphasis on optimizing engagement and continuity of care where multiple referral partners are involved

This guideline is intended to be a resource for physicians, nurses and nurse practitioners, pharmacists, allied health professionals, and all other clinical and non-clinical personnel involved in the care of individuals and families affected by alcohol use. This guideline is also intended to be used by policymakers and healthcare administrators in the development of strategies to address unmet alcohol treatment and care needs in BC in an evidence-based, cost-effective manner.

Table 1 Summary of Guideline Recommendations [a]

		Quality of Evidence	Strength of Recommendation
Screening and Brief Intervention			
1	Clinicians should provide education about Canada's Low-Risk Alcohol Drinking Guidelines to all adult and youth patients.	LOW	STRONG
2	All adult and youth patients should be screened annually for alcohol use above low-risk limits.	MODERATE	STRONG
3	All patients who are drinking alcohol above low-risk limits but do not have an alcohol use disorder (AUD) [b] should receive a brief counselling intervention.	MODERATE	STRONG
Withdrawal Management			
4	Clinicians should use the Prediction of Alcohol Withdrawal Severity Scale (PAWSS) to assess the risk of severe complications of alcohol withdrawal in patients with AUD, in order to select the most appropriate withdrawal management pathway.	MODERATE	STRONG
5	Patients at low risk of severe complications of alcohol withdrawal (PAWSS<4) who have no other concurrent conditions that would require inpatient management should be offered outpatient withdrawal management.	HIGH	STRONG
6	Clinicians should consider prescribing non-benzodiazepine medications, such as gabapentin, carbamazepine, or clonidine, for the outpatient management of patients at low risk of severe complications of alcohol withdrawal.	MODERATE	STRONG
7	Patients at high risk of severe complications of withdrawal (PAWSS≥4) should be referred to an inpatient facility (i.e., withdrawal management facility or hospital) where they can receive a benzodiazepine treatment regimen under close observation, and emergency care can be administered immediately if needed.	HIGH	STRONG
8	All patients who complete withdrawal management should be connected to continuing AUD care.	LOW	STRONG
Continuing Care			
9	Adult patients with moderate to severe AUD should be offered naltrexone or acamprosate as a first-line pharmacotherapy to support achievement of patient-identified treatment goals. A. Naltrexone is recommended for patients who have a treatment goal of either abstinence or a reduction in alcohol consumption. B. Acamprosate is recommended for patients who have a treatment goal of abstinence.	MODERATE	STRONG
10	Adult patients with moderate to severe AUD who do not benefit from, have contraindications to, or express a preference for an alternative to first-line medications, can be offered topiramate or gabapentin.	MODERATE	STRONG
11	Clinicians should provide motivational interviewing-based counselling to all patients with mild to severe AUD to support achievement of treatment goals.	MODERATE	STRONG
12	All patients with mild to severe AUD can be provided with information about and referrals to specialist-led psychosocial treatment interventions.	MODERATE	STRONG
13	All patients with mild to severe AUD can be provided with information about and referrals to peer-support groups and other recovery-oriented services in the community.	LOW	STRONG

[a] *The GRADE approach[1] was used to assess the quality of evidence (possible categories include: high, moderate, low, or very low) and strength of recommendation (possible categories include: strong or weak). Please refer to the Development and Approval of Recommendations section for more information on how the GRADE criteria were applied and an explanation of the quality of evidence and strength of recommendation scores that have been assigned.*

[b] *As per DSM-5 Diagnostic Criteria for Alcohol Use Disorder and Severity (Mild, Moderate, Severe)[2]*

1 Introduction to the Guideline

This introduction describes the overall structure, scope and intended use of the guideline, and provides a brief overview of methods used to conduct the systematic review of the literature, develop recommendations for clinical practice, and assess quality of evidence and strength for each recommendation.

1.1 Guideline Structure

This guideline consists of nine main sections, appendices, and a supplemental section. A brief description of each is provided below.

1. **Introduction**: This section provides a brief overview of the scope, intended use, and the methods used to develop the guideline.
2. **Background and Rationale:** This section outlines the risks, harms, and costs attributable to alcohol use in British Columbia, Canada, and globally that collectively underscore the need for an evidence-based guideline on the clinical management of high-risk drinking and alcohol use disorder.
3. **Working with Patients and Families Affected by Alcohol Use:** This section sets out general principles of care for working with patients and families affected by alcohol use, high-risk drinking, and alcohol use disorder. Overarching frameworks such as the social determinants of health, harm reduction, trauma- and violence-informed care, and Indigenous cultural safety are discussed, as well as models for providing care, including longitudinal care, continuum of care, and comprehensive medical management models. The section concludes with a review of the principles of patient-centred, recovery-oriented care, and best practices for the involvement of family in patients' treatment and recovery plans.
4. **Screening and Brief Intervention:** This section reviews the evidence and makes recommendations on the use of universal alcohol use screening and brief counselling interventions to reduce drinking in adult and youth patients exceeding low-risk drinking limits. Clinical signs and diagnosis of alcohol use disorder are also discussed.
5. **Withdrawal Management:** This section provides an overview of the pathophysiology, signs, and symptoms of alcohol withdrawal, and reviews the evidence for use of a simple scale to predict patients' risk of developing severe complications of alcohol withdrawal in order to determine an appropriate management plan. Recommendations are made for use of pharmacotherapy and supportive care to manage mild to severe alcohol withdrawal in outpatient and inpatient care settings. Medications reviewed include benzodiazepines, carbamazepine, gabapentin, and alpha-adrenergic agonists (i.e., clonidine).
6. **Continuing Care – Pharmacotherapy:** This section reviews the evidence and makes recommendations for use of pharmacotherapy as part of continuing care plans for alcohol use disorder, with special consideration of patients' treatment and recovery goals. Naltrexone, acamprosate, topiramate, gabapentin, and disulfiram are reviewed in depth. A brief review of emerging therapies, including baclofen, ondansetron, and combination therapy, is also included.
7. **Continuing Care – Psychosocial Treatment Interventions:** This section reviews the evidence and makes recommendations on the use of psychosocial treatment interventions as part of continuing care plans for alcohol use disorder. Primary care-led approaches, such as motivational interviewing and contingency management, and specialist-led approaches, such as cognitive-behavioural therapy, family-based therapy, and mindfulness-based interventions, are covered.

8. **Community-Based Programs and Supports:** This section reviews the evidence and makes recommendations on referring patients and families to community-based programs and supports for alcohol use disorder, including peer-support groups (e.g., Alcoholics Anonymous, SMART© Recovery), intensive outpatient programs, and inpatient treatment programs.
9. **Managed Alcohol Programs:** A brief overview of the evidence for the use of managed alcohol programs in outpatient and inpatient settings is provided in the section. Making an explicit recommendation on managed alcohol programs was outside the scope of this guideline, however, the committee wishes to acknowledge the important role of this intervention in reducing harm for certain patients with severe alcohol use disorder.

Appendices: The appendices include practical guidance, instructions, medication protocols, and external resources to support health care providers with implementing guideline recommendations in their practice. The following topics are covered: Alcohol Use Screening, Brief Intervention for High-Risk Drinking, Withdrawal Management, AUD Pharmacotherapy, and Motivational Interviewing. Guidance for youth and pregnant patients is provided where appropriate.

Supplemental Content: Supplemental guidance and resources for working with specific patient populations, including Indigenous peoples, 2SLGBTQ+ populations, youth, pregnant patients, older adults, and patients with co-occurring mental health and substance use disorders is provided in this supplement.

1.2 Scope of the Guidelines

The scope of these guidelines is the identification and clinical management of high-risk drinking and alcohol use disorder (AUD) in adults (individuals aged 25 years and older) and youth (individuals aged 11-25 years). The intended use is to support routine screening to identify high-risk alcohol use and diagnose AUD, and to promote the use of evidence-based prevention, risk and harm reduction, and treatment interventions within primary care and other clinical settings in British Columbia.

Specifically, these guidelines aim to:

- Describe principles of care and general considerations for screening, intervention, management, and continuing care for adult and youth patients who are drinking above recommended low-risk limits and meet diagnostic criteria for an AUD.
- Review strategies for alcohol use screening and brief intervention for adult and youth patients who are drinking above recommended low-risk limits.
- Recommend a clinical algorithm for alcohol withdrawal management, where an individual's risk of developing severe complications is used to triage that individual to an appropriate care setting and management approach.
- Provide guidance on outpatient withdrawal management, with attention to limiting or avoiding use of benzodiazepines where appropriate and indicated.
- Recommend strategies for continuing AUD care supported by evidence, including use of pharmacotherapy, psychosocial treatment interventions, and specialist-led and community-based services and supports.
- Provide advice for managing transitions along the continuum of care, with an emphasis on optimizing engagement and continuity of care where multiple referral partners are involved.

1.2.1 Objective and Purpose

The objective of this guideline is to provide recommendations, supported by current and rigorously reviewed evidence, for the full spectrum of medical and psychosocial interventions available to treat patients with high-risk drinking and AUD. In doing so, the guideline aims to provide comprehensive education and clinical care guidance to health care providers spanning the addiction care continuum in the province, which will, in turn, improve access to evidence-based treatment for patients and families, and reduce the significant harms associated with alcohol use in British Columbia.

1.2.2 Intended Audience

The guideline is intended to be a resource for physicians, nurses and nurse practitioners, pharmacists, allied health care professionals, and all other clinical and non-clinical personnel with and without specialized training in addiction medicine, who are involved in the care and management of individuals, families, and communities affected by alcohol use. In addition, this guideline is intended to be a resource for policy makers and health care administrators in the development of strategies and programs to best address unmet alcohol treatment and care needs within British Columbia in an evidence-based, cost-effective manner.

1.2.3 Care Settings

While this guideline focuses on the clinical management of AUD in primary care settings (e.g., family practice clinics, community health centres, walk-in clinics, student health services), the recommendations also apply more broadly to other care settings and environments that may represent an individual's first contact with the health care system. Depending on the circumstances, an individual experiencing alcohol-related issues or consuming alcohol in a high-risk manner may be identified through routine intake, assessment, and monitoring procedures at a number of other care settings, including: emergency and assessment rooms, acute care settings (e.g., general, surgical, trauma or intensive care wards), sexual health services, trauma and anti-violence services, prenatal care clinics, and specialized mental health and addiction services (e.g., inpatient addiction medicine consult teams, outpatient rapid access addiction medicine clinics, community mental health and substance use programs). Clinical care teams and staff in these health care settings are encouraged to adapt and apply guideline recommendations as needed for their practice, supporting individuals and families affected by alcohol use in seeking help and accessing evidence-based treatment and services at multiple points of entry in the provincial health care system.[3]

1.2.4 Patient Populations

The recommendations made in this guideline are applicable to the general adult patient population, which can include individuals who are drinking within recommended limits for low-risk drinking, those who are exceeding low-risk alcohol drinking limits, individuals diagnosed with AUD of any severity (mild, moderate, severe),[2] as well as individuals in recovery from an AUD. While much of the evidence reviewed in this guideline pertains to the general adult population, it is the consensus of the guideline committee that guideline recommendations are equally relevant and applicable to youth.

Additionally, while this guideline offers a brief overview of the available evidence for the clinical management of high-risk drinking and AUD in pregnant individuals[c], the importance of specialist consultation in these cases is emphasized, as is the urgent need for more research in this area. For additional clinical guidance on the management of alcohol use during pregnancy and postpartum, clinicians can refer to the Alcohol Use and Pregnancy Consensus Clinical Guidelines[4] issued by the Society of Obstetricians and Gynaecologists of Canada.

In partnership with Perinatal Services BC, the BCCSU will be releasing guidance for the Clinical Management of High-Risk Drinking and Alcohol Use Disorder in Pregnancy, which will be available at the following link once published: http://www.bccsu.ca/clinical-care-guidance/.

The guideline committee also recognizes the need to develop and implement best practices for identifying, treating, and managing high-risk drinking and AUD in specific populations, including Indigenous peoples, women and girls, men and boys, 2SLGBTQ+ folks[d], pregnant individuals, adolescents (age 11-18) and young adults (age 19-25), older adults (age 65 and over), and individuals with co-occurring mental health disorders. A brief overview on working with these specific patient populations, including links to additional resources, has been included as a Supplement.

1.3 Methods

1.3.1 Funding

Guideline development activities were entirely supported by internal funding from the BC Ministry of Health to the BCCSU, without support from the pharmaceutical industry or associated stakeholders.

1.3.2 Committee Membership

An interdisciplinary committee of 39 individuals was assembled in March 2018, including representation from each regional Health Authority in BC, the Provincial Health Services Authority, the First Nations Health Authority, and the BC Ministry of Health, with expertise spanning addiction medicine, psychiatry, family practice, social work, nursing, pharmacy, recovery-oriented systems of care, health care administration and policy, and people and family members with lived experience.

1.3.3 Conflict of Interest Policy

In keeping with Guidelines International Network's Principles for Disclosure of Interests and Management of Conflicts,[5] committee members were asked to disclose all sources and amounts of direct and indirect remuneration from industry, for-profit enterprises, and other entities (i.e., direct financial conflicts) that could potentially introduce real or perceived risk of bias. In addition, committee members were asked to report indirect conflicts of interest, such as academic advancement, clinical revenue, and professional or public standing that could potentially influence interpretation of evidence and formulation of recommendations.

Twenty-three committee members disclosed special interests in relation to the guideline content, mainly pertaining to expertise (e.g., addiction medicine clinician), clinical practice, or past or current research on treatment interventions or approaches reviewed in the guideline. On review, none of the disclosed potential

[c] *While the majority of pregnant individuals identify as women, this term does not reflect the identities and experience of all pregnant people, some of whom may not identify as female or as women. The BCCSU has adopted the practice of using gender-neutral language in pregnancy-related guidance to support inclusivity of sex- and gender-diverse patient populations. Asking patients how they choose to identify themselves and using their correct or chosen pronouns (e.g., they/them/theirs, she/her/hers, he/him/his) is an important component of person-centred care.*

[d] *The acronym 2SLGBTQ+ has been used in this guideline to describe Two-Spirit, lesbian, gay, bisexual, transgender, queer, and other gender and sexually diverse individuals. The BCCSU has adopted the practice of placing "2S" for "Two-Spirit" at the beginning of this acronym to acknowledge Indigenous ways of knowing gender and sexuality and the long history of gender and sexual diversity in Indigenous cultures. It is important to note that not all Indigenous LGBTQ+ people identify as Two-Spirit, and that not all Indigenous cultures perceive the Two-Spirit identity in the same way. Asking patients how they prefer to identify themselves rather than assuming their gender identity or sexuality is an important component of person-centred care.*

indirect conflicts of interest or bias were deemed to be of sufficient relevance or weight to warrant exclusion from the committee.

No committee members disclosed direct monetary or non-monetary support from pharmaceutical industry sources within the past five years. Three committee members disclosed potential direct conflicts of interest involving current and past employment at private or mixed private-/public-pay addiction treatment facilities. One committee member disclosed a potential direct conflict of interest in that their spouse is employed in beverage alcohol production. To mitigate any real, potential or perceived risk of bias, these four committee members were recused from the final review and approval of the guideline.

No other committee member met the criteria of current or past employment (either self or a family member), investment interests, grants-in-aid of research, non-monetary research or program support (e.g., equipment, travel, staff salary, facilities), or intellectual property holdings with a commercial entity that could potentially be impacted by guideline recommendations. Thus, the remaining 35 members reviewed and granted final approval of the guideline contents and clinical recommendations.

1.3.4 Guideline Development Process

Consistent with best practices for guideline development, the BCCSU used the AGREE-II instrument[6] throughout development and revision phases to ensure the guideline met international standards for transparency, high quality, and methodological rigour.

Guideline Development Process

Between April 2018 and April 2019, the guideline committee conferred through email, teleconferences, and three face-to-face meetings. At the first committee meeting, evidence gathered through scoping activities performed by the BCCSU medical writing team was reviewed, and the outline, scope, and contents of the guideline were provisionally approved by committee consensus. The committee also provided feedback and suggestions for literature search strategies and parameters (e.g., keywords, search limits, inclusion/exclusion criteria).

Three working groups were struck and assigned core sections of the guideline: (1) Screening and Brief Intervention, (2) Withdrawal Management, and (3) Continuing Care. Between May and October 2018, each working group conferred over email and teleconference, and held three in-person meetings to develop and approve literature search strategies, review evidence summaries, and draft guideline contents and recommendations.

Literature Search Strategy

The guideline evidence review and recommendations are based on a limited but systematic review of the literature, and used a traditional hierarchy to identify relevant research evidence, whereby meta-analyses of randomized clinical trials were given the most weight, followed by individual clinical trials, observational reports, and expert opinion.[1,7]

An information specialist performed the literature search using a peer-reviewed search strategy for the following databases: Medline, Embase, Cochrane Database of Systematic Reviews, and Cochrane Central Register of Controlled Trials via Ovid; and CINAHL and PsycINFO via EbscoHost. Search date limits varied by topic and were informed by the most recent high-quality systematic review or meta-analysis available. Studies were excluded if they did not meet inclusion criteria established a priori or if they were already included in high-quality systematic reviews and meta-analyses. For more detail on the literature search strategy please refer to the Methodology Supplement.

Study Selection and Critical Appraisal

Two medical writers independently screened and identified eligible studies. Discordance between reviewers on inclusion or exclusion of individual studies was resolved through discussion with no need for arbitration. One reviewer used validated assessment tools (i.e., AMSTAR-2, Cochrane Risk of Bias Tool, Downs and Black checklist) to evaluate study quality. The second reviewer verified the assessments. The writers then prepared an evidence synthesis for review by each of the working groups.

Development and Approval of Recommendations

After reviewing prepared evidence summaries, the working groups used the Grading of Recommendations Assessment, Development and Evaluation (GRADE) tool[1] to develop and score recommendations. Using the GRADE system, the quality of evidence to support each recommendation can be assigned a rank of high, moderate, low, or very low, based on the committee's confidence in the estimates of effect. Initial estimates of quality are based on traditional hierarchy of evidence, whereby meta-analyses of randomized clinical trials were assigned a high score, followed by individual clinical trials, quasi- or non-randomized trials, observational studies and reports, and expert opinion, which is assigned the lowest score. The final quality ratings are reflective of the confidence in the estimated effect of an intervention as reported in the literature with consideration of biases and limitations of the evidence base as identified by the committee. Factors that lowered confidence in the estimated effect of an intervention included risk of bias, inconsistency across the RCTs, indirectness, and publication bias. Factors that increased confidence included large effect sizes and an observed dose-response effect.

To determine strength of recommendations, the GRADE system takes into account the quality of evidence as well as additional factors such as clinician, patient, and policy-maker's values and preferences, costs and cost-effectiveness, risk-benefit ratios, and feasibility.[8] It is the consensus of this guideline committee that all recommendations are strong, which implies that all patients in the given situation would want the recommended course of action, and that only a small proportion of patients would not.

Once approved by respective working groups, the draft guideline and graded recommendations were compiled and circulated to the full committee. A committee meeting was held in October 2018 to review and provide feedback on guideline contents and recommendations. Following the meeting, the committee was given four weeks to submit written feedback on the draft guideline. Feedback was collated and incorporated into a revised draft for external review.

1.3.5 External Review and Stakeholder Consultation

The draft guideline was circulated for review and comment to relevant experts and stakeholders as identified by the committee. As per policy, all external reviewers completed disclosure of interest forms prior to review. A second and final committee meeting was held in April 2019, where feedback from the external reviewers was reviewed by the co-chairs and the committee, and incorporated into the guideline by majority consensus.

1.3.6 Update Schedule

In order to ensure that advancements in the field reach the intended audience in a timely and effective manner, the guideline committee will reconvene two years after publication to review and update the guideline, with a revised guideline to be published on an approximate three-year cycle.

2 Background and Rationale

Alcohol use disorders (AUD) and high-risk drinking[e] are common in Canada.[9] It is estimated that up to 18% of all Canadians aged 15 or older have met the clinical criteria for an AUD during their lifetime,[10] while 19.5% of Canadians aged 12 or older currently drink in excess of recommended daily or weekly limits.[11] Nearly 200 disease or injury conditions are wholly or in part attributable to alcohol use, with the total global burden of disease estimated to be two to three times higher than that of all illicit substances combined.[12,13] Globally, alcohol was responsible for an estimated 3 million deaths (5% of all deaths) in 2016,[13] and for the total population aged 15-49 years, was the leading risk factor for premature death and disability.[14] National statistics indicate that alcohol use is linked to 7.7% of all deaths and 8.0% of all potential years of life lost for individuals aged 0 to 64 years.[15] In British Columbia (BC), there were nearly 28 alcohol-related deaths per 100,000 people in 2017.[16] In the context of the North American opioid overdose crisis, which claimed approximately 31 lives per 100,000 people in BC in 2018, alcohol was present in over 25% of overdose deaths that occurred in the province between 2016 and 2018.[17]

Economic, health care, and social costs associated with alcohol are equally substantive. In 2014, the overall annual economic cost of substance use in Canada was estimated to be over $38 billion.[18] Alcohol use was associated with the greatest proportion of these costs (lost productivity, health care, criminal justice, other direct costs), accounting for about $14.6 billion or 38% of the total, followed by tobacco ($12 billion; 31%), and all other substances[f] ($11.8 billion; 30.7%).[18] Alcohol use can also cause harm to others, for example, interpersonal conflict and financial problems, workplace accidents, traffic accidents and deaths.[19] As well, alcohol is often associated with incidents of intimate partner and stranger violence, as well as theft and property crime.[18,20-22]

In the 2015/16 fiscal year, approximately 56,600 Canadians were hospitalized for alcohol-related conditions, and 21% of whom were hospitalized two or more times in that year.[23] The total number of hospitalizations directly related to alcohol (77,000; 212 admissions/day) exceeded hospitalization rates for heart attacks (75,000; 205 admissions/day) in that year.[23] In British Columbia, annual per capita consumption rates of pure ethanol have increased from 8.25 L in 2002 to 9.39 L in 2017[g,24] an upward trend that has been correlated with the privatization of alcohol sales and increased availability of and access to alcohol in the province.[25] In parallel, hospitalization rates for alcohol-related conditions increased from 383 to 557 per 100,000 individuals from 2002 to 2017, surpassing those for tobacco-related conditions in 2017 (517 per 100,000 individuals) in BC.[16] Similarly, the number of primary care visits for alcohol-related conditions increased by 53% between 2001 and 2011.[26]

Despite the significant burden of disease, social harms, and economic costs attributed to alcohol in Canada, high-risk drinking and AUD frequently go unrecognized and untreated in the health care system. Although Canadian statistics are lacking, in the United States, national surveys indicate that fewer than 8% of individuals with AUD had received treatment in the past 12 months.[27] European countries report similarly low rates, with less than 20% of people with AUD receiving any kind of treatment.[28] These trends underscore the importance of bridging the gap between research and clinical practice, particularly in primary care, to generate meaningful improvements in health and wellbeing for individuals, families, and communities impacted by alcohol use.

[e] *Canada's Low-Risk Alcohol Drinking Guidelines define high-risk drinking as more than 3 standard drinks per day or 10 standard drinks per week for women, and more than 4 standard drinks per day or 12 standard drinks per week for men. A standard drink is equal to one 341 ml (12 oz.) bottle of 5% strength beer, cider or cooler; one 142 ml (5 oz.) glass of 12% strength wine; or one 43 ml (1.5 oz.) shot of 40% strength spirits (NB: 1 Canadian standard drink = 17.05 ml or 13.45 g of ethanol).*[9]

[f] *The "other substances" category included cannabis, opioids, other central nervous system (CNS) depressants (e.g., benzodiazepines, barbiturates), cocaine, other CNS stimulants (e.g., amphetamine, methamphetamine, ecstasy) and other substances (e.g., hallucinogens, inhalants) as per the original source.*[18]

[g] *1L of pure ethanol is equivalent to 58.65 standard drinks.*

Recent research has highlighted the important role that primary care providers can have in early detection and intervention for high-risk drinking, outpatient withdrawal management, and treatment of AUD, and connecting patients and families with specialized services and community-based supports.[29] Although high-risk drinking and AUD can be readily identified using simple screening tools, alcohol use screening is not widely implemented in clinical practice.[30] This is a critical missed opportunity to intervene early, at a point where many individuals, including adolescents and young adults, may respond positively to brief counselling interventions alone, by changing their behaviour to reduce their risk of alcohol-related harms.[30] These opportunities for early intervention, treatment, and support are missed if providers rely on case identification alone.

Screening can also serve an important role in identifying individuals with mild to severe AUD who would benefit from more intensive treatment approaches, including pharmacotherapy, psychosocial treatment interventions, as well as community-based recovery-oriented and psychosocial support services. Very few individuals who would benefit are receiving evidence-based treatment for AUD, including safe and effective pharmacotherapies for managing alcohol withdrawal, reducing alcohol consumption, and preventing relapse.[31,32] In the majority of cases, the care needs of individuals with AUD can be met in an outpatient primary care setting.[33] For patients who identify cessation or reduction of alcohol use as a treatment goal, there are two first-line medications currently approved in Canada: naltrexone and acamprosate and both are critically underutilized.[32] Although national statistics are lacking, a study in Ontario found that over a one-year period, only 37 of 10,394 (0.4%) public drug plan beneficiaries diagnosed with an AUD filled a prescription for naltrexone or acamprosate in the year following their diagnosis.[34] Similarly, a 2018 report from Manitoba found that only 493 of 53,625 individuals (0.9%) diagnosed with an AUD had a prescription dispensed for naltrexone, acamprosate, or disulfiram within one year.[35] The cumulative result of these missed opportunities is a system where patients and providers alike are often constrained to managing the negative consequences of alcohol use rather than preventing or reducing harm through early intervention and treatment.

BC is in urgent need of a paradigm shift in the clinical management of AUD. To move this agenda forward, this committee sought to address the lack of evidence-based practice recommendations available to health care providers. An expert panel was convened to review the literature and develop a consensus guideline for the optimal screening, diagnosis, treatment, and care of individuals with AUD. What follows is a summary of the research evidence used to derive the clinical recommendations proposed by the committee. It is anticipated that health professionals, policymakers, and educators will use this document to inform clinical practice and health promotion activities directed towards reducing alcohol-related harms within the province.

3 Working with Patients and Families Affected by Alcohol Use

In developing this guideline, the committee identified several overarching principles of care that apply to all recommendations and, more broadly, to establishing positive partnerships with patients and families experiencing alcohol-related harms. Underlying these principles is the importance of considering the social determinants of health, and incorporating harm reduction, trauma- and violence-informed, and culturally safe approaches as the standard of care for patients and families affected by alcohol use. To implement these principles in practice, the committee endorses a longitudinal and comprehensive clinical management strategy, and the use of patient-centred, recovery-oriented, and family-oriented approaches to optimize health, wellness, and social outcomes of patients and families.

3.1 Principles of Care

The following principles of care are intended to serve as a general framework to support clinicians, care teams, and programs in the integration of care for high-risk drinking and AUD in their clinical practice. Clinicians and care teams are encouraged to review and adapt these principles of care as needed to fit their local context and resources available.

These principles of care identified here should not be considered an exhaustive list. There may be additional factors clinicians should take into account in different practice settings, or when working with specific patients, families, communities, and populations. In recognition of this, a brief overview of additional considerations when working with Indigenous peoples, 2SLGBTQ+ populations, pregnant individuals, youth, older adults, and individuals with co-occurring mental health and substance use disorders, as well as sex- and gender-specific care, can be found in the Supplement.

Table 2 Summary of Principles of Care

1	Alcohol use, high-risk drinking, and AUD should be viewed within a larger societal framework that is shaped by inequities in the social determinants of health. Clinicians should aim to address disparities in the social determinants of health by connecting patients with resources that meet these needs (e.g., housing, food/nutrition, financial assistance, employment).
2	Clinicians should be familiar with and incorporate the principles of harm reduction, trauma- and violence-informed care, and Indigenous cultural safety in the care and clinical management of patients with AUD.
3	AUD is understood to be a chronic, relapsing condition. As with other chronic disorders, a longitudinal care approach is recommended.
4	Patients should be offered a full range of evidence-based pharmacotherapies, psychosocial treatment interventions, and recovery supports to support achievement of their treatment goals.
5	A stepped and integrated approach to management of AUD is recommended, where mode of treatment is regularly adjusted to meet patient needs, circumstances, and preferences over time.
6	AUD should be managed within a broader framework of comprehensive medical care and support, including routine and ongoing medical, mental health, and psychosocial assessments.
7	Treatment plans should be individually tailored, patient-centered, and recovery-oriented, with the understanding that "recovery" can look different to each person.
8	Family and social circle[h] involvement in treatment planning and decision-making should be encouraged whenever possible, and when deemed appropriate by the patient and their care team.

[h] *This guideline uses the term "family" to encompass all relations that are important to the patient within their social circle, which may include romantic partners, close friends, and other people of significance who may or may not be legally recognized as family.*

3.1.1 Overarching Frameworks

The Social Determinants of Health

The social determinants of health have been defined as *"the economic and social conditions that shape the health of individuals, communities, and jurisdictions as a whole."*[36] At a population level, this can be understood as the quantity and quality of resources a society makes available to all of its members, which include, but are not limited to: conditions of childhood; access to income; education and literacy; food, housing, and employment; working conditions; and health and social services.[36,37] Distribution of these resources tends to occur along a social gradient,[38] and is shaped by factors such as socioeconomic class and income; sex, gender identity, and sexuality; Indigeneity; race and ethnicity; refugee, migrant or immigrant status; and disability status, among others.[37,39] These factors are often interrelated and intersectional — meaning that most people occupy multiple social positions by nature of their unique identity, and that these factors interact with and impact each other.[40] People who belong to marginalized groups and/or occupy the lowest socioeconomic classes experience the most significant barriers to accessing resources, and, in turn, have the poorest health outcomes.[39]

Alcohol use, high-risk drinking, and AUD should also be viewed within this larger social context. Higher prevalence rates of high-risk drinking and AUD are observed among individuals who report adverse early childhood experiences,[41] lower socioeconomic status,[42] living in poorer neighbourhoods,[43] and who identify as a racial, ethnic, sex, and/or gender minority.[44]

Clinicians, care teams, and staff should have a basic understanding of how the unequal distribution of power, opportunity, and resources in Canadian society impacts the social determinants of health for individuals.[39] Clinicians providing care to individuals, groups, and those communities at risk of discrimination and marginalization above and beyond that related to alcohol and other substance use should endeavour to remove barriers to accessing care that patients may experience. Additionally, clinicians should aim to address inequities that may exist in the social determinants of health by connecting patients with resources to meet their social and survival needs (e.g., housing, food/nutrition, financial assistance, employment).

Harm Reduction

Harm reduction has been defined as *"Policies, programmes and practices that aim to minimise negative health, social and legal impacts associated with drug use, drug policies and drug laws. Harm reduction […] focuses on positive change and on working with people without judgement, coercion, discrimination, or requiring that they stop using drugs as a precondition of support."*[45] Although most often associated with the use of illegal substances, harm reduction approaches can also be applied to any behaviour that increases risk of adverse health, social, or legal consequences for an individual, including alcohol use.[46]

At its core, a harm reduction approach to alcohol use supports any steps taken by patients to improve their health and wellbeing, and seeks to meet the patients "where they are at" in terms of willingness and ability to change.[46] Although it is understood that the only way to fully avoid all negative consequences associated with alcohol is abstinence, it is also recognized that not all patients are able or willing to discontinue or substantially reduce their drinking, even if it is recommended by their health care provider.[46]

In these cases, clinicians are encouraged to adopt strategies to minimize alcohol-related harms rather than imposing abstinence from alcohol as the only desirable outcome of treatment. (Also see Setting Patient-Centred Treatment Goals). Harm reduction strategies could include promoting safer alcohol use strategies (e.g., reducing drinking [total consumption or drinking days per week], not drinking and driving, reducing use of non-beverage

alcohol), optimizing engagement and retention in care, and connecting patients with resources to address inequities in the social determinants of health (e.g., housing, legal services, financial assistance, employment programs).[47-50] For some patients, a reduction in drinking can lead to clinically significant improvements in health and quality of life,[51-53] while for others, treatment goals can change from reduced drinking to abstinence over time with continued engagement in care.[50] This guideline also recognizes the growing body of evidence supporting managed alcohol programs as a harm reduction approach for individuals with severe AUD (see Managed Alcohol Programs).

Trauma- and Violence-Informed Practice

The goal of trauma- and violence-informed practice is to create a safe and respectful environment that minimizes the potential for harm and re-traumatization of patients.[54] Embedding trauma and violence-informed approaches into all aspects of clinical practice can create *universal trauma precautions*, which provide positive supports for all patients and families, regardless of whether they have experienced trauma or violence in their lives.[55] Universal trauma precautions can also aid clinicians, care teams, and staff in developing a consistent approach to working with people who have potentially experienced trauma and violence.[55] The key principles of trauma- and violence-informed practice are trauma awareness; safety and trustworthiness; choice, collaboration and connection; and strengths-based approaches and skill building.[54]

While a universal approach to trauma- and violence-informed practice is recommended, it is recognized that some patient populations are more likely to have experienced trauma and violence than others. For example, Indigenous peoples, women, and 2SLGBTQ+ populations are more likely to have experienced trauma and violence as a result of racism, discrimination, and social inequity compared to other patient populations.[56,57] In the context of alcohol use, research has shown that individuals with AUD are more likely to have experienced past trauma or have a diagnosis of post-traumatic stress disorder compared to the general population.[27,58,59] Accordingly, this guideline strongly recommends that clinicians and care teams be familiar with and adhere to the principles of trauma-informed practice when working with patients and families affected by alcohol.

The Centre of Excellence in Women's Health's Trauma-Informed Practice (TIP) Guide[54] and New Terrain toolkit[57] and the Substance Abuse and Mental Health Services Administration's (SAMHSA) Trauma-Informed Care in Behavioral Health Services[60] may be useful resources for clinicians seeking to adopt trauma- and violence-informed care in their practice. The Canadian Institutes for Health Research (CIHR)-funded EQUIP Health Care research team has also published a Trauma- and Violence-Informed Care Tool[61] for organizations and care providers in BC, and has several webinars on incorporating trauma- and violence-informed approaches in primary and emergency care settings available on their website: https://equiphealthcare.ca/tvic-workshop.

It is important to note that disclosure of violence and trauma is not the goal of trauma and violence-informed practice; health care providers do not necessarily need to know an individual's past experiences to provide appropriate support. Additionally, trauma- and violence-informed care is not intended to treat trauma. Clinicians should be familiar with specialized treatment and support services for individuals who have experienced trauma as well as crisis services in their community, and provide information and referrals to patients, should the need arise.

Indigenous Cultural Safety

It is well documented that the Indigenous peoples of Canada have inequities in the social determinants of health that are a direct result of colonization. Decades of federal policies with the sole purpose of eradicating Indigenous identities, families, communities, culture, and traditional ways of life (i.e., genocide) have resulted in direct and intergenerational trauma, and institutionalised racism and discrimination.[62-64] These factors manifest as an overall increased risk of premature morbidity and mortality among Indigenous peoples in Canada relative to non-Indigenous Canadians.[65-67] Epidemiological data that show higher prevalence rates of high-risk substance use, substance use disorders, and substance-related harms among Indigenous peoples[65,68] must also be interpreted within this broader context. More specifically, it is emphasized that Indigenous peoples are not, by nature of their genetic background and cultural identity, a "high-risk" population. Rather, health and social inequities faced by Indigenous peoples have created conditions where some individuals use alcohol and other substances to cope with racism, discrimination, poverty, trauma, violence, or other sources of distress in their daily lives.[69,70] Despite this, racism and harmful stereotypes about Indigenous peoples, particularly around alcohol and other substance use,[71-73] persist within the Canadian health care system and can act as a deterrent to seeking out and staying engaged in care in this population.[74-76]

If the mainstream Canadian health care system is to be effective in addressing health and social inequities experienced by Indigenous peoples, health care providers must make a meaningful commitment to providing culturally safe and culturally appropriate care.[77] Indigenous cultural safety is an approach that moves beyond the concept of cultural sensitivity[i] to consider how social and historical contexts, institutional discrimination, structural and interpersonal power imbalances, and past, current, and ongoing colonization shape health and health care experiences of Indigenous peoples.[79] It requires health care providers to be knowledgeable of the colonial history of Canada and the roots of historical, ongoing, and intergenerational trauma among Indigenous peoples, and to practice cultural humility: to be continually self-reflective of personal biases and aware of their position of power and the effects that this power dynamic may have on their Indigenous patients.[78]

Establishing a trusting, respectful and collaborative therapeutic relationship with patients is a cornerstone of treating substance use disorders in clinical practice, and this guideline strongly recommends that all health care professionals and staff undertake Indigenous cultural safety training to improve their ability to establish safe, positive partnerships with Indigenous patients and families. There are a number of Indigenous cultural safety-training programs available to health care providers and staff in BC. The San'yas Indigenous Cultural Safety Training Program is an online interactive training program offered by PHSA Indigenous Health that is designed to increase knowledge, enhance self-awareness, and strengthen the skills of those who work both directly and indirectly with Indigenous peoples. PHSA also hosts, in partnership with the Southwest Ontario Aboriginal Health Access Centre, an online Indigenous Cultural Safety Learning Series. Information on this monthly webinar, which is guided by an advisory council of national and international Indigenous and non-Indigenous leaders can be found here: http://www.icscollaborative.com/. The First Nations Health Authority (FNHA) and the BC Patient Safety & Quality Council offer a cultural safety and cultural humility webinar series, in addition to a number of policies and resources that can be accessed on the FNHA website. It is further recommended to seek out resources that may be available in local health authorities. For example, the Vancouver Coastal Health (VCH) Aboriginal Health program offers Foundational Indigenous Cultural Safety (ICS) Training, an in-person interactive and self-reflective group training session, to VCH staff. (Also see Working with Specific Patient Populations).

[i] *Cultural sensitivity respects cultural differences and involves communicating and behaving in ways that are considered polite and respectful by the person of the other culture.*[78]

3.1.2 Models of Care

Longitudinal Care Model

For most patients, AUD is a chronic, relapsing condition, yet traditionally, approaches to care and management of AUD have emphasized short-term and high-intensity treatment; for example, referring patients to inpatient withdrawal management or inpatient treatment programs without a plan for continuing care after discharge or completion. In recent years, however, there has been increased recognition that, like other chronic health conditions (e.g., diabetes, hypertension, heart disease), AUD can be safely and effectively managed in outpatient primary care settings using a longitudinal care approach.[80] A pre-existing therapeutic relationship (or the development of one over time) can improve engagement and retention in care.

Integrated Continuum of Care Model

As noted above, AUD is understood to be a chronic, relapsing condition. This underscores the importance of using a continuum of care approach, where patients with AUD (and their families, if involved in care) are offered a range of evidence-based pharmacotherapies, psychosocial treatment interventions, and recovery support services to reduce harm, prevent relapse, and support long-term recovery, with the understanding that patients with AUD may need to try multiple approaches of varying intensities along this continuum of care.[81]

Further, it is recognized that individual patient needs, circumstances, and goals may change over time, and this guideline supports the use of a stepped and integrated approach, where the mode of treatment is continually adjusted to meet these needs. A stepped approach may include treatment intensification, transitions between different treatment options, and strategies to de-intensify treatment at the patient's discretion. Patients can opt to re-initiate pharmacotherapy, psychosocial treatment, or recovery supports at any time if their needs and circumstances change.

Primary care providers and care teams should ensure that patients with AUD and their families are aware of the range of specialist-led and community-based programs and services that are available to them, and regularly assess interest or readiness in accessing these services. To support continuity of and transitions in care across the continuum, primary care providers and care teams should establish fully functioning referral pathways. Establishing protocols for communication and sharing information (with the patient's consent) between the primary care team and referral partners is strongly encouraged.

Comprehensive Medical Management

As is the standard of care for any complex or chronic medical condition, all primary care clinicians and care teams should provide medical management to patients with AUD. By definition, medical management includes, but is not limited to: providing non-judgmental support and advice; assessing motivation and exploring barriers to change; developing and regularly reviewing a treatment and recovery plan with the patient; promoting alternative strategies for managing stress; and providing referrals to specialized medical care, recovery support, and social services when requested or appropriate.[82]

Management of AUD in primary care also permits the provision of more comprehensive care, which may include, but is not limited to: screening and clinical management of co-occurring substance use and mental health disorders, concurrent medical conditions, and alcohol-related sequelae (e.g., liver disease, gastrointestinal disorders, cardiovascular disease, dementia), preventive health care (e.g., vaccinations, general health screening), sexual and reproductive health services (e.g., sexually-transmitted infection screening, contraceptive counselling, family planning), chronic disease management (e.g., arthritis, diabetes, cardiovascular disease), and referrals to specialist care.

3.1.3 Approaches to Care

Patient-Centred Care

Research suggests that incorporating patient-centred approaches in the clinical management of AUD can improve retention in care, treatment satisfaction, and health outcomes.[83] In addition to recognizing the unique needs, values, and preferences of each individual, patient-centred care involves listening to, informing, and empowering patients as experts in their own care.[84] Practical strategies for incorporating patient-centred care in the clinical management of AUD include collaboratively developing treatment plans, encouraging patients to set treatment goals that are realistic and meaningful to them (and not imposing goals on them), using a shared decision-making framework to select treatment options or interventions, and being open to and respectful of patient agency and choice.[85]

Awareness of and active efforts to address stigma experienced by individuals with AUD are important elements of patient-centred care. Primary care clinicians and care teams should be aware of the language they use and its potential to stigmatize individuals who use alcohol and other substances. Clinicians and staff involved in substance use care should strive, at all times, to use "person-first" language and current medical terminology (i.e., person with an alcohol use disorder) when interacting with patients, families, colleagues, health care professionals, and staff.[86] While patients may choose to refer to themselves and their health conditions using language that they are most comfortable with, clinicians, other health care professionals, and non-clinical staff should also avoid using non-diagnostic, outdated, or "slang" terms (e.g., "alcoholic", "addict", "[alcohol] abuse", "clean/dirty") in conversation and when charting. Use of such terms by health care providers has been shown to be stigmatizing to some patients,[87,88] and stigma (both experienced and anticipated) has been associated with a reduced likelihood of accessing and staying in care.[89-91] Clinicians are encouraged to review *Respectful Language And Stigma: Regarding People Who Use Substances*,[92] a resource jointly developed by the BC Centre for Disease Control, PHSA, and Toward the Heart, for more information.

Recovery-Oriented Care

The continuum of care for AUD is considered to be inclusive of recovery and recovery-oriented services. Recovery-oriented care recognizes that there are multiple pathways to recovery, and strives to respect the choices, autonomy, dignity, and self-determination of individuals in defining their personal recovery goals and pathway.[93] Recovery-oriented care emphasizes holistic, client-centered, strengths-based approaches, and can encompass both abstinence-oriented and harm reduction management strategies.[93]

This guideline suggests adoption of the United States-based SAMHSA's *Working Definition of Recovery*[94] as an overarching framework and for the purpose of developing patient-centred, recovery-oriented treatment plans:

> *"A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential."*

Recognizing and validating how individuals choose to define their recovery is an important component of recovery-oriented care. Treatment and recovery plans should be developed in partnership with patients and families, and include goals that patients have identified as important to them. In some cases, patient-identified goals may not be directly related to alcohol use, such as improved health and wellness, having a safe and stable place to live, finding a sense of purpose through volunteer, educational or employment activities, strengthening relationships with family and friends, or building social support networks.[94]

There is a diversity of recovery-oriented services in BC that can provide additional care, support, and guidance to individuals and families affected by AUD, in a manner that is complementary to the clinical management approaches delivered in primary care. It is recognized, however, that recovery-oriented services and the health care system have traditionally operated independently of one another, and there is a need to improve collaboration and communication between multiple service providers and programs that may be involved in an individual's care. This guideline emphasizes the importance of establishing functional referral networks and streamlined communication pathways between these two sectors as part of a broader provincial strategy to build an integrated continuum of substance use care in BC.

Family and Social Circle Involvement in Care

This guideline uses the term "family" to encompass all relationships that are important to the patient, which may include romantic partners, close friends, and other people of significance who may or may not be legally recognized as family. Family members can have an important role as partners in an individual patient's care, and this guideline recommends the inclusion of family members in decision-making processes and care at all levels, when deemed appropriate by patients and their care teams. Research has shown that families can have a pivotal role in improving treatment outcomes and sustaining benefits of treatment among youth and adults with AUD, by providing additional support and structure, and promoting resilience.[95-98] If a patient determines family involvement would be a positive element in their treatment plan, clinicians are encouraged to educate family members about available treatment options and resources, and provide as much patient-specific information as possible within the boundaries of confidentiality requirements.

As with all medical care, confidentiality requirements must be met when treating individuals with AUD. This includes maintaining confidentiality from family members unless patients have granted consent for their medical information to be shared with their family.[99] However, it is also emphasized that health care providers should avoid making assumptions about privacy, and routinely ask patients if they prefer to include family members or friends as supportive partners in their care. If aspects of care are being kept confidential from family members, the challenges and logistics of this should be discussed with the patient. While information cannot be shared with family members without a patient's consent, family members can share relevant information with health care providers without violating that patient's privacy or confidentiality.

It is important to note that, in some cases, family involvement may not be in the best interest of the patient. Factors such as partner or parental substance use, familial abuse and violence, or dysfunctional family relationships can act as barriers to engagement and retention in treatment as well as to achieving long-term recovery.[95-98] Patients should be given full discretion on whether and how they wish to include family members in their care, and if they opt not to involve family members, this decision should be respected.

In the case of youth (aged 11-25), parental participation in treatment should be actively encouraged, if appropriate, and family members should be supported with sufficient education and information about alcohol use and AUD. Offering or providing referrals to group or individual sessions for parents and/or caregivers is recommended. A family history should be taken, when possible, to identify and treat any mental health or substance use issues requiring treatment in the youth's family. It should also be noted that, like adults, not all youth have healthy or positive relationships with their family members. Decisions to involve family members in care should be guided by the patient's wishes and an understanding of the family dynamic.

Regardless of their level of involvement in a patient's care, family members and caregivers often require support for their own health and wellness. Several resources exist for family members impacted by alcohol and AUD, including From Grief to Action's *Coping Kit: A guide for family members*; Parents Forever, a support group for parents of adults with substance use issues in Vancouver, BC; Al-Anon and Alateen Family Groups across BC; and Here to Help's resources for family members. Family members can also be referred to external specialist-led and community-based services and supports. Clinicians should be mindful of any concerns that patients may have about privacy, confidentiality, or perceived conflicts of interest if patients and family members are referred to the same specialist-led or community-based programs.

4 Screening and Brief Intervention

4.1 Providing Information and Education on Low-Risk Drinking to Patients

Alcohol use screening often relies on an assessment of a patient's alcohol use in comparison to an accepted standard for high- versus low-risk drinking. While alcohol use that exceeds recommended daily or weekly limits does not automatically equate to "high-risk" for every individual in every circumstance, alcohol-related harms rarely occur when drinking remains below recommended low-risk standards.[100]

This guideline endorses the adoption and use of Canada's *Low-Risk Alcohol Drinking Guidelines*[9] as an educational resource and discussion tool in primary care practice. Although the Low-Risk Alcohol Drinking Guidelines were released in 2011, public awareness and knowledge of these guidelines remain low. Several provincial and national surveys of the general public have reported that fewer than 20% of respondents are aware that the Low-Risk Alcohol Drinking Guidelines exist, and fewer still are able to correctly identify standard drink sizes or recall age- and sex-specific limits for low-risk drinking.[101-105] While some studies suggest that mass media campaigns aimed at increasing knowledge of national low-risk drinking guidelines can lead to short-term reductions in alcohol consumption,[106,107] others have found that without personalized context, some individuals may perceive low-risk guidelines as not realistic or relevant to their lives, particularly when they are drinking above low-risk limits.[101,108]

By providing patients with information and education about the Low-Risk Alcohol Drinking Guidelines, primary care providers can play an important role in promoting awareness, as well as work with patients to understand how the low-risk limits may apply to their health and daily life. Introducing the topic in a general and conversational way can also help build rapport and comfort in talking about personal use in subsequent steps in the screening and intervention pathway. For example: "*Have you heard about Canada's Low-Risk Alcohol Drinking Guidelines? I talk to all of my patients about these guidelines. They contain important information about safer alcohol use that everyone needs to know.*"

4.1.1 Overview of Canada's Low-Risk Alcohol Drinking Guidelines

Canada's Low-Risk Alcohol Drinking Guidelines provide information on the risks and benefits associated with alcohol consumption, and evidence-based guidance on estimated levels of consumption that would be considered lower-risk in adult men and women.[9]

The evidence used to derive approximate levels of alcohol consumption that would be considered "low-risk" is based on large prospective population-based studies that have shown that long-term alcohol consumption is associated with increased risk of harm, including premature mortality.[100] Observational cohort studies have found that average long-term alcohol consumption levels as low as one or two standard drinks per day are directly or indirectly linked to increased risk of at least eight different types of cancer (i.e., oral, pharynx, larynx, oesophageal, liver, breast, colon and rectal cancers) as well as numerous other serious medical conditions (e.g., epilepsy, haemorrhagic stroke, cardiac dysrhythmias, liver cirrhosis, and hypertension).[15,109-114] In addition, there are a number of serious medical conditions directly attributed to long-term alcohol consumption, including AUD, alcohol-related psychosis, nervous system degeneration, polyneuropathy, myopathy, cardiomyopathy, gastritis, liver diseases (e.g., hepatitis), and pancreatitis.[9,15,100,112-114]

From this literature, the authors of the Low-Risk Alcohol Drinking Guidelines derived a threshold level of average daily and weekly alcohol consumption for adult men and women where the overall net risk of premature death was equivalent to that of an individual who had never consumed alcohol in their lifetime (Table 3).

Table 3 Summary of Canada's Low-Risk Alcohol Drinking Guidelines[9]

	Women	Men	Youth
If you drink, you can reduce health and safety risks by following the guidelines:	0-2 standard drinks per day[a]	0-3 standard drinks per day	For youth <19 years, delay drinking until adulthood. If you choose to drink, speak with your parents, and do so with parental guidance.
	No more than 3 standard drinks on any one occasion	No more than 4 standard drinks on any one occasion	For youth 19-24 years, no more than 1-2 drinks on any one occasion.
	No more than 10 standard drinks per week	No more than 15 standard drinks per week	For youth 19-24 years, do not drink more than 1-2 times per week.
	Always have some non-drinking days per week to minimize tolerance and habit formation.		If you do choose to drink, plan ahead, adhere to local laws, and follow safer drinking tips.

[a] *In Canada, a "standard drink" is equal to one 341 ml (12 oz.) bottle of 5% strength beer, cider or cooler; one 142 ml (5 oz.) glass of 12% strength wine; or one 43 ml (1.5 oz.) shot of 40% strength spirits (NB: 1 Canadian standard drink = 17.05 ml or 13.45 g of ethanol).*
NOTE: International standards may vary.

The Low-Risk Alcohol Drinking Guidelines also make recommendations for specific populations and scenarios in which either abstinence from or extreme caution with alcohol use is advised, including alcohol use among youth (see Table 3), during pregnancy, in association with high-risk activities (e.g., driving motor vehicles), and in combination with medication and/or other substances.

At least half of all alcohol consumed in Canada is in excess of levels deemed low-risk[115] and the authors estimate that if all Canadians who drink alcohol were to adhere to the low-risk limits, there would be a reduction in alcohol-related deaths of approximately 4,600 per year.[9] Recognizing that the Low-Risk Alcohol Drinking Guidelines are less likely to have any significant impact on population health if disseminated in isolation, the authors encourage their adoption and use as part of a more comprehensive public health strategy to address alcohol-related harms, for example, to support the implementation of a continuum of evidence-based interventions in clinical practice.[9]

To support discussions about the Low-Risk Alcohol Drinking Guidelines, the Canadian Centre on Substance Use and Addiction (CCSA) has created a number of patient education and decision-making tools, including tailored materials for women and youth, and guidance for clinicians on how to talk to their patients about alcohol-related risks and harms. These materials can be accessed on their website: www.ccsa.ca/Eng/topics/alcohol/drinking-guidelines/Pages/default.aspx.

4.1.2 Section Summary and Recommendation

This guideline strongly recommends that clinicians provide education to their patients about Canada's Low-Risk Drinking Guidelines to both enhance awareness and knowledge of alcohol use among their patients and as an introduction to alcohol use screening. Although research evidence is limited, increased awareness and knowledge of safer alcohol consumption guidelines can lead to reductions in alcohol consumption,[106,107] particularly when delivered in a personalized manner.[101,108]

Recommendation 1 Awareness of Canada's Low Risk Alcohol Drinking Guidelines

Clinicians should provide education about Canada's Low-Risk Alcohol Drinking Guidelines to all adult and youth patients.

Quality of Evidence: LOW	Strength of Recommendation: STRONG

Remarks

- This recommendation has been graded as strong despite limited research evidence. It is the consensus of the committee that all patients could potentially benefit from increased knowledge and awareness of Canada's Low-Risk Alcohol Drinking Guidelines.
- Cultural safety is critical when talking to Indigenous patients and families about alcohol use. Some patients may have experienced stigma and discrimination, or been subject to harmful stereotypes about Indigenous peoples and alcohol in the health care system in the past. Using culturally safe approaches can minimize unintended harms and strengthen the therapeutic relationship.
- Clinicians should be mindful that some patients may be in recovery or abstinent from alcohol for personal reasons, such as a family history of alcohol-related issues. These types of disclosures should be handled with sensitivity and support to avoid causing distress or other unintended consequences in patients.

4.2 Alcohol Use Screening

Despite its high prevalence in primary care and other clinical settings, high-risk drinking often goes unrecognized and untreated.[116] Implementation of routine and universal alcohol screening in primary care practice has increasingly been advocated as an important public health strategy for early identification of high-risk drinking and secondary prevention of AUD.[117-119]

The underlying rationale of universal screening is to capitalize on both patterns of practice that are already in place and the longitudinal model of care in the primary care setting. Patients can be routinely asked about alcohol use during new client intakes, general assessments, annual preventive screening, and in specific disease management clinics (e.g., hypertension, diabetes). Thus, screening could occur when alcohol use is not the primary reason for presentation, facilitating early intervention and connection to care among patients not actively seeking treatment for alcohol-related problems or concerns.

Introducing alcohol use screening tools in a non-judgmental, conversational manner can foster trust, and in turn, improve the accuracy of self-reported alcohol use. Seeking the patient's consent and providing context prior to asking screening questions may also aid in building rapport, for example: *"Now that we've talked about some of the effects alcohol can have on our health, would you mind if I ask you some questions about your alcohol use?"* Establishing trust and safety in these initial conversations is particularly important for patients who may otherwise tend to underreport substance use, such as pregnant individuals[j], adolescents, older adults, or patients with co-occurring disorders where alcohol use may be associated with greater risk of harm.

[j] *While the majority of pregnant individuals identify as women, this term does not reflect the identities and experience of all pregnant people. Gender-neutral language has been used in this guideline where possible. Respect for individual identities and use of corresponding or chosen pronouns is an important component of patient-centred care.*

Box 1 Terminology Used to Assess Screening Tools

Sensitivity	The proportion of individuals correctly identified as having the condition, or "true positives".
Specificity	The proportion of individuals correctly identified as not having the condition, or "true negatives".

Remarks

Sensitivity and specificity can vary according to the cut-point used for the scale, the population being assessed, the setting, and the experience of the assessor. A general rule when assessing the usefulness of a screening or diagnostic tool is for both sensitivity and specificity to be greater than 0.75 or 75%.[120]

Regardless of the screening tool used, it is emphasized that screening alone does not improve outcomes. Provider and staff education, training, and the development of clinical pathways and processes that support early intervention among individuals who meet criteria for high-risk drinking are also needed, along with a plan for required diagnostic follow-up and treatment for individuals who are diagnosed with an AUD.

4.2.1 Screening Adult Patients

A number of standardized alcohol use screening instruments are available that have been validated in a range of clinical care settings, including the Alcohol Use Disorders Identification Test (AUDIT), the condensed AUDIT-Consumption (AUDIT-C) test, and the Cut-down, Annoyed, Guilty, Eye Opener (CAGE) questionnaire (see Appendix 1). However, provider-level barriers, including time constraints, unfamiliarity with the instruments, and the requirement to calculate item and overall scores have been cited as impediments to the uptake and use of such screening tools in primary care settings. An approach specifically tailored for the primary care setting is "single-question" alcohol screening (SASQ), as it takes minimal time to administer, is easily recalled, and requires no scoring.[121]

Single Alcohol Screening Question (SASQ)

SASQ screening is typically structured around sex- and age-specific recommendations for low-risk alcohol consumption. To normalize alcohol use and support disclosure, patients are asked to estimate how many times in the past year their drinking exceeded low-risk limits, however, frequency is not factored in to the screening result. For example, any response greater than "never" or "zero times" to the question below would be considered a positive screening result for high-risk drinking, warranting additional follow-up:

> *"In the past year, how often have you consumed more than 3 drinks (for adult women)* ***or*** *4 drinks (for adult men) on any one occasion?"*

Although less sensitive than structured screening instruments for the detection of high-risk drinking behaviours,[122] studies have found that the sensitivity of single question screening ranges from 60-90% versus reference standards (e.g., AUDIT, AUDIT-C, or clinical diagnostic interview),[123-126] and systematic reviews have concluded that this is a valid option in clinical settings where time and patient interactions are limited.[121,127]

4.2.2 Screening Adolescent Patients

For adolescents aged 11-18, there are also validated screening tools available, including AUDIT, AUDIT-C, and the six-question Car, Relax, Alone, Forget, Friends, Trouble (CRAFFT) instrument which is specifically for screening adolescents (see Appendix 1), but as described above, a simplified 1- or 2- question screening approach may be preferred in primary care due to brevity and ease of recall.[128-130]

U.S. National Institute on Alcohol Abuse and Alcoholism (NIAAA) Screening Tool

The U.S. NIAAA developed a two-question tool for screening adolescents aged 11 to 18 years that consists of the following questions[131]:

1. *"Have any of your friends consumed alcohol in the past year?"*
2. *"Have you consumed any alcohol in the past year?"*

These questions were empirically derived from extensive analyses of national survey data, and have the strongest evidence base for predicting current or downstream alcohol-related problems in adolescents.[131] For adolescents aged 11-14, it is recommended to first ask about alcohol use among friends as a less-threatening introduction to the topic, followed by personal use questions (i.e., question 1 then 2), with the order reversed for adolescents aged 15 to 18 (i.e., question 2 then 1).[132]

To assess risk and triage youth appropriately, the NIAAA tool recommends asking all youth aged 11 to 18 years who screen positive for personal use ("yes" to question 2) to estimate the number of days they have consumed alcohol over the past year.[133,134] Self-reported drinking days that exceed age-specific thresholds shown below (Table 4) signal that the patient may be at increased risk of alcohol-related problems, including AUD.[135]

Table 4 Age-specific Thresholds for NIAAA Screening Tool

Age category	Risk threshold
11-15 years	Any drinking days over past year
16-17 years	6 or more drinking days over past year
18 years	12 or more drinking days over past year

Prospective evaluations of the NIAAA tool incorporating these age-specific cut-points have concluded that it is an accurate and reliable method for screening and triaging adolescents for more intensive interventions in primary care settings.[136,137] However, these studies also noted the advantages of having a simplified version of the tool that could be used to stratify adolescents of any age into low- versus high-risk categories.

To date, several studies have been conducted investigating a simplified version of the NIAAA tool for triaging adolescents based on current or future risk of alcohol-related harms. In an urban primary care setting, researchers found that utilizing a threshold of ≥2 drinking days per year for adolescents aged 12-17 (n=525) conferred high sensitivity (96%) and specificity (85%) for identifying individuals who met DSM-5 criteria for AUD.[136] The simplified NIAAA screening tool was subsequently evaluated in six rural primary care clinics, where researchers determined a threshold of ≥3 drinking days per year had a 91% sensitivity and 93% specificity for detection of AUD among youth aged 12-17 (n=942).[137] Further research is underway to improve the precision and accuracy of cut-points for the risk-based triage of adolescents, and as illustrated by these findings, local context may play an important role. In the interim, adopting the age-specific cut-points as described in Table 4 is advised.

4.2.3 Screening Pregnant Patients

As noted above, alcohol use screening is recommended for all individuals of childbearing capacity, whether they are intending to become pregnant or not. Universal screening of all primary care patients allows for timely intervention prior to pregnancy and secondary prevention of maternal and fetal harms associated with alcohol use.[138]

Prior to screening, it is crucial to secure the patient's consent, and to review confidentiality and other rights of the patient involved, congruent with the standards of medical practice.[4] Alcohol use screening should be conducted at the first prenatal visit or during the first trimester, and as needed in subsequent visits.[4] Although not explicitly validated for use in pregnant patients, SASQ has been recommended as the first step in alcohol use screening in this population by the Society of Obstetricians and Gynaecologists of Canada[4] and the U.S. Preventive Health Services Task Force.[127] As with non-pregnant patients, a simplified approach to alcohol use screening may be preferred in the prenatal care context, and the general consensus among experts is that these questions are sufficiently sensitive and specific for identifying individuals and pregnancies that may be at increased risk.[138] When combined with supportive, non-judgmental dialogue, the SASQ format—asking open-ended rather than yes/no questions, and assessing alcohol use patterns over the past year—can encourage an open discussion about alcohol use and strategies to reduce maternal and fetal risks.[4] As well, individuals may be more likely to report pre-pregnancy or lifetime use than they are to report use during pregnancy because of the risks and stigma involved in disclosure.[138]

Individuals who disclose alcohol use during pregnancy should undergo further assessment to determine frequency and amount of alcohol consumption, and to differentiate high-risk use from individuals with an AUD (see Diagnosis of Alcohol Use Disorder).

4.2.4 Frequency of Alcohol Use Screening

Several systematic reviews have concluded that there is insufficient research evidence to recommend an optimal screening/rescreening interval for alcohol use in adults and youth.[127] In the absence of robust evidence, most public health agencies, including the Canadian Task Force on Preventive Health Care[139] and the Canadian Paediatric Society,[140,141] recommend screening adults and youth on an annual basis. This is for reasons of convenience—alcohol screening can be combined with other components of a routine medical exam or preventive health screening—and to detect changes, as an individual's alcohol use can shift from low- to high-risk over a one-year period. In line with this, a U.S. study found that use of annual substance use screening intervals identifies a modest number of incident cases of high-risk use in adult primary care patients.[142] Of 1014 patients who initially screened negative for high-risk alcohol or drug use, 34 (3.4%) screened positive for high-risk use when screened again one year later, with the majority (23/34) meeting criteria for high-risk alcohol use.[142]

4.2.5 Clinical Indications for Alcohol Use Screening

This guideline recommends universal screening of all adult and youth patients in primary care. However, there are a number of common clinical scenarios that should trigger alcohol screening regardless of whether or when a patient was last screened. These include:

- Signs of intoxication or detection of alcohol on breath
- Before prescribing a medication known to interact with alcohol
- Patient reports non-medical use of opioids, benzodiazepines, or illicit substances
- Patients with chronic non-cancer pain
- Laboratory investigations show elevated liver enzymes (increased GGT, AST:ALT ratio > 2:1), or MCV > 96 fL on CBC panel[k]
- Patients who are pregnant or planning to become pregnant
- Recent and/or repeated physical trauma, burns, injuries, accidents, or falls
- Recent, historical, or recurrent psychological trauma, intimate partner or family violence
- Significant life event (death of spouse or family member, divorce)
- Signs of workplace dysfunction (unexplained time-off, loss of employment)
- High-risk behaviours (problem gambling, unplanned or unprotected sex, impaired driving)
- Diagnosis or worsening of health conditions that may be associated with alcohol use:
  - Depression
  - Anxiety
  - Insomnia
  - Seizures
  - Psychosis
  - Anaemia
  - High blood pressure
  - Cardiovascular disease
  - Gout
  - Memory issues
  - Pancreatitis
  - Gastrointestinal disorders
  - Hepatitis, cirrhosis

Additionally, patients presenting to care because they are concerned about their alcohol use or suspect they have an AUD can undergo a full diagnostic interview immediately.

4.2.6 Section Summary and Recommendation

Based on known risks and harms of high-risk drinking, and the benefits of early identification, intervention, and treatment, this guideline recommends universal alcohol use screening for all adult and adolescent patients seen in primary care.

The committee endorses the use of single-question alcohol screening (SASQ) for adult patients (including pregnant individuals) and the NIAAA tool for youth. Simplified screening tools have several advantages in primary care,[121] while still achieving acceptable sensitivity and specificity for detection of high-risk drinking compared to more complex screening tools.[121,123-126]

There is a lack of evidence regarding optimal screening-rescreening intervals in adults and youth. Given the advantages of early detection and intervention to reduce or prevent alcohol-related harms, it is the consensus of this committee that the benefits of annual screening, as recommended by national public health agencies, would likely outweigh any disadvantages of this approach.

[k] *Abbreviations: GGT – gamma-glutamyl transpeptidase, AST – aspartate aminotransferase, ALT – alanine transaminase, MCV – mean cell corpuscular volume, CBC – complete blood count.*

Recommendation 2 Universal Screening for Drinking Alcohol Above Low-Risk Limits

All adult and youth patients should be screened annually for alcohol use above low-risk limits.

Quality of Evidence: MODERATE	Strength of Recommendation: STRONG

Remarks

- Screening alone does not improve outcomes. As a standard component of screening, all patients should be provided with individually tailored feedback about their results, regardless of the screening tool used.

4.3 Diagnosis of Alcohol Use Disorder

Patients who screen positive for drinking above low-risk limits should undergo further assessment, and if appropriate, a structured interview using the DSM-5 criteria to confirm the diagnosis and severity of AUD (see Table 10). Confirmation or exclusion of an AUD, and an assessment of AUD severity and the patient's risk of complications, determines subsequent steps in the treatment pathway.

Patients who are drinking above low-risk limits but do not have an AUD should be administered a brief counselling intervention and encouraged to reduce their alcohol consumption (see Brief Interventions).

Brief intervention alone is not effective for individuals with AUD.[143] Patients who are diagnosed with an AUD should undergo a more comprehensive assessment, including, as appropriate and indicated: a detailed medical, mental health and substance use history; physical examination; laboratory investigations; and risk assessment for developing severe complications of withdrawal (i.e., seizures, delirium tremens). All patients should be offered evidence-based treatment for AUD (see Withdrawal Management, Pharmacotherapy, Psychosocial Treatment Interventions).

4.4 Brief Interventions for Drinking Above Low-Risk Alcohol Limits

4.4.1 Theory and Practice

Identification of patients who are drinking above recommended low-risk alcohol limits through screening provides the opportunity for clinicians to conduct a brief intervention (BI) to support behavioural change to reduce alcohol consumption. BI approaches vary in a range of components, such as the duration and number of clinician-patient interactions involved, but they all consist of a brief or ultra-brief variant of motivational interviewing (MI), an evidence-based psychosocial treatment intervention.

Motivational interviewing (MI) is a counselling approach that helps patients develop motivation to change, and creates a therapeutic alliance that is predominantly a partnership, rather than an expert/patient dynamic.[144] The general principles of MI are to express empathy, support self-efficacy, avoid argumentation, roll with resistance, and develop understanding of any discrepancy between current behaviour and future goals.[145] BI approaches that adhere to the principals of MI are typically structured using the FRAMES approach,[144] an mnemonic device that stands for **F**eedback, **R**esponsibility, **A**dvice, **M**enu, **E**mpathic, and **S**elf-efficacy (see Appendix 2).[144,146]

An example that has been well studied in primary care is the "5 As" model for behavioural change.[147] The 5As model was originally developed to facilitate the adoption of universal screening and brief intervention for tobacco cessation, but has been adapted for a number of other conditions, including alcohol use.[48,148] The 5As

stand for **A**sk, **A**dvise, **A**ssess, **A**ssist, and **A**rrange (see Box 2). Ease of recall and brevity are practice-relevant strengths of this approach. The 5As can also be easily adapted to specific clinical settings and patient populations (e.g., question order and format can be modified as needed), and other members of the primary care team can administer the 5As if physician time is limited.

Box 2 The 5As Model for Delivering Alcohol Use Brief Interventions[48,148]

Ask	Screen and document alcohol use for every patient. Identify individuals who are drinking above low-risk limits.
Advise	In a clear, strong, and personalized manner, advise individuals that they are drinking above low-risk limits, and may be at risk of alcohol-related harms.
Assess	Is the individual willing to make a change at this time? Confirming/excluding a diagnosis of AUD is advised, as BI alone is not effective for individuals with an AUD.
Assist	For the patient willing to reduce or stop alcohol use, develop a treatment plan using a shared decision-making framework. Provide supportive counselling and advice, and referrals to community resources.
Arrange	Schedule a follow-up visit, preferably within a week of the planned "change date".

Patients who are pre-contemplative or ambivalent about reducing their drinking can be reassessed at subsequent appointments to determine whether their alcohol use and related circumstances have changed. Additional guidance on delivering brief alcohol interventions can be found in Appendix 2.

4.4.2 Brief Intervention

There is a robust evidence base to support the use of BI for high-risk drinking in adults and youth (aged 11-25 years).[128,149] Several high-quality systematic reviews have demonstrated that BI results in clinically meaningful reductions in high-risk drinking behaviours, including heavy episodic drinking, high daily or weekly levels of alcohol consumption, and drinking that exceeds recommended alcohol consumption limits, and have concluded that overall, there is a moderate beneficial effect of BI.[143,150-153] For example, a 2018 meta-analysis (69 RCTs, n=33,642) reported moderate-quality evidence that alcohol-related BIs administered in primary care and emergency settings led to sustained reductions in alcohol use up to one year later: on average, participants consumed 1.5 fewer drinks[l] per week than participants who received minimal or no intervention.

Although a 2012 systematic review reported larger effect sizes with multi-contact brief interventions, (i.e., multiple 10-15 minute BI sessions delivered over a timespan of up to 1 year);[117] other reviews have found that extending the duration and frequency of brief interventions does not appear to confer significant advantages.[143,154] A consistent finding across multiple reviews is that even a single, 5-minute session incorporating the core principles of MI is likely to be effective in reducing alcohol consumption among individuals at higher risk of alcohol-related harms.[149] A 2016 meta-analysis of 52 RCTs (n=29,891) found that provider type did not impact outcomes, with some evidence that BI delivered by nurses was more effective than physician-, counsellor- or peer-delivered BIs in reducing the quantity of alcohol consumed by individuals with high-risk drinking patterns.[155] Thus, if physician and nurse practitioner time is limited, delegation of screening and BI to other trained members of the care team or staff can be considered.

[l] *Canadian standard drink = 17.05 mL or 13.45 g of ethanol.*

4.4.3 Brief Intervention in Adolescent Patients

A 2018 systematic review (13 studies, n=7,060) of BI for high-risk drinking in adolescent primary care patient populations concluded that both indicated and universal (i.e., preventative) delivery of alcohol-focused BI can result in clinically important changes in alcohol-related outcomes.[156] However, authors also noted limitations of the current evidence base, and specifically the lack of research on best practices for delivery, communication methods, and intervention-specific components that could influence "real-world" effectiveness of BI in this population.[156]

In the Canadian context, key messages for youth from the Low-Risk Alcohol Drinking Guidelines that could be adapted into BI are to advise youth that if possible, they should try to delay drinking until they are of legal age (≥19 years of age).[9] If youth do decide to drink, strategies for reducing harm can be discussed, such as ensuring that drinking occurs in a safe environment, and limiting that to one to two drinks at a time, one to two times per week (Also see Table 3).[9]

4.4.4 Brief Intervention in Pregnant Patients

A 2009 systematic review (4 RCTs; n=715) of clinical trials examining the effectiveness of psychosocial interventions found that BI might motivate pregnant patients to reduce or discontinue alcohol use, but noted that due to insufficient and heterogeneous data, a meta-analysis could not be performed.[157] A number of individual studies have reported significant results in favour of BI in this population. For example, a randomized study that compared BI to assessment only (n=162) found that pregnant individuals who received a BI were five times more likely to discontinue alcohol use throughout their pregnancy than those who received assessment only.[158] Perinatal outcomes were also improved in the BI group: infant mortality rate was three times lower, and infants had greater birth length and weight in the BI group than the assessment-only group.[158]

As with the general patient population, the most frequently studied form of BI in this population is MI, including the 5As model.[4,159,160] However, research has also shown that simply asking pregnant patients about their alcohol use, discussing potential risks, and offering brief, nonjudgmental advice may help modify drinking behaviour.[4,161]

4.4.5 Section Summary and Recommendation

Based on available evidence, this guideline recommends that clinicians administer a brief intervention (BI) to all adult and youth patients who screen positive for high-risk drinking. Several high-quality systematic reviews have found that BI results in clinically meaningful reductions in alcohol consumption, and concluded that overall, there is moderate quality evidence for the beneficial effect of BI.[30,127,143,162]

The committee endorses the use of short, practice-friendly motivational interviewing (MI)-based approaches, for example, the 5As model to support behavioural change,[48,148] as these approaches have been well-studied and are likely familiar to many primary care providers.

Involving interprofessional staff or teams in the screening and brief intervention pathway is recommended if clinician time is limited and to ensure that all patients are screened and triaged appropriately. Research has shown that BI delivered by nurses, counsellors, or peer support staff is as effective as physician-delivered BI in supporting patients to reduce drinking and alcohol-related harms.[155]

Recommendation 3 Brief Intervention for Drinking Alcohol Above Low-Risk Limits

All patients who are drinking alcohol above low-risk limits but do not have an AUD should receive a brief counselling intervention to reduce drinking.

Quality of Evidence: MODERATE	Strength of Recommendation: STRONG

Remarks

- Clinicians should have access to appropriate training, education and resources for delivering BI.

4.5 Implementing Screening and Brief Intervention in Practice

Implementation of universal screening and BI for alcohol use has been recommended by a range of national and international organizations, including the Canadian National Alcohol Strategy Working Group, the Canadian Task Force on Preventive Health Care, the Canadian Paediatric Society, the US Preventive Services Task Force, the American Academy of Pediatrics, and the WHO.[118,139-141,146,163,164] However, real-world implementation of universal alcohol screening and brief intervention has proven challenging, with reported rates of uptake as low as 2% for alcohol use screening and 1% for BI.[165] Barriers most often cited by primary care providers include a lack of time, education, training, and resources; personal discomfort and unease around how to communicate with patients; stigma manifesting in beliefs that patients will not change their behaviour; and fear of offending patients with questions about alcohol consumption.[166]

These barriers may also underpin discrepancies between efficacy and effectiveness studies, including recent trials that reported modest or no differences in alcohol consumption following widespread implementation of universal alcohol use screening and BI in private and publicly-funded care systems.[167-170] In these studies, the authors specifically cited low rates of provider compliance in administering BI as per recommendations as contributing factors, and suggest that organizational or system-level factors, such as provider incentives, educating providers about the risks of high-risk drinking and effectiveness of BI, and providing training for delegated staff (e.g., nurses, allied health professionals) could facilitate wider implementation and improve effectiveness in the primary care context.[167-170]

In the United States, funding for screening, brief intervention, and referral to treatment (SBIRT) initiatives has been prioritized by the National Institutes of Health for over a decade, and robust evaluations of large-scale implementation projects are available. Through this work, a number of similar themes have emerged among successful programs. These "best practices" for successful uptake and implementation of substance use SBIRT are summarized below (Box 3).

Box 3 Best Practices for Implementing SBI in Primary Care Settings [171-174]

- Identify a "practice champion"
- Ensure buy-in from leadership and senior staff
- Involve all members of the care team and clinic staff
- Clearly define and communicate each step of the SBIRT pathway to all team members
- Develop functional referral pathways with external partners and programs
- Institute ongoing and regular opportunities for staff training/re-training in SBIRT
- Align the SBIRT pathway within the primary care clinic flow such that disruptions are minimal and change is readily adopted
- Use a pre-screening instrument if available
- Integrate SBIRT into the electronic health record

5 Withdrawal Management

Withdrawal management is defined as a set of pharmacological, psychosocial, and supportive care interventions that aim to manage withdrawal symptoms and/or syndromes that occur when an individual with a substance use disorder stops using that substance.[175] For individuals with AUD, medically supervised withdrawal management can prevent potentially life-threatening complications that can emerge if the patient is left untreated.[175]

Withdrawal management for alcohol may be recommended for a number of reasons. Some patients may have a treatment goal of abstinence and thus, completion of withdrawal management would be the first step in their treatment plan. Most AUD pharmacotherapies do not address alcohol withdrawal symptoms, and none have been shown to prevent severe complications of withdrawal (i.e., seizures, delirium tremens).[176] Research has also shown that completion of withdrawal management prior to starting AUD pharmacotherapy can improve treatment outcomes by preventing early relapse, which is often associated with untreated withdrawal symptoms.[177-179] Completion of withdrawal management may also be required when patients wish to enter inpatient treatment programs.

Withdrawal management may not be necessary for patients whose goal is reduced drinking. Patients who are assessed to be at low-risk of developing severe complications may be able to start AUD pharmacotherapy immediately (see Continuing Care — Pharmacotherapy). Clinicians should be aware, however, that alcohol withdrawal symptoms can still occur with a sudden or significant reduction in alcohol consumption, and closely monitor these patients during early stages of treatment.

It is important to note that withdrawal management alone is not considered a standalone treatment. As a short-term intervention, withdrawal management is not intended to resolve any underlying medical, psychological, or social issues related to AUD, and should be considered a bridge to continuing care, treatment, and support that will address these concerns. Referring patients to withdrawal management alone is neither sufficient nor appropriate care.

5.1 Overview of Alcohol Withdrawal

While other neurotransmitter systems are involved, alcohol primarily affects the central nervous system (CNS) by acting as a *gamma*-aminobutyric acid (GABA) agonist and glutamate antagonist. In normal conditions, the brain maintains a balance between the inhibitory effects of GABA and excitatory effects of glutamate. Alcohol disrupts this balance by increasing the inhibitory effects of GABA and supressing excitatory effects of glutamate, resulting in calm or relaxed feelings, reduced inhibitions, impaired balance and coordination, and slowed reaction speed, cognition, and breathing rate.[180] With chronic alcohol use, the brain adapts and compensates for its effects; GABA-mediated systems become less sensitive to GABA and glutamate-mediated systems become more sensitive to glutamate to restore neurochemical equilibrium.[181] In these conditions, a sudden cessation or a significant reduction of alcohol consumption triggers an acute imbalance between the GABA and glutamate systems, resulting in an overall state of CNS excitation and a lower seizure threshold.[181] This mechanism explains many symptoms of alcohol withdrawal that occur in patients with a history of chronic heavy alcohol use when they abruptly discontinue alcohol intake.

Up to 50% of individuals with long-term alcohol dependence will experience some degree of withdrawal upon cessation of alcohol use.[182-184] Symptoms of alcohol withdrawal typically begin 6-24 hours after the last intake of alcohol and reach peak intensity at 24-48 hours, with resolution of symptoms within 5-7 days.[185] Within hours of alcohol use cessation, autonomic hyperactivity can present as tachycardia, pyrexia, tremor, nausea, vomiting, and sweating, which may also be accompanied by psychological distress in the form of anxiety, restlessness, and sleep disturbance or insomnia (see Box 4).

Box 4 DSM-5 Diagnostic Criteria for Alcohol Withdrawal Syndrome[2]

A. Cessation of (or reduction in) alcohol use that has been heavy and prolonged.
B. Two (or more) of the following, developing within several hours to a few days after the cessation of (or reduction in) alcohol use described in Criterion A: • Autonomic hyperactivity (e.g., sweating or pulse rate greater than 100 bpm). • Increased hand tremor. • Insomnia. • Nausea or vomiting. • Transient visual, tactile, or auditory hallucinations or illusions. • Psychomotor agitation. • Anxiety. • Generalized tonic-clonic seizures.
C. The signs or symptoms in Criterion B cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
D. The signs or symptoms are not attributable to another medical condition and are not better explained by another mental disorder, including intoxication or withdrawal from another substance.

Data on the natural history of alcohol withdrawal has mainly been derived from studies of medically-ill, hospitalized patients. These studies have shown that while alcohol withdrawal is typically limited to the symptoms listed above, approximately 7-8% of symptomatic individuals may also experience transient visual, auditory and/or tactile hallucinations.[186] Additionally, approximately 10% of symptomatic patients experience withdrawal-related generalized tonic-clonic seizures that require medical intervention.[176,187] If left untreated, approximately one-third of individuals experiencing withdrawal seizures are at risk of progression to delirium tremens.[188] Delirium tremens is the most serious manifestation of alcohol withdrawal and is characterized by the onset of severe confusion, disorientation and/or hallucinations accompanied by severe autonomic hyperactivity.[189] Delirium tremens occurs in approximately 3-5% of patients who are hospitalized for the management of alcohol withdrawal.[180,182,190]

5.2 Assessing Risk of Severe Complications of Alcohol Withdrawal

Not all individuals with alcohol use disorder will experience severe complications upon reduction or cessation of alcohol use; for example, some reviews suggest that youth and individuals with a shorter lifetime history or severity of AUD may be less likely to experience severe complications.[182-184] A widely cited theory known as the "kindling effect"[191] suggests that the severity of withdrawal symptoms experienced by a patient directly correlates to their alcohol use history (e.g., duration of any and heavy alcohol use) and previous experiences of withdrawal (e.g., number of previous attempts at abstinence, symptom severity, history of complications). The kindling theory proposes that repeated episodes of untreated alcohol withdrawal symptoms progressively increases neural excitability and lowers the seizure threshold, leading to successively more severe withdrawal episodes, with increased likelihood of progression to seizures and delirium tremens.[188,192]

A systematic method for predicting the risk of severe withdrawal symptoms based on alcohol use history, withdrawal history, and other relevant factors would enable clinicians to stratify withdrawal management pathways and devise tailored strategies, reducing unnecessary acute care admissions and medication use among patients at low risk of severe complications. Risk-stratifying patients can also potentially allow for the use of a non-benzodiazepine or benzodiazepine-sparing approach in patients at low risk for withdrawal complications,

avoiding adverse effects commonly observed with benzodiazepine use, such as oversedation, falls, delirium, respiratory depression, and prolonged hospitalization.[193,194]

A number of meta-analyses have reported that the following factors are associated with increased risk of severe withdrawal and complications: previous episodes of alcohol withdrawal, seizures, delirium tremens, inpatient alcohol rehabilitation treatment, and/or blackouts; current concomitant use of CNS-depressant agents (e.g., benzodiazepines, barbiturates) and/or other licit or illicit substances; recent intoxication; positive blood alcohol level on admission to care; and evidence of increased autonomic activity, including elevated blood pressure, heart rate, and body temperature.[183,189,195]

The Prediction of Alcohol Withdrawal Severity Scale (PAWSS, see Appendix 3) is a validated score-based tool for estimating the risk of severe withdrawal, facilitating the selection of appropriate withdrawal management pathways.[195] The PAWSS incorporates the risk factors listed above into a 10-item cumulative scale with a maximum score of 10, wherein a score of <4 indicates low risk and a score of ≥4 denotes high risk for severe complications of withdrawal.[195]

A 12-month prospective study of 403 hospitalized patients showed that the PAWSS has a high predictive value for identification of patients at high-risk of severe complications (positive predictive value [PPV], 93.1; negative predictive value [NPV], 99.5) and good inter-rater reliability (96.3%).[196] The authors concluded that this tool may enable clinicians to accurately identify patients at risk of severe complications and devise an appropriate treatment plan to prevent these symptoms.[196]

The accuracy and usefulness of the PAWSS was further demonstrated in a 2018 systematic review of 14 studies (n=71,295) evaluating single and composite measures of severe withdrawal risk.[197] The authors demonstrated that, while no single factor could be used to exclude the risk of severe withdrawal management syndrome, a history of delirium tremens (likelihood ratio [LR], 2.9 [95% CI, 1.7-5.2]) and baseline systolic blood pressure of 140 mmHg or higher (LR, 1.7 [95% CI, 1.3-2.3) were associated with an increased likelihood of developing severe complications of alcohol withdrawal. The review also demonstrated that composite scales that measured multiple signs and symptoms were more useful in predicting an individual's risk than individual signs or symptoms. Of these composite scales, the PAWSS was found to be the most accurate, with a positive LR of 174 [95% CI, 43-696; specificity, 0.93), and a negative LR of 0.07 [95% CI, 0.02-0.26; sensitivity, 0.99).[197]

As noted in the 2018 review,[197] the PAWSS has not yet been validated in outpatient care settings and patient populations, or in youth and pregnant individuals. It should also be emphasized that this tool is not suitable for self-assessment; the administering clinician should clearly define the criteria in the PAWSS questionnaire for the patient in order to minimize the risk of a false positive result. As with any other assessment tool, the PAWSS is intended for use in conjunction with best clinical judgment based on a comprehensive assessment of a patient's medical history, current circumstances, needs, and preferences. Some considerations that would prompt referral to inpatient withdrawal management and/or medical care regardless of PAWSS score include acute confusion, gastrointestinal bleeding, electrolyte imbalance, infection, cognitive impairment, old age or physical frailty, chronic and complex pain disorders, pregnancy, and social instability (e.g., unsafe housing, homelessness, intimate partner violence; also see Box 5).

It is emphasized that all patients diagnosed with AUD should be assessed for the risk of developing severe complications of alcohol withdrawal, even if a patient opts not to start treatment, or if withdrawal management is not part of a patient's treatment plan. Severe complications can occur with sudden or significant reductions in alcohol use as well as abstinence. Clinicians should review PAWSS scores with patients and provide education on the risks associated with unsupervised withdrawal.

The PAWSS can only be used to predict the risk of severe complications of withdrawal, and not to assess patients who are currently experiencing withdrawal symptoms. The use of point-of-care withdrawal symptom assessment tools, such as the Clinical Institute Withdrawal Assessment—Alcohol revised (CIWA-Ar) scale and the Short Alcohol Withdrawal Scale (SAWS), in the management of alcohol withdrawal are reviewed in the next section.

5.2.1 Section Summary and Recommendation

The guideline committee recommends the use of the PAWSS to assess risk of severe complications of alcohol withdrawal and to stratify patients to outpatient (PAWSS<4) and inpatient (PAWSS≥4) withdrawal management care pathways. This recommendation is based on the results of a prospective study that found the PAWSS had an excellent predictive value (PPV=93.1; NPV=99.5) for identification of patients at risk of severe complications,[196] and a 2018 systematic review that found that the PAWSS had the highest sensitivity (93%) and specificity (99%) for identifying patients at risk.[197]

Recommendation 4 Assessing the Risk of Severe Complications of Withdrawal

Clinicians should use the Prediction of Alcohol Withdrawal Severity Scale (PAWSS) to assess the risk of severe alcohol withdrawal complications in all patients with AUD in order to select the most appropriate withdrawal management pathway.

Quality of Evidence: MODERATE	Strength of Recommendation: STRONG

Remarks

- This tool should be used in conjunction with best clinical judgment based on a comprehensive assessment of a patient's medical history, current circumstances, needs, and preferences.
- The PAWSS is not suitable for self-assessment and should be administered by a clinician.
- The PAWSS has not been validated in pregnant or youth populations.
- Patients may confuse some of the criteria included in the PAWSS questionnaire, specifically seizures and delirium tremens, with common and less severe symptoms of withdrawal. To avoid false positives, the administering clinician should clearly define these criteria prior to obtaining the patient's responses.

5.3 Point-of-care Assessment of Withdrawal Symptom Severity

Periodic measurement of symptoms during the withdrawal process has been shown to facilitate appropriate adjustments in dosing and mitigating the risk of severe symptoms, as high severity scores early in the course of treatment are predictive of severe withdrawal complications, including seizures and delirium.[198-200] Several alcohol withdrawal symptom severity assessment scales have been published. Of these, the Clinical Institute Withdrawal Assessment Alcohol revised (CIWA-Ar) and Short Alcohol Withdrawal Scale (SAWS) are the two most widely used and recommended tools for measuring withdrawal symptoms.[200-202]

5.3.1 The Clinical Institute Withdrawal Assessment — Alcohol revised (CIWA-Ar)

The CIWA-Ar is considered the gold standard for assessing withdrawal symptom severity in a range of clinical care settings, with demonstrated inter-rater reliability and validity.[203] The CIWA-Ar involves assessment of 10 individual symptoms and signs of alcohol withdrawal including anxiety and agitation; auditory, visual, and tactile disturbances; tremor; sweating; nausea; headache; and clouding of sensorium, which are assigned a numerical score based on objective and subjective measures of severity (see Appendix 3).[203]

The CIWA-Ar can be used to determine medication dosing schedules prior to treatment initiation and periodically during withdrawal management (i.e., symptom-triggered schedules). Studies have shown that using the CIWA-Ar in this context minimizes both under- and over-medicating patients.[200,201]

Use of the CIWA-Ar may not be appropriate if there are any barriers to communication between provider and patient (i.e., language, verbal capacity, cognitive impairments, or decreased level of consciousness), or if the patient shows signs of instability, disorientation, or delirium. Clinicians should be aware that such circumstances may undermine the validity of scores for subjective CIWA-Ar item symptoms (anxiety, headache, nausea, hallucinations).[204]

5.3.2 Short Alcohol Withdrawal Scale (SAWS)

The Short Alcohol Withdrawal Scale (SAWS) was developed with a focus on minimizing length, observer bias, and communication barriers that can hinder the objective scoring of alcohol withdrawal symptoms.[205,206] The SAWS scoring tool consists of 10 symptoms, with the severity of each symptom assigned a score from nonexistent (0) to severe (3) (see Appendix 3). Patients reporting a combined score of 12 or higher are considered to be candidates for pharmacological withdrawal management.[205] SAWS scoring takes 5-10 minutes and can be completed by the patient or in a structured interview format in inpatient or outpatient settings.[205]

Cited advantages of the SAWS instrument are its brevity and ease of interpretation and use by patients and clinicians alike.[205,206] A randomized study involving 122 patients validated the use of the SAWS in outpatient settings and found it easy to understand and relevant to treatment selection and evaluation.[206] Additionally, it is suggested that the completion of the SAWS by patients may help eliminate observation bias and remove practical barriers imposed by frequent scoring among clinical staff.[206] As such, the SAWS may serve as a standalone tool for assessing mild to moderate alcohol withdrawal symptoms or a supplement to clinician-administered tools such as CIWA-Ar. As above, use of the SAWS is limited if there are any barriers to communication or comprehension (e.g., language, low literacy).[206]

5.4 Withdrawal Management Strategies

5.4.1 Outpatient Withdrawal Management (PAWSS <4)

It is estimated that up to 80% of patients with alcohol use disorders can undergo medically supervised withdrawal management in an outpatient care setting (e.g., primary care offices, addiction treatment facilities).[207,208] Outpatient management is generally safe, effective, and more cost-effective than inpatient treatment,[208,209] and may be less disruptive to patients' work and family life.[210] Moreover, reviews report that more than 70% of patients enrolled in outpatient withdrawal management complete treatment, and 50% of these patients remain engaged in ongoing addiction care to meet long-term recovery goals (i.e., a reduction in heavy drinking and related harms, or abstinence).[211,212] Specific patient criteria for outpatient withdrawal management are listed below.

Box 5 Patient Criteria for Outpatient Alcohol Withdrawal Management [212,213]

Outpatient withdrawal management can be considered for patients who meet all of the following criteria:

- PAWSS score <4
- Absence of contraindications including, but not limited to:
  - Severe or uncontrolled comorbid medical conditions (e.g., diabetes, COPD, heart disease, decompensated cirrhosis)
  - Acute confusion or cognitive impairment
  - Acute illness or infection requiring medical intervention
  - Co-occurring serious psychiatric symptoms or disorders (e.g., suicidal ideation, psychosis)
  - Co-occurring severe drug use disorder (excluding tobacco)
  - Pregnancy
- Ability to attend daily medical visits for first 3-5 days, and alternating day visits thereafter
  - For patients and/or practices in rural or remote areas where daily in-person visits are not feasible, remote follow-up options such as telemedicine, or secure phone or video calls, are acceptable alternatives (but see notes below)
- Ability to take oral medications
- Has a reliable family member or community-based contact who can monitor symptoms during acute withdrawal period (i.e., 3-5 days) and support adherence to medications*
- Any other medical or social condition that, in the treating clinician's best judgment, would present serious risks to patient safety if alcohol withdrawal was managed on an outpatient basis

Note: Patients who do not have support from family or community should not be denied treatment. If inpatient treatment is not an option due to scarcity of beds or patient preference, patients with minimal social supports should be accommodated and treated through alternative strategies such as daily clinic visits, home visits, or connection to a local pharmacist. A patient's track record of reliability and adherence to clinical recommendations should be considered as a factor in this decision.

Inpatient withdrawal management in a hospital or specialized facility should be considered for patients who do not meet the criteria specified above, or who have any other contraindications to outpatient management as per the clinical judgment of the treating health care provider. Alternatively, in communities where they are available, medically supervised outpatient withdrawal management programs (e.g., home detox programs involving daily visits from care team, "Daytox" programs) may be considered if feasible and appropriate.

Absent to Mild Withdrawal Symptoms

While all patients diagnosed with AUD should be offered medication for withdrawal management, patients diagnosed with mild to moderate AUD (as per DSM-5 criteria) may experience negligible withdrawal symptoms on cessation of alcohol use. In this case, some patients may choose supportive therapy alone or initiation of AUD pharmacotherapy (e.g., naltrexone, acamprosate) to support long-term treatment goals (i.e., reduced drinking or abstinence).

There is a lack of consensus and clear guidance regarding outpatient management of patients experiencing mild withdrawal symptoms. Practice guidelines tend to advocate provision of supportive care alone (e.g., supportive environment; minimal interpersonal interactions; adequate nutrition and hydration; encouragement and positive reinforcement; referrals to community resources) until withdrawal symptoms subside.[175,214] This is based on early studies that found supportive care was sufficient for approximately 75% of patients who had no concurrent complex medical conditions.[215,216] In view of these findings, patients with PAWSS <4 who prefer to begin withdrawal without the use of prescription pharmacotherapies should be provided with necessary information and referrals, and monitored frequently. Over-the-counter pain relievers, anti-emetics, and antidiarrheal medications may also be recommended for the management of mild symptoms.

It is emphasized that adequate management of withdrawal symptoms, including pharmacotherapy when appropriate, can increase the likelihood that patients will achieve their treatment goals. Thus, clinicians may also consider writing a prescription for pharmacotherapy that the patient can fill if needed, in order to avoid destabilising delays in managing any significant withdrawal symptoms that emerge. Patients should be advised to contact their health care provider in the event that this occurs. Community pharmacists can also be an important source of support and guidance for patients experiencing unexpected withdrawal symptoms.

Mild to Moderate Withdrawal Symptoms

Studies have demonstrated that withdrawal management can be provided safely in outpatient settings to most patients with AUD.[207,208,211,212] Patients at low risk of developing severe complications of withdrawal (i.e., PAWSS<4) and who have no other concurrent conditions or complications that would require inpatient management (Box 5) can be offered outpatient withdrawal management. General considerations for outpatient management are listed below (Box 6). The research evidence for several pharmacotherapy options is reviewed in the next section (see Pharmacotherapies for Withdrawal Management).

Box 6 General Considerations for Outpatient Withdrawal Management

- Schedule withdrawal management in consideration of available coverage and patient circumstances. Starting treatment on a weekend may minimize disruption to a patient's work. If weekend service is unavailable, schedule treatment for Monday or Tuesday to ensure access to service in the following days.
- See the patient daily during the stabilization phase of withdrawal (i.e., 3-5 days), evaluate and adjust the visit schedule thereafter as appropriate. If appropriate, consider remote follow-up options (i.e., phone or video calls and connection to a local pharmacist) for patients residing in remote areas or those with mobility impediments.
- Provide patients with a phone number or alternative contact that they can call in the event of an emergency.
- Where possible, request that a reliable family member or friend is available to provide support, help with treatment schedules, track symptoms and response to medications, and accompany or transport the patient to appointments.
- Provide patients, families and caregivers with educational resources detailing withdrawal symptoms, medications, side effects, and safety issues.
- Advise patients not to drive until their withdrawal symptoms subside.
- Recommend over-the-counter vitamins including thiamine and folate.
- Recommend increased fluid and electrolyte intake, restricted diet consisting of mild foods, and minimal exercise.
- Review risks and benefits of natural remedies, caffeine, or any activity that increases sweating (e.g., hot baths, showers, or saunas), with respect for and understanding of the important role that Indigenous and traditional approaches to healing have for some patients (e.g., sweat lodges).
- Assess vital signs, withdrawal symptoms, hydration, cognition, emotional status, general physical condition, and sleep at each daily visit.
- Provide encouragement and referrals to community resources, support groups, or employee assistance programs.
- Reassess patient's recovery goals regularly.
- Monitor for relapse, and collaboratively explore the cause of relapse and correct if possible; if unable to address the cause, refer for inpatient management.
- BC physicians and nurse practitioners are encouraged to call the Rapid Access to Consultative Expertise (RACE) line (Vancouver area: 604-696-2131; toll-free: 1-877-696-2131; Monday to Friday, 0800-1700) or use the RACE line app (www.raceconnect.ca) to connect with an addiction medicine specialist for advice and guidance.

5.4.2 Inpatient Withdrawal Management (PAWSS 4)

Approximately 20% of patients with AUD will require hospitalization or inpatient withdrawal management due to an increased risk of serious complications. Patients located in regions that do not have dedicated inpatient withdrawal management facilities should be admitted to hospital.[217-219] Patients, families and care providers in BC can access health information and referrals to withdrawal management services from trained allied health professionals at the following numbers:

ACCESS CENTRAL

1-866-658-1221

- Operated by VCH
- Staffed by trained operators
- Information and referrals to withdrawal management facilities and other services in BC

BC NURSELINE

1-866-215-4700

- Staffed by RNs
- Triage, assessment, self-care, referrals to withdrawal management services

D-TALKS YOUTH LINE

1-866-889-4700

- For youth and families
- Staffed by social workers
- Counselling, coping skills, referrals

If a patient at high risk of severe withdrawal complications is motivated to stop or reduce drinking, but declines the recommended approach of inpatient management, use motivational interviewing techniques (see Motivational Interviewing), delivered over multiple clinical visits if necessary, to explore the factors underlying this decision. In addition, provide detailed information about acute withdrawal symptoms, and how progression to severe, life-threatening complications can be unpredictable and occur rapidly. Discuss the benefits of continuous medical monitoring and access to immediate care in terms of patient safety, comfort, and recovery planning. If the patient declines the offer of withdrawal management, reiterate the risks of sudden and/or unsupervised withdrawal from alcohol, ensure that they are aware of the need to seek immediate emergency assistance in the event any withdrawal complications are experienced, and consider a referral to an addiction medicine specialist or the most appropriate local addiction services. Outpatient management of patients at high-risk for severe complications is not advised.[175,220]

5.4.3 Section Summary and Recommendation

This guideline recommends outpatient withdrawal management for patients at low risk of developing severe complications of withdrawal. An established body of evidence supports the safety and effectiveness of outpatient withdrawal management for the majority of patients (80%) with AUD.[207,208,221] Outpatient management is generally safe, effective, and more cost-effective than inpatient treatment,[208,209] and may be less disruptive to patients' work and family life.[210] Reviews report that more than 70% of patients enrolled in outpatient withdrawal management complete treatment, and 50% of these patients remain engaged in ongoing addiction care.[211,212]

Recommendation 5 Care Setting for Withdrawal Management in Patients at Low Risk of Severe Complications

Patients at low risk of severe complications of withdrawal (i.e., PAWSS < 4) who have no concurrent conditions that would require inpatient management should be offered outpatient withdrawal management.

Quality of Evidence: HIGH	Strength of Recommendation: STRONG

Remarks

- In addition to a PAWSS score < 4, candidates for outpatient withdrawal management should meet the following criteria:
  - No contraindications such as severe or uncontrolled comorbid medical conditions, serious psychiatric conditions, concurrent severe substance use disorders other than tobacco use, and/or pregnancy.
  - Ability to commit to daily medical visits for first 3-5 days, or to participate in an appropriate remote mode of medical follow-up when in-person visits are not feasible.
  - Ability to take oral medications.
  - Stable accommodation and reliable caregiver for providing support and monitoring symptoms during acute withdrawal period (i.e., 3-5 days).
- Patients who do not meet these criteria should be referred to inpatient treatment.

5.5 Pharmacotherapies for Withdrawal Management

This section reviews the evidence on the efficacy and safety of three categories of medication categories commonly used to manage alcohol withdrawal symptoms: benzodiazepines, anticonvulsants, and α-adrenergic agonists. Refer to Table 5 for a summary comparison of withdrawal management pharmacotherapies.

5.5.1 Benzodiazepines

Benzodiazepine medications have the most extensive history in the treatment of alcohol withdrawal,[180,194,207,222-226] with strong evidence from multiple systematic reviews demonstrating their superior efficacy in the prevention of delirium tremens and seizures compared to placebo and alternative therapies including anticonvulsants (e.g., chlormethiazole, gabapentin, carbamazepine) and antipsychotics (e.g., chlorpromazine).[227-229] However, benzodiazepines can present challenges when used for treating alcohol withdrawal in outpatient settings.[175] The mechanism of action of benzodiazepines and their potential for drug-drug interactions can lead to side effects including excess sedation, impaired psychomotor functioning, and cognitive effects, particularly among elderly or frail patients, or those with hepatic dysfunction.[193,194] In addition, if patients either continue or resume alcohol use during benzodiazepine treatment, the combined effect potentiates intoxication, further increasing risk of accidents and injuries, as well as respiratory depression, which can result in overdose, coma and death.[230-234] Potential risks associated with non-medical use and diversion of benzodiazepines should also be considered.[235]

To date, no systematic review has conclusively established that any one class of benzodiazepines is superior to another for alcohol withdrawal management, although a 2010 systematic review reported that chlordiazepoxide may be marginally more effective than other benzodiazepines in reducing symptom severity, seizures, and delirium tremens.[229] Therefore, other factors such as provider experience, duration of action (i.e., short- versus long-acting), dosing schedule, patient's health history (e.g., history of hepatic dysfunction), drug coverage and availability, and potential for non-medical use may guide medication selection.

Regardless of benzodiazepine type, the duration of treatment should be short-term and limited to the acute phase of alcohol withdrawal, with a taper schedule determined by the individual's response to treatment (typically 5-7 days). Daily dispensing schedules and compliance packaging (i.e., "blister packs") can be considered to mitigate risks if appropriate. Finally, because the combined use of benzodiazepines and alcohol can cause respiratory depression and death, the importance of abstaining from alcohol use must be emphasized to patients and families or caregivers. Consider enlisting the support of family members and/or caregivers in medication administration, if appropriate and with the patient's consent.

5.5.2 Anticonvulsants

Carbamazepine

Carbamazepine has been used in Europe for over 35 years to manage symptoms of alcohol withdrawal,[236] and it has been found safe and effective for the management of alcohol withdrawal in a number of RCTs.[237] Some advantages of carbamazepine are that it is non-sedating, does not interact with alcohol, and has no reported potential for non-medical use or diversion.

To date, five randomized trials conducted in inpatient settings (n=422) have demonstrated that carbamazepine is equivalent[238-241] or superior[242] to benzodiazepines for the reduction of withdrawal symptom severity. Similar results were demonstrated in an outpatient setting, where 136 participants were randomized to receive a fixed dosage taper over five days of either carbamazepine (800 mg on day 1 tapering to 200 mg by day 5) or lorazepam (6-8 mg on day 1 tapering to 2 mg by day 5).[243] The authors reported a significant difference in physician-assessed withdrawal severity over time and at day 7 post-treatment favouring carbamazepine.[243] Furthermore, evaluation of post-treatment drinking behaviour found that participants who received lorazepam were three times more likely to relapse to drinking immediately following treatment than those who received carbamazepine. In all trials conducted to date, there were no reports of safety issues, and carbamazepine was well tolerated with no difference between treatment arms in dropout rates due to side effects.[236] A 2010 systematic review concluded that of all non-benzodiazepine anticonvulsants studied to date, carbamazepine is the only medication that may be more effective than benzodiazepines in reducing the severity of alcohol withdrawal symptoms.[237]

Although the potential risk of side effects has likely been a barrier to wider use of carbamazepine in North America, in RCTs, side effects have been shown to be generally mild and temporary. A 2010 systematic review reported that carbamazepine can have side effects in up to 18% of patients; however, the authors also noted that the treatment was generally well tolerated, with fewer than 2% of trial drop-outs due to intolerable side effects.[237] The most commonly reported side effects in carbamazepine RCTs were pruritus (6.9%–18%), dizziness (11.5%), and nausea and vomiting (3.8%–10.3%), while fewer than 3% of participants experienced mental confusion, drowsiness and rash.[237] As some of these side effects can mimic or mask symptoms of alcohol withdrawal, caution should be exercised in distinguishing between withdrawal symptoms and medication side effects prior to dose adjustment. At higher doses (>1200 mg/day) and with longer treatment duration (e.g., for seizure disorders), carbamazepine has been associated with rare blood dyscrasias and Stevens Johnson Syndrome,[244] however, these adverse events have not been reported in any RCTs of carbamazepine for alcohol withdrawal.[236] Importantly, pharmacogenetics studies have shown that individuals of Asian ethnicity are at increased risk of severe adverse events due to a higher prevalence of a genetic variant for carbamazepine toxicity (HLA allele B*1502).[245] Prescribing carbamazepine should be avoided in patients of Asian ethnicity unless genetic testing indicates this allelic variant is not present.

Gabapentin

Gabapentin has a growing evidence base supporting its efficacy and safety for outpatient management of alcohol withdrawal in patients at low risk of complications. To date, results from two RCTs (n=126) indicate that gabapentin (1200 mg per day) is as effective as benzodiazepines for the outpatient management of mild alcohol withdrawal symptoms, and may confer additional benefits in terms of greater daytime alertness and sleep quality, and less anxiety and mood disturbances.[246,247] Additional support for gabapentin's efficacy is provided from an open-label trial among 27 inpatients experiencing mild to moderate withdrawal symptoms, which showed that a higher dosage of gabapentin (1200 mg BID, tapered by 600 mg daily) had effects comparable to those of phenobarbital, with similar outcome scores between the two treatments.[248] In addition, an observational study of 37 inpatients experiencing acute withdrawal showed that two hours after the administration of 800 mg of gabapentin, 73% (27) patients showed a significant reduction in symptom severity.[249]

A more comprehensive review of safety considerations for gabapentin (e.g., non-medical use, diversion, physiological dependence, and overdose risk) can be found in the Pharmacotherapy section.

Valproic acid

There is limited evidence to support the efficacy of valproic acid for treating alcohol withdrawal and most RCTs conducted to date have been small and underpowered.[250] Only two of six published trials reported a statistically significant difference in favor of valproic acid for the treatment of alcohol withdrawal, and these differences were of marginal clinical significance.[250] Both trials found that valproic acid results in a more rapid and consistent decline in the severity of withdrawal symptoms compared to a benzodiazepine (lorazepam and chlordiazepoxide),[251,252] however, due to small sample sizes, an adequate evaluation of safety (e.g., prevention of severe symptoms, seizures, or delirium tremens) and adverse events could not be performed.[250] The most commonly reported side effect in clinical trials was gastrointestinal upset.[250] Safety advantages of valproic acid are that it does not have a potential for non-medical use or diversion, nor does it potentiate the effects of alcohol or other CNS depressants when taken together.[253]

5.5.3 α-adrenergic Agonists

Clonidine

Clonidine is a centrally acting alpha-2 adrenergic agonist that can suppress persistent noradrenergic symptoms (e.g., hypertension, tachycardia) associated with alcohol withdrawal. Two RCTs have reported that clonidine (at doses of 0.2-0.6 mg per day) is as effective as the benzodiazepine chlordiazepoxide in the management of mild to moderate withdrawal symptoms, with advantages in control of sympathetic symptoms and reductions in patient anxiety.[254,255] Both trials excluded patients with a history of withdrawal-related seizures.[254,255] There have been no reports of safety issues with concomitant administration of clonidine with anticonvulsants, therefore, clonidine can also be considered as an adjunct to carbamazepine, gabapentin, or other anticonvulsants, as it may provide additional benefits in managing withdrawal symptoms via a different mechanism of action than these drugs.[256]

Table 5 Comparison of Pharmacotherapy Options for Outpatient Management of Alcohol Withdrawal [m]

	Benzodiazepines[257]	Carbamazepine[244]
Efficacy	Over 60 RCTs (n>4000) report superior efficacy in the suppression of withdrawal symptoms compared to placebo and other active treatments.[229] Over 20 RCTs (n>2000) report superior efficacy for prevention of seizures compared to placebo and active treatments.[227-229]	Six RCTs (n=558) of carbamazepine report equal[238-241] or superior[242,243] efficacy in the reduction of withdrawal symptom severity compared to benzodiazepines. Insufficient evidence for prevention of seizures or delirium tremens.
Concurrent Alcohol Use	Potentiates the effects of alcohol; concurrent alcohol use can result in serious safety risks, including over sedation, falls, delirium, respiratory depression (e.g., non-fatal or fatal overdose), and need for prolonged hospitalization.	No safety risk if taken concurrently with alcohol (i.e., in the event of lapse/relapse).
Contraindications	1. Severe respiratory insufficiency 2. Hepatic disease 3. Sleep apnea 4. Myasthenia gravis 5. Narrow angle glaucoma	1. Hepatic disease 2. Bone marrow depression 3. Serious blood disorder 4. Atrioventricular heart block
Cautions	1. Lactose intolerance 2. Renal impairment 3. Breast feeding	Has been associated with rare blood dyscrasias and Stevens Johnson Syndrome with longer-term use. Note: Patients of Asian ethnicity are at increased risk of carbamazepine toxicity due to higher prevalence of the HLA-B*1502 allele. Genetic testing to exclude those at high-risk must be performed before prescribing to this patient population.[245]
Side Effects	Common side effects are drowsiness, dizziness. Less common side effects include changes in skin colour, nausea, headache, blurred vision, tremors, hypotension, GI disturbances. Memory loss may also occur.	Side effects may include dizziness, pruritus, ataxia, headache, drowsiness and nausea. These side effects are often minor and temporary.
Other Considerations	Potential for non-medical use, diversion, and dependence. Potential for drug-drug interactions leading to excess sedation, impaired psychomotor and cognitive functioning. Due to safety concerns, exercise caution when considering this medication for outpatient use.	Has no potential for non-medical use, diversion, or dependence. Some side effects resemble withdrawal symptoms; clinician should ascertain the source of symptoms before dose adjustments. Baseline and periodic evaluations of hepatic function must be performed in elderly patients and patients with a history of liver disease.

[m] *Contraindications, cautions, and side effects have been abstracted in part from Health Canada-approved product monographs for specific clinical indications. Only benzodiazepines have been approved for the treatment of alcohol withdrawal in Canada. Duration and dosages used for indicated conditions (e.g., seizure disorders, hypertension) may differ from those used for off-label indication of alcohol withdrawal management. Data should be interpreted with this caution.*

Gabapentin[258]	Clonidine[259]	Valproic Acid[260]
Two RCTs (n=126) reported that gabapentin is as effective as benzodiazepines in suppressing mild to moderate withdrawal symptoms, and may be superior for treating insomnia and anxiety symptoms.[246,247] Insufficient evidence for prevention of seizures or delirium tremens.	Two RCTs (n=50) reported that clonidine was as effective as benzodiazepines in reducing mild to moderate withdrawal symptoms.[254,255] Does not prevent seizure or delirium tremens.	Limited evidence of efficacy. Two open-label trials (n=27) suggest a faster reduction of withdrawal symptoms with valproic acid compared than benzodiazepines.[251,252] Insufficient evidence for prevention of seizures or delirium tremens.
Abstinence is recommended after starting treatment due to potential risk of additive CNS-depressive effects. Note: Studies suggest concomitant use of alcohol and gabapentin (at therapeutic doses) does not increase sedation or motor impairment.[261]	Can have an additive effect on lowering blood pressure if taken with alcohol. Patients and families should receive education on signs and symptoms of hypotension.	No safety risk if taken concurrently with alcohol (i.e., in the event of lapse/relapse).
Hypersensitivity to gabapentin	1. Sinus node function impairment 2. Severe bradyarrhythmia 3. Galactose intolerance	1. Mitochondrial disease 2. Hepatic disease or dysfunction 3. Urea cycle disorders
Renal impairment	May cause hypotension in patients with a history of low blood pressure.	1. Pregnant or intending to become pregnant 2. Geriatric patients (>65 years of age)
Higher doses may cause ataxia, slurred speech and/or drowsiness. Favourable side effect profile in comparison to other anticonvulsants.	Hypotension, dry mouth, dizziness, fatigue, headache, nausea, vomiting, constipation, malaise, sleep disorder, sedation and erectile dysfunction.	Somnolence, GI disturbances, confusion and tremor.
Potential for non-medical use, diversion, and dependence. Toxicity profile parallels that of alcohol. Easy to transition from withdrawal management to long-term relapse prevention.	Should only be used for treating mild-moderate withdrawal symptoms in patients at low risk of severe complications. Safe to use as adjunct to benzodiazepines or other anticonvulsants. Patients should receive education on the signs and symptoms of hypotension.	Due to the lack of high-quality evidence, should only be considered when other options are contraindicated. Associated with risk of fetal harm and birth defects (e.g., neural tube defects, craniofacial defects, cardiovascular malformations, hypospadias). Women of reproductive age should be advised to use an effective contraceptive.

5.5.4 Section Summary and Recommendations

Based on available evidence, the guideline committee recommends non-benzodiazepine medications as the preferred approach for the outpatient management of mild to moderate withdrawal symptoms in patients at low risk of severe complications. Carabamazepine[237-241] and gabapentin[237,246,247] have been shown to be safe and effective for the management of mild to moderate withdrawal symptoms in comparison to placebo. The use of clonidine as an alternative or adjunctive option for mild to moderate withdrawal symptoms is also supported by moderate quality evidence.[254,255]

There is insufficient evidence that gabapentin, carbamazepine, and clonidine are effective for preventing seizures or delirium tremens, therefore, it is recommended that non-benzodiazepine medications be used only for outpatient management of patients who are at low risk of these complications. The committee's strong recommendation is specific to the use of non-benzodiazepine pharmacotherapies for the outpatient management of mild to moderate alcohol withdrawal in patients at low-risk of severe complications.

There is limited evidence to support the efficacy of valproic acid for the treatment of alcohol withdrawal.[250] Thus, while this medication may still be commonly used for alcohol withdrawal management in some care settings, the committee recommends that it should only be considered when all other pharmacotherapy options are contraindicated.

Benzodiazepines are generally not a preferred option for outpatient withdrawal management due to their well-documented side effects, tendency to potentiate the effects of alcohol if used concurrently, and potential for non-medical use and dependence.[175] Although not preferred, if benzodiazepines are prescribed for outpatient withdrawal management, the following measures should be considered: prescribing a short course prescription (5-7 days) with a fixed-dose schedule, daily dispensing from a pharmacy, and frequent clinical visits to closely monitor side effects, symptoms, and alcohol use, and to make dose adjustments as needed.

Recommendation 6 Pharmacotherapy for Management of Mild to Moderate Withdrawal

Clinicians should consider non-benzodiazepine medications, such as carbamazepine, gabapentin, or clonidine, for outpatient withdrawal management in patients at low risk of severe complications of alcohol withdrawal.

Quality of Evidence: MODERATE	Strength of Recommendation: STRONG

Remarks

- Selection of an appropriate medication should be made through shared decision-making by patient and provider in consideration of a patient's goals, needs, and preferences.
- Contraindications, side effects, feasibility (dosing schedules, out-of-pocket costs), and patient history should also be taken into account in selecting a medication.
- Carbamazepine is contraindicated in patients with hepatic disease, bone marrow depression, serious blood disorder, and atrioventricular heart block.
  - People of Asian descent are at increased risk of serious cutaneous adverse drug reactions (Stevens-Johnson Syndrome, Toxic Epidermal Necrolysis [TEN], maculopapular rash) due to a higher baseline prevalence of the HLA-B*1502 allele, a marker for carbamazepine toxicity. Carbamazepine should be avoided in this population unless genetic testing is available and has excluded risk.[245]
- Gabapentin is contraindicated in patients with hypersensitivity to this medication. Caution is advised for patients with renal impairment. Gabapentin should not be combined with opioids.
- Clonidine is contraindicated in patients with sinus node function impairment, severe bradyarrhythmia, and galactose intolerance. Caution is advised for patients with a history of hypotension.

This guideline recommends inpatient withdrawal management using a benzodiazepine regimen for patients at high risk of developing severe complications of withdrawal. Multiple systematic reviews have reported high quality evidence that benzodiazepines are more effective than placebo and other active treatments for the suppression of severe withdrawal symptoms and prevention of delirium tremens and seizures.[227-229] The committee's strong recommendation is specific to the supervised use of benzodiazepines for the management of severe alcohol withdrawal in an inpatient setting, due to their safety profile.[175]

Recommendation 7 Withdrawal Management for Patients at High Risk of Severe Complications

Patients at high risk of severe complications of withdrawal (i.e., PAWSS ≥ 4) should be referred to an inpatient facility (i.e., withdrawal management facility or hospital) where they can receive a benzodiazepine treatment regimen under close observation, and emergency care can be administered immediately if needed.

Quality of Evidence: HIGH	Strength of Recommendation: STRONG

Remarks

- Conditions that could indicate inpatient withdrawal management regardless of PAWSS score include:
  - Multiple unsuccessful attempts at outpatient withdrawal management
  - Failure to respond to medications after 24-48 hours
  - Unstable medical conditions
  - Unstable psychiatric disorders
  - Chronic, complex pain disorders
  - Concurrent use of other CNS depressants (e.g., prescribed or nonmedical use of Z-drugs, benzodiazepines, barbiturates, opioids)
  - Severe liver compromise (e.g., jaundice, ascites, decompensated cirrhosis)
  - Pregnancy
  - Lack of a safe, stable, and substance-free setting and/or caregiver to dispense medication
- If a patient has a PAWSS ≥ 4 but inpatient treatment is not feasible due to patient preference or scarcity of beds, clinicians should arrange for community-based monitoring and support during treatment (home withdrawal programs, intensive outpatient programs (DayTox), connection with community pharmacist, involving family members or caregivers) and monitor patient closely (daily phone calls, frequent clinical visits).

5.6 Withdrawal Management in Adolescent Patients

Withdrawal symptoms on cessation of alcohol use are relatively rare among adolescent patients (aged 11–18 years) with AUD.[262] It is estimated that 5 to 10% of adolescents with an AUD will experience withdrawal symptoms of any severity,[262] and only a subset of these individuals will require pharmacological management.[263] Due to the relative rarity of this condition, no empiric data are available to make evidence-based recommendations for pharmacological management of alcohol withdrawal in adolescents. Practice guidelines recommend that in rare cases where pharmacological management is necessary, approaches are generally the same for adolescent as for adult patients.[263] In cases involving adolescents, a consultation with an addiction medicine specialist is strongly recommended prior to initiating monitored withdrawal in an outpatient setting, even if the PAWSS < 4, as this instrument has not been validated for use in youth. All care providers, patients, and families in British Columbia can access information and referrals from the D-Talks (youth detox) provincial contact line (1-866-889-4700).

5.7 Withdrawal Management in Pregnant Patients

There are unique considerations for withdrawal management in pregnant individuals. The potential maternal and fetal risks and benefits of pharmacotherapy must be weighed against the known risks of untreated withdrawal and/or continued alcohol consumption. Adding to this, very few medications have been studied in pregnant individuals, and several options that have been proven safe and effective in non-pregnant adult patients are contraindicated in pregnancy due to the risk of fetal malformations (e.g., carbamazepine).

The limited research on withdrawal management during pregnancy has been focused almost exclusively on benzodiazepine-based pharmacotherapy, and has yielded conflicting results. Early case-control studies suggested that benzodiazepines were associated with increased risk of fetal malformations; however, a more recent meta-analysis including case-control and cohort studies concluded that, overall, the available evidence did not support their teratogenicity.[264-266] These results should be considered with caution, as very few studies have been published on the topic, and there have been no randomized or quasi-randomized trials of pharmacological withdrawal management in pregnant individuals with AUD. More research is needed to accurately assess the safety and efficacy of available treatments in this population.[267]

Few clinical practice guidelines have made explicit recommendations for withdrawal management in pregnant individuals. The World Health Organization's 2014 Guidelines for Identification and Management of Substance Use and Substance Use Disorders in Pregnancy recommend that pregnant individuals with AUD should be admitted to inpatient withdrawal management facilities or hospital settings that are appropriately equipped to monitor fetal movement and vital signs during treatment.[268] Pharmacotherapy with benzodiazepines is recommended where indicated and appropriate, to be delivered under close observation so that dose can be titrated to severity of withdrawal symptoms (i.e., symptom-triggered protocol).[175,268] In the absence of clear evidence, the risks of untreated maternal alcohol withdrawal symptoms, which include fetal distress, spontaneous abortion, preterm birth, and fetal demise,[266] must be weighed against the risks of pharmacological treatment.

5.8 Committee Consensus Recommendation — Continuity of Care

The guideline committee strongly recommends that patients who complete withdrawal management should be offered a connection to ongoing relapse prevention and recovery management treatment and support. Withdrawal management alone is not adequate treatment for AUD, as it does not address the chronic relapsing nature of the condition. Randomized trials and observational studies have reported that 40% to 85% of individuals with AUD resume drinking following withdrawal management, often within the first few days or weeks.[269-275]

The guideline committee emphasizes that offering withdrawal management as a standalone intervention to patients with AUD is neither sufficient nor appropriate.

Recommendation 8 Continuing Care Following Withdrawal Management

All patients who complete withdrawal management should be connected with continuing relapse prevention and recovery management care.

Quality of Evidence: LOW	Strength of Recommendation: STRONG

Remarks

- Withdrawal management is a short-term intervention that does not resolve underlying medical, psychological, or social issues associated to AUD, and should be considered a bridge to continuing care, treatment, and support that will address these concerns.

6 Continuing Care — Pharmacotherapy

Pharmacotherapy can play an important role in assisting individuals with AUD to reduce or stop drinking, yet are underutilized in the management of AUD. Primary care providers' lack of education and training are consistently identified as barriers to prescribing AUD pharmacotherapy,[276,277] but research has shown that when these practitioners are provided with evidence-based clinical care guidance and practice tools, they can effectively prescribe these medications in alignment with their patients' goals, leading to clinically meaningful improvements in treatment outcomes.[29,33] All primary care patients with moderate or severe alcohol use disorder can be offered pharmacotherapy for AUD. Additionally, regardless of AUD severity, any patient who has stopped or reduced their drinking but continues to experience strong alcohol cravings or is at risk of relapse may be an appropriate candidate for pharmacotherapy.

6.1 Setting Patient-Centred Treatment Goals

Traditionally, abstinence or cessation of alcohol use has been viewed as the primary goal of AUD treatment. However, it is important to recognize that not all individuals with AUD view abstinence as an acceptable, desirable, or realistic treatment goal, which in turn, can prevent them from seeking treatment for AUD or act as a barrier to continued engagement in care.[278] In recent years, there has been increased recognition that a reduction in drinking is a valid and important treatment goal for some individuals.[83] Studies have shown that individuals with AUD are more likely to achieve self-identified treatment goals — whether that is a reduction in drinking or abstinence — than goals that are set for them.[279,280]

As an emerging area of research, relatively few RCTs have been explicitly designed with reduced alcohol consumption as a primary study outcome, and thus, some concerns have been raised about the lack of efficacy data for use of pharmacotherapy in this context.[281] For example, a recent network meta-analysis of 32 RCTs (n=6,036) concluded that there is a lack of high-quality evidence that available pharmacotherapies are effective for reducing alcohol consumption in non-abstinent adults.[282] Additional concerns have been raised about the lack of evidence that a reduction in drinking directly translates into improved health outcomes in patients.[282] In the absence of high-quality RCT data, it is noted that findings from a number of large observational cohort studies do show that reductions in alcohol consumption are associated with reductions in alcohol-attributable morbidity and mortality.[9,51,52,100,113,283]

While acknowledging that there are limitations to the evidence base, it is the consensus of this committee that clinicians should adopt a treatment approach that accepts a spectrum of goals from harm reduction to abstinence, and recognizes that a reduction in drinking and alcohol-related harms is a useful and important goal for some patients.

6.2 First-line Pharmacotherapies

6.2.1 Naltrexone

Naltrexone is a mu-opioid receptor antagonist that has been shown to block euphoria associated with alcohol consumption.[284] It is hypothesized to work by diminishing the rewarding effect of alcohol in the brain following its consumption, as well as reducing cravings for alcohol in some individuals.[284] This blunting effect on neural reward pathways is consistent with research findings that naltrexone is particularly effective in preventing a return to heavy drinking following a temporary lapse to alcohol use.[285]

Naltrexone has a well-established evidence base for safety and efficacy in the treatment of AUD.[178] A 2010 meta-analysis of 50 RCTs (n=7,793) reported that participants treated with naltrexone had a 17% lower likelihood of engaging in heavy drinking, and had 4% fewer drinking days per month than those who received placebo.[285] Naltrexone-treated participants also showed a greater reduction in heavy drinking days (-3.25%) and the amount of alcohol consumed (-10.83 grams) compared to the placebo group.[285]

Naltrexone is contraindicated in individuals with acute hepatitis and liver failure, and although it no longer carries a "black boxed warning" for hepatoxicity,[286] caution and increased monitoring are advised if prescribed to patients with hepatic impairment. Naltrexone is also contraindicated in patients currently taking or expected to require opioid medications for pain (e.g., long-term opioid treatment) and/or as opioid agonist treatment (i.e., methadone, buprenorphine, slow-release oral morphine, or injectable opioid agonist treatment) for treating opioid use disorder. Commonly reported side effects in placebo-controlled trials of naltrexone include somnolence (29.5% in the naltrexone-treated group vs. 17.8% in the placebo group), nausea (25.8% vs. 16.3%), vomiting (16.9% vs. 10.4%), decreased appetite (17.7% vs. 11.8%), abdominal pain (15.9% vs. 7.5%), insomnia (16.4% vs. 13.4%), and dizziness (11.9% vs. 6.2%).[285]

Research suggests that predictors of a positive response to naltrexone include high levels of craving and a family history of AUD.[287,288] Two recent studies have also reported that naltrexone may be more effective in individuals who smoke tobacco or use electronic cigarettes, but these results have yet to be validated in large prospective trials.[289,290] As would be expected, treatment adherence is also highly correlated with positive treatment outcomes; therefore, it is recommended that clinicians routinely check-in and provide support with medication adherence when needed, as well as other patient-defined treatment goals, through medical management and regular follow-up visits.[285,291,292]

In the majority of clinical trials, naltrexone has been studied as a dose taken once daily. However, several studies have found that when taken "as-needed" (e.g., prior to drinking or when significant cravings are experienced), targeted naltrexone can reduce alcohol consumption in individuals who meet criteria for high-risk drinking, including those diagnosed with mild to severe AUD.[179,293-295] Two RCTs have found that targeted naltrexone reduces the likelihood of heavy drinking[293] and number of drinks consumed per drinking day[294,296] compared to placebo conditions, and one RCT showed that targeted naltrexone was significantly more effective than placebo in maintaining a reduction in drinking following 12-weeks of continuous naltrexone therapy.[179] Reported effect sizes on alcohol-related outcomes were small to moderate,[297] which is consistent with published treatment effects of daily-dosed naltrexone.[178,285] Taken together, these results suggest that targeted naltrexone is an effective approach for reducing alcohol consumption and alcohol-related harms.[297] Targeted dosing regimens may be preferred for patients who experience challenges with adherence or significant side effects with daily-dosed regimens, or patients who are drinking above low-risk limits but do not meet the criteria for an AUD. Prescribing naltrexone "as-needed" may also have advantages in supporting patients to maintain their goals during later stages of AUD treatment, rather than discontinuing pharmacotherapy.

6.2.2 Acamprosate

Acamprosate's mechanism of action is not well understood, but it is believed to restore the imbalance between glutamate-mediated excitation and GABA-mediated inhibition of neural activity, which is dysregulated by chronic alcohol consumption, and to reduce general neuronal hyperexcitability.[284] Together, these effects are believed to reduce symptoms associated with withdrawal from alcohol, and modify responses to alcohol-related cognitive cues.[284]

Acamprosate has an established evidence base for safety and efficacy in the treatment of AUD.[298-302] A 2010 meta-analysis of 24 RCTs (n=6,915) found that acamprosate significantly reduced the likelihood of a return to any drinking by 14% and increased the cumulative duration of abstinence by 11 days compared to placebo.[300] In addition, the review showed that the effects of acamprosate persisted for 3-12 months after treatment discontinuation.[300]

The majority of clinical trials of acamprosate have taken place in Europe, where it was used for several decades to treat AUD prior to its approval in North America. This has raised some concerns that research findings may not be generalizable to North American settings, particularly as a large U.S. trial (n=1,383) showed that acamprosate was no more effective than placebo in reducing alcohol consumption.[303] This finding is contrary to most European acamprosate trials. A 2015 meta-analysis (49 RCTs, n=9,435) of acamprosate and naltrexone treatment trials concluded that overall, trial location did not appear to influence abstinence or relapse rates, but that drop-out rates and participant characteristics did differ by location.[304] Participants in European trials were less likely to discontinue treatment early, more likely to have a treatment goal of abstinence, and were better engaged in care than non-European study participants. The review authors speculated that these differences resulted in a lower likelihood of treatment discontinuation for participants in European trials compared to non-European trials, which could account for observed differences in treatment efficacy.[304] No interaction was observed between drop-out and trial location for naltrexone trials. Overall, the review concluded that based on available evidence, acamprosate is effective for the treatment of AUD, but suggested that an individual patient's treatment goal is an important factor to consider when selecting a first-line treatment (see Selecting Between Naltrexone and Acamprosate).[304]

Acamprosate is generally well tolerated, and the most common side effects are gastrointestinal disturbances (e.g., diarrhea, nausea, vomiting). In RCTs, diarrhea is the only side effect reported more frequently for acamprosate than placebo.[300] Although this side effect can occur in up to 16% of patients, it usually resolves quickly within a few days.[145]

Clinical trials show that the strongest predictors of acamprosate treatment success are completing withdrawal management or being abstinent prior to starting treatment, and having abstinence as a treatment goal.[177,305] Motivation and treatment readiness may be particularly important factors for adherence, as due to its low bioavailability, acamprosate must be administered at a dosage of nearly 2 grams split into three doses per day. Providing encouragement and informal counselling to support patients with medication adherence is critical at treatment onset and on an ongoing basis.[305] Additional predictors of treatment success with acamprosate that have been identified in the literature include higher baseline anxiety levels, a physiological dependence on alcohol, a lack of family history of AUD, and a later age of AUD onset (i.e., >40 years of age).[306]

6.2.3 Selecting Between Naltrexone and Acamprosate

A 2014 meta-analysis (122 RCTs, n=22,803) of outpatient pharmacotherapy for adults with AUD found that both acamprosate (27 RCTs, n=7,519) and naltrexone (53 RCTs, n=9,140) were associated with a lower likelihood of relapse than placebo.[178] When directly compared with one another (4 RCTs, n=1,141), no significant differences were found between acamprosate and naltrexone in alcohol consumption outcomes.[178]

While the overall superiority of one medication over the other has not been established conclusively, there is evidence that naltrexone may be more effective in reducing heavy drinking, while acamprosate may be more effective in supporting abstinence from alcohol. A 2014 systematic review calculated that to prevent one individual from returning to any drinking, the number needed to treat (NNT) was 20 for naltrexone, and 12 for acamprosate.[178] To prevent return to heavy drinking, the NNT for naltrexone was calculated to be 12, whereas acamprosate was not significantly better than placebo.[178] Two independent systematic reviews have reached similar conclusions, finding that acamprosate may be more effective for patients with a goal of abstinence, whereas naltrexone may be beneficial for patients with a goal of reduced drinking or abstinence.[307,308] Thus, a patient's treatment goals are a key consideration when selecting between these medications. Additional information to consider when selecting between these two medications is summarized in Table 6.

Accessibility and Other Considerations

In British Columbia, both acamprosate and naltrexone are classified as Limited Coverage Drugs in the provincial formulary. To secure PharmaCare coverage for their patients, prescribers must first submit a "Collaborative Prescribing Agreement for Naltrexone and Acamprosate for the Treatment of Alcohol Dependence" to the Pharmaceutical Services Division of the Ministry of Health. Once approved, the Collaborative Prescribing Agreement (CPA) will apply to all patients within a clinician's practice. Once a CPA is in place, naltrexone and acamprosate are eligible for full coverage under the various PharmaCare prescription drug plans, including Plan G, which provides full coverage for psychiatric medications for qualifying individuals with an adjusted net family income of $42,000 or less, plus $3,000 per dependent.

Table 6 Comparison of First-Line Pharmacotherapies for AUD

	Naltrexone[309]	Acamprosate[310]
Efficacy	Established evidence base for safety and efficacy in reducing relapse rates and alcohol consumption compared to placebo (53 RCTs; n=9,140).[178] A 2014 meta-analysis estimated that the NNT to prevent return to any drinking (relapse) was 20 (95%CI, 11 to 500), and the NNT to prevent return to heavy drinking was 12 (95%CI, 8 to 26).[178]	Established evidence base for safety and efficacy reducing relapse rates compared to placebo (27 RCTs; n=7,519).[178] A 2014 meta-analysis estimated that the NNT to prevent return to any drinking (relapse) was 12 (95%CI, 8 to 26), but that acamprosate was not associated with an improvement in alcohol consumption.[178]
Concurrent Alcohol Use	Safe to start while patients are using alcohol, but may be more effective and potential side effects minimized if started upon completion of withdrawal management (3-7 days of abstinence from alcohol use).[178,179]	Safe to start while patients are using alcohol, but may be more effective if started following completion of withdrawal management.[177,178]
Contraindications	1. History of sensitivity to naltrexone 2. Current opioid use or opioid use disorder (analgesia, opioid agonist treatment, or non-medical use) 3. Acute opioid withdrawal 4. Acute hepatitis or liver failure	1. History of hypersensitivity to acamprosate 2. Severe renal impairment (creatinine clearance ≤30mL/min) 3. Breastfeeding
Cautions	1. Renal impairment 2. Hepatic impairment 3. Concomitant use of other potentially hepatotoxic drugs 4. Pregnancy and breastfeeding* 5. Pediatric patients (<18 years)*	1. Moderate renal impairment (creatinine clearance of 30-50mL/min) 2. Pregnancy* 3. Pediatric and geriatric (>65 years) patients*
Side Effects	Nausea, headache, and dizziness are the most commonly reported side effects. Generally, these are mild, subside over time, and can be avoided if naltrexone is started at a lower dose and/or if the patient is abstinent from alcohol.	Diarrhea is the most commonly reported side effect; vomiting and abdominal pain are reported less frequently. Side effects are usually transient and resolve quickly.
Coverage	Collaborative Prescribing Agreement is required; eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C, G, and W.	Collaborative Prescribing Agreement is required; eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C, G, and W.
Safety and Other Considerations	• Liver function tests (LFT) should be assessed at treatment initiation, and again at 1, 3, and 6 months. If LFTs are elevated at baseline, more frequent monitoring is indicated. • Patients should be advised of the risk of hepatic injury and to stop use of medication if they experience symptoms of acute hepatitis (fatigue, anorexia, nausea, and vomiting).	• No dose adjustment is required for patients with mild renal impairment (creatinine clearance 50-80mL/min). • Dose reduction is required for patients with moderate renal impairment (creatinine clearance 30-50mL/min). • No known hepatic toxicities.

** Safety and efficacy of these medications has not been fully established in these patient populations and their use would be at the discretion of the treating clinician. Specialist consultation, careful assessment of benefit and risks, fully informed patient consent, and regular monitoring and assessment is advised in these cases.*

6.2.4 Extended-Release Naltrexone

Note: Extended-release naltrexone is not approved for clinical use in Canada. At the time of this guideline publication, there is also no indication that the manufacturer plans to pursue approval of this medication in Canada.

In the United States, naltrexone is available as an extended-release formulation administered via monthly intramuscular injections,[284] which may promote improved treatment adherence in comparison to daily-dosed oral naltrexone.[311] Several randomized controlled trials have found extended-release naltrexone to be well tolerated and superior to placebo in terms of improved treatment adherence and retention rates, increased abstinence rates, and decreased alcohol cravings.[311,312]

Additionally, given the established body of evidence supporting the use of extended-release naltrexone for the treatment of opioid use disorder (OUD),[313] this medication may have advantages for treatment of individuals with co-occurring AUD and OUD. A recent pilot trial that compared extended-release naltrexone to treatment-as-usual in individuals with HIV and co-occurring AUD, OUD, or concurrent AUD/OUD (n=51) found that 88% of participants randomized to extended-release naltrexone were retained in treatment at 16 weeks, compared to 50% of patients in the treatment-as-usual arm (oral naltrexone, gabapentin, acamprosate, disulfiram).[314] The study was not powered to detect differences in treatment-specific outcomes, but the authors noted that alcohol-related and HIV-specific outcomes (i.e., antiretroviral adherence, HIV viral suppression) improved in both pharmacotherapy groups.[314]

At present, extended-release naltrexone is only available through Health Canada's Special Access Programme (SAP). The SAP considers individual requests for access to drugs that are not available or approved in Canada for patients with serious or life-threatening conditions for whom conventional treatments have failed, are unsuitable, or are not accessible. Clinicians can submit applications to the SAP on behalf of their patients, but should be aware that medication costs are not covered by insurance plans when accessed via this route, and that patients incur the full cost out-of-pocket. The injectable formulation of naltrexone is substantially more expensive than the oral option. Providing recommendations on the use of this medication in the treatment of AUD is currently outside the scope of this guideline; however, in future, there may be a need for an expert therapeutic guideline to identify circumstances and patient populations who could benefit from extended-release naltrexone.

6.2.5 Section Summary and Recommendation

This guideline recommends that all adult patients with moderate or severe alcohol use disorder should be offered pharmacotherapy for AUD. Additionally, regardless of AUD severity, the guideline committee recommends that any patient who has stopped or reduced drinking but is continuing to experience strong alcohol cravings and/or is at risk of relapse may be an appropriate candidate for pharmacotherapy.

Based on moderate-quality evidence, the committee recommends naltrexone and acamprosate as first-line pharmacotherapy options for treatment of AUD. The committee recommends naltrexone for patients with a treatment goal of reduced drinking or abstinence, and acamprosate for patients with a treatment goal of abstinence, based on research evidence supporting each medication's efficacy for achieving these specific outcomes.[178,307,308]

Recommendation 9 First-line Pharmacotherapy for Alcohol Use Disorder

Adult patients with moderate to severe alcohol use disorder should be offered naltrexone or acamprosate as a first-line pharmacotherapy to support achievement of patient-identified treatment goals.

A. Naltrexone is recommended for patients who have a treatment goal of either abstinence or a reduction in alcohol consumption.

B. Acamprosate is recommended for patients who have a treatment goal of abstinence.

Quality of Evidence: MODERATE	Strength of Recommendation: STRONG

Remarks

- Naltrexone is contraindicated in patients who are currently or expected to be taking opioids (prescribed or non-medical use), patients with a known sensitivity to the drug or its constituents, and patients with acute hepatitis or liver failure. Caution is advised in prescribing naltrexone to patients with liver disease, patients who are pregnant, and patients under the age of 18.
- Acamprosate is contraindicated in patients with severe renal impairment (i.e., creatinine clearance ≤ 30 mL/min), patients with a known hypersensitivity to the drug or its constituents, and in patients who are breastfeeding. Caution is advised in prescribing naltrexone to patients with renal disease, patients who are pregnant, patients under the age of 18 and patients over the age of 65.
- Completion of withdrawal management is not a mandatory prerequisite to starting treatment.

6.3 Alternative and Emerging Pharmacotherapies for AUD

Not all individuals with AUD benefit from first-line treatment approaches, despite good adherence and treatment motivation. For example, systematic reviews have reported that 38% to 70% of individuals treated with acamprosate or naltrexone do not benefit or only partially benefit from a trial with one of these medications.[285] As a result, research into alternative pharmacotherapies is ongoing, with the goal of providing a wider range of personalized pharmacotherapy options for individuals seeking treatment for AUD. The research evidence for efficacy and safety of several alternative pharmacotherapies — topiramate, gabapentin, disulfiram, baclofen, and ondasetron — is reviewed below (see Table 7 for summary).

With the exception of disulfiram, which is a Health-Canada approved medication for AUD, use of the medications reviewed below would be considered "off-label". As with any medication that is being prescribed off-label, it is important to conduct a full assessment including carefully reviewing concomitant medications for potential drug-drug interactions, and documenting patient consent in their chart. All five medications are eligible for full coverage through PharmaCare drug benefits Plan C, Plan W and Fair PharmaCare, but only disulfiram is covered by Plan G for the treatment of AUD.

In addition, as comparative safety and efficacy of these alternative therapies has not been fully established in adolescent, pregnant, older adult, or more complex patient populations (e.g., concurrent medical conditions, co-occurring mental health and substance use disorders), prescribing these medications in these cases would be at the clinician's discretion following a careful assessment of risks, benefits, drug-drug interactions and contraindications (particularly for pregnant individuals). British Columbia physicians and nurse practitioners are encouraged to call the RACE line (Vancouver area: 604-696-2131; toll-free: 1-877-696-2131, www.raceconnect.ca) or use the RACE line app to connect with an addiction medicine specialist for advice and guidance on complex cases.

6.3.1 Topiramate

Topiramate is an anticonvulsant medication that has been investigated off-label for treating AUD. A 2014 meta-analysis of 7 placebo-controlled trials (n=1,125) of topiramate for treating AUD reported significant, moderate-sized effects on aggregate measures of abstinence and heavy drinking, and non-significant effects on gamma-glutamyl transferase (GGT) levels and craving outcomes, compared to placebo.[315] Topiramate doses ranged from 100-300mg/day and duration of treatment from 12-16 weeks. Of note, three of the trials included in this review enrolled participants who were not abstinent from alcohol at treatment onset,[316-318] and outcomes did not appear to systematically differ from trials that required participants to be abstinent at treatment start.[319-322] In addition, pooled results from three randomized trials directly comparing topiramate to naltrexone suggest that topiramate may be superior to naltrexone for heavy drinking and craving outcomes, and equally effective for abstinence-related outcomes.[321,323,324]

Topiramate is generally well tolerated, but some individuals do experience significant side effects, particularly at higher doses or with more rapid increases in dosage.[316,317,320,322] For this reason, a gradual dose titration over several weeks is strongly recommended (e.g., ~5-8 weeks to full dose).[316,317,320,322] In placebo-controlled trials, adverse effects that were significantly more common with topiramate were paresthesia (50.8% vs. 10.6% in the placebo group), dysgeusia (23.0% vs. 4.8%), anorexia (19.7% vs. 6.9%), difficulty with concentration or attention (14.8% vs. 3.2%), nervousness (14.2% vs. 7.5%), dizziness (11.5% vs. 5.3%), and pruritus (10.4% vs. 1.1%).[317] Most clinical trials conducted to date have used a relatively high daily dose of topiramate (up to 300mg per day), however, one randomized trial that compared psychotherapy alone to psychotherapy plus low-dose topiramate (up to 75mg per day) found that participants who received topiramate were more likely to remain continuously abstinent during a 4-month follow-up period than those who did not (33.3% compared to 14.5%).[325] Further research is needed to determine optimal dosing strategies, rates of dose titration, and maintenance dose levels that best balance treatment effectiveness with patient comfort and safety.

6.3.2 Gabapentin

Emerging evidence for the efficacy of gabapentin in treating AUD is derived primarily from three placebo-controlled clinical trials. One trial randomized 60 participants to receive either gabapentin (600mg/day) or placebo for 7 days, and found that gabapentin was more effective in reducing alcohol craving, the number of drinks per day, and percentage of heavy drinking days, and increasing the number of days abstinent.[326] A second trial randomized 33 participants to receive gabapentin (1200mg/day) or placebo for 7 days, and found that gabapentin was effective in attenuating subjective alcohol craving, and cravings specifically associated with emotionally evocative stimuli, compared to placebo.[327] A third, larger trial (n=150) that compared placebo with gabapentin administered at a dose of either 900mg/day or 1800mg/day for 12 weeks reported abstinence rates of 4.1%, 11.1%, and 17.0% respectively, with an estimated number needed to treat (NNT) of 8 for those participants who received a daily dose of 1800mg.[328] For measures of alcohol consumption, 22.5% of participants in the placebo group, 29.6% of participants in the 900mg/day group, and 44.7% of participants in the 1800mg/day group met criteria for no heavy drinking at 12 weeks, with an estimated NNT of 5 for the 1800mg/day group.[328] There were no differences in adverse events reported for gabapentin at either dose compared to placebo.[328] The authors also noted that gabapentin appeared to have a dose-dependent effect on participants' subjective ratings of mood, insomnia, and craving symptoms.[328] As gabapentin has also been found to be effective for the outpatient management of mild to moderate alcohol withdrawal symptoms, having the option to continue its use beyond the acute withdrawal period as part of a long-term treatment strategy may have advantages.[261] While promising, these initial trials employed relatively small sample sizes and the largest trial reported high drop-out rates (65 dropouts/150 participants, or about ~43%).[328] A 2019 meta-analysis (7 RCTs, n=751) concluded that while

gabapentin appears to be more efficacious than placebo for treating AUD, the only outcome measure that clearly favors gabapentin is a reduction in heavy drinking days.[329] As underscored by this meta-analysis, further research is needed to definitively establish the safety and efficacy of gabapentin in comparison to first-line and other alternative treatment options.

While the three trials described above used the immediate-release formulation of gabapentin, a 2019 multi-site RCT (n=346) evaluated the safety and efficacy of an extended-release gabapentin formulation (gabapentin enacarbil) for treating AUD.[330] Participants were randomized to receive either placebo or gabapentin enacarbil (600mg twice per day) for six months. At the conclusion of the trial, the percentage of participants with no heavy drinking days did not differ significantly between treatment and placebo (28.3% vs. 21.5%), and no clinical benefit was found for other drinking measures (percent participants abstinent, percent days abstinent, percent heavy drinking days, drinks per week, drinks per drinking day), alcohol craving, alcohol-related consequences, sleep problems, smoking, and depression/anxiety symptoms.[330] The lack of a demonstrated treatment effect for the extended-release formulation compared to earlier trials of immediate-release gabapentin is not yet fully understood, and more research is needed—in particular, large, well-designed, multi-site trials that directly compare different gabapentin formulations and dosages.[330] At this time, based on these results, extended-release gabapentin is not recommended for the treatment of AUD.

The most common adverse events reported in placebo-controlled clinical trials of (immediate-release) gabapentin are dizziness (19.1% vs. 6.6% in the placebo group), somnolence (14.1% vs. 5.2%), ataxia or gait disorder (14.0% vs. 2.2%), and peripheral edema (6.6% vs. 1.5%).[331] As gabapentin is excreted renally it is safe to use in patients with severe liver disease, but requires conservative dosing in patients with severe renal failure. In patients with chronic kidney disease, glomerular filtration rate (GFR) should be monitored with gabapentin dosage adjusted as needed with any changes in GFR.[332] Due to its side effect profile, caution is advised in prescribing gabapentin to patients at increased risk of confusion, disorientation or falls (e.g., older adults, frail patients, individuals with cognitive impairment).

Safety Considerations for Gabapentin

Recent reports have raised concerns regarding potential risks of nonmedical use, physiological dependence, and withdrawal syndromes associated with gabapentin.[333-338] While large observational cohort studies in the United Kingdom and the United States have shown that the prevalence of non-medical use of gabapentin is low in the general population (~1%)[339] and among individuals prescribed gabapentin (~2%),[340] higher rates (12%-22%) have been documented among opioid-using populations and in facilities where access to alcohol and other drugs is restricted (e.g., inpatient treatment programs, correctional facilities).[338,340-343] A 2016 review identified 18 case reports and case series describing non-medical use including non-prescribed (diverted) use and use where not taken as prescribed (e.g., higher and/or more frequent doses, combined with other substances, or taken by inhalation, injection or other routes), as well as physiological dependence and/or withdrawal symptoms on discontinuation of use.[344] Gabapentin dependence was noted only among patients with a history of alcohol, stimulant, or opioid use disorders, and the average daily dose in these cases was approximately 3000mg/day (range 600-8000mg/day).[344] Withdrawal symptoms, where reported, occurred within 12 hours to 7 days of discontinuation of gabapentin, and included restlessness, disorientation, confusion, agitation, and anxiety, which did not resolve with the administration of benzodiazepines.[344]

There have also been a small number of reports of individuals combining high doses of gabapentin with alcohol or other medications (such as quetiapine, buprenorphine/naloxone, methadone, and other prescribed and illicit opioids) to potentiate euphoric effects.[345-348] The combined use of opioids and gabapentin is of particular concern,

due to additive effects on respiratory depression, which can increase risk of fatal overdose.[349] A Canadian study of 5,875 individuals prescribed opioid medications reported that concomitant use of gabapentin increased the risk of fatal overdose by 49% compared to case-controls (matched for age, sex, index year, history of chronic kidney disease, and disease risk index).[350] The study also found evidence that moderate (900-1800mg) and high (≥1800mg) prescribed daily doses of gabapentin increased the adjusted odds of a fatal opioid overdose by 60% compared to individuals with no concomitant gabapentin use.[350] Gabapentin is also increasingly being identified in post-mortem toxicology analyses of individuals who have died from substance-related overdoses.[338] For example, a recent analysis of 4,169 overdose deaths in five U.S. states reported that gabapentin was detected in 22% of all overdose deaths and 26% of opioid-related overdose deaths.[351]

It is likely that the risks of non-medical gabapentin use in individuals with AUD remain lower than risks associated with untreated AUD. However, primary care providers do need to be aware of these risks and carefully monitor their patients for any signs of non-medical use, dependence, and diversion, with particular attention to individuals prescribed multiple medications for concurrent medical conditions. If diversion or misuse is a concern, clinicians can consider prescribing gabapentin to be dispensed daily, weekly or biweekly from a pharmacy, or with blister-packaging to conduct random pill counts.[334]

6.3.3 Disulfiram

As noted above, disulfiram is one of three Health Canada-approved medications for treatment of AUD in adults. Unlike other AUD pharmacotherapies, disulfiram does not directly influence the neural pathways linked to the rewarding effects of, cravings for, or motivation to drink alcohol. It is an aversive agent that causes an extremely unpleasant physiological reaction if alcohol is consumed (i.e., a "alcohol-disulfiram" reaction). Disulfiram blocks the metabolism of alcohol by inhibiting an alcohol dehydrogenase enzyme, which results in an accumulation of acetaldehyde (the primary metabolite of alcohol) in the body.[284] Acetaldehyde causes a range of side effects that may include sweating, headache, dyspnea, lowered blood pressure, flushing, sympathetic hyperactivity, heart palpitations, nausea, and vomiting.[284] This reaction can occur if alcohol is consumed for up to two weeks after a standard daily dose (125-500mg) of disulfiram is taken.[284] As the alcohol-disulfiram reaction can present as an emergency situation, patients must never be administered disulfiram without full consent and knowledge of its effects.[352]

Placebo-controlled trials have not clearly demonstrated that disulfiram is more effective than placebo for the treatment of AUD. A 2014 meta-analysis of two clinical trials (n=492) did not find any significant differences between disulfiram and placebo in preventing a return to any drinking among individuals with AUD.[178] Previous studies have noted that disulfiram adherence rates are low, which contributes to its lack of efficacy.[353] In contrast, a meta-analysis that stratified analyses by blinded (5 RCTs) versus open-label trials (17 trials), concluded that disulfiram can be effective when administered under structured and supervised conditions.[354] For example, an open label clinical trial (n=243) that randomly assigned participants to receive 12 weeks of disulfiram, naltrexone, or acamprosate treatment under supervision found that individuals taking disulfiram showed greater reductions in heavy drinking days, average weekly consumption, and relapse rates compared to naltrexone and acamprosate.[355] However, the relative benefits of disulfiram observed during the trial dissipated in a subsequent unsupervised 52-week treatment period: a setting that may more closely resemble "real-world" conditions.[355]

Based on this evidence, disulfiram is not recommended over other available pharmacotherapies for AUD that have been proven effective in preventing relapse and/or reducing alcohol consumption. However, it is recognized that some individuals may be interested in this approach for a variety of reasons. For example, some individuals may wish to take disulfiram as an additional source of support in avoiding alcohol consumption in certain

circumstances (e.g., vacations, special occasions) or occupations (e.g., safety sensitive positions). In these cases, the evidence of risks and benefits must be carefully reviewed, and education on adverse effects that may be experienced if alcohol is consumed (including accidental/incidental exposure to non-beverage alcohol) must be provided to patients and families prior to initiating treatment. As clinical trials indicate that disulfiram is most effective when taken under structured and supervised conditions, disulfiram should only be prescribed to patients who are engaged in ongoing addiction care where safety monitoring pathways are in place and adherence can be assessed regularly.

Side effects of disulfiram (in the absence of alcohol) are typically mild, and include fatigue, mild drowsiness, headache, and dermatitis.[284] Although infrequent, hepatotoxicity has been reported in patients with and without prior history of abnormal liver function; baseline and follow-up liver function tests (LFT) should be routinely requested during treatment, and patients and families should be advised to immediately report early signs or symptoms of hepatitis.[352] Contraindications to disulfiram use include severe myocardial disease and/or coronary occlusion, psychosis, or known hypersensitivity to the medication.[284] As the disulfiram-alcohol reaction can present as an emergency, use of disulfiram to reduce drinking rather than sustain abstinence is not appropriate or recommended. Compounded disulfiram (generic formulation) is listed in the BC PharmaCare formulary and eligible for full coverage under the various PharmaCare prescription drug plans, including Plan G, which provides full coverage for psychiatric medications for qualifying individuals with an adjusted net family income of $42,000 or less, plus $3,000 per dependent.

Table 7 Comparison of Select Alternative AUD Pharmacotherapy Options[n]

	Topiramate[356]	Gabapentin[258]	Disulfiram[352]
Efficacy	Seven RCTs (n=1,125) of topiramate have reported small to moderate effects on abstinence and heavy drinking outcomes compared to placebo.[316-322] Three clinical trials (n=439) have reported that topiramate is as effective or superior to naltrexone for abstinence, heavy drinking and craving outcomes.[323,324]	Three RCTs (n=131) of immediate-release gabapentin have reported small to moderate effects on abstinence and heavy drinking outcomes, craving, mood, and insomnia compared to placebo.[326,328,357] One RCT (n=346) of extended-release gabapentin found no difference in alcohol consumption or craving compared to placebo.[330]	Five RCTs (n=528) found that disulfiram was no more effective than placebo in supporting abstinence or preventing relapse.[358-362] A 2014 meta-analysis of 17 open-label trials (n=2,104) concluded that disulfiram is effective in supporting abstinence if administered under structured and supervised conditions.[354]
Concurrent Alcohol Use	Safe to start while patients are using alcohol; has been studied for the reduction of alcohol consumption in non-abstinent individuals.[316-318] Outcomes do not appear to differ for patients who complete withdrawal management prior to starting treatment compared to those who do not.[315] Completion of withdrawal management is not required prior to treatment start.	Safe to start while patients are using alcohol, but outcomes may be improved if patient has been abstinent for ≥ 3 days.[261] Abstinence is recommended after starting treatment (where possible) due to potential risk of combined CNS-related side effects, although studies suggest concomitant use of alcohol and therapeutic doses of gabapentin does not increase sedation or motor impairment.[261] Completion of withdrawal management is not required prior to treatment start.	Due to severity of disulfiram-alcohol reaction, **patients should not consume alcohol while taking disulfiram.** Disulfiram must never be administered to a patient without their full knowledge and consent, and patients and families must receive education on side effects and risks associated with the disulfiram-alcohol reaction. Disulfiram should never be administered to a patient until they have abstained from using alcohol for at least 12 hours.
Contraindications	1. Hypersensitivity to topiramate 2. Pregnant or planning to become pregnant 3. Narrow angle glaucoma 4. History of nephrolithiasis	Hypersensitivity to gabapentin	1. Concurrent or recent use of metronidazole, alcohol, or alcohol containing preparations 2. Alcohol intoxication 3. Severe myocardial disease, coronary occlusion 4. Active psychosis 5. Hypersensitivity to disulfiram or to other thiuram (rubber) derivatives

[n] *Contraindications, cautions, and side effects have been abstracted in part from Health Canada-approved product monographs for specific clinical indications. Only disulfiram has been approved for the treatment of AUD in Canada. Duration and dosages used for indicated conditions (e.g., seizure disorders) may differ from those used for off-label indication of AUD treatment. Data should be interpreted with this caution.*

Table 7 Comparison of Select Alternative AUD Pharmacotherapy Options[n] (continued)

	Topiramate[356]	Gabapentin[258]	Disulfiram[352]
Cautions	1. Concomitant use of valproic acid 2. Conditions or therapies that predispose patients to acidosis (renal disease, severe respiratory disorders, status epilepticus, diarrhea, surgery, ketogenic diets, certain drugs)	1. Geriatric (>65 years of age) and pediatric patients (<18 years of age)* 2. Pregnant and breastfeeding patients* 3. Concomitant use of opioids and other CNS depressants 4. Compromised respiratory function 5. Neurological disease or cognitive impairment 6. Renal impairment	1. Pregnant and breastfeeding patients* 2. Pediatric patients* 3. Disorders including diabetes mellitus, hypothyroidism, seizure disorders, cerebral damage, chronic or acute nephritis, hepatic cirrhosis or insufficiency, abnormal EEG results, or co-occurring drug use disorders
Side Effects	Side effects are most often CNS-related, and may include psychomotor slowing, difficulty concentrating, speech/language problems, somnolence, fatigue, and mood disturbance (irritability, depression). Most are mild to moderate in severity, and occur early in therapy. Starting at a low dose with slow titration up to a stable dose over a period of several weeks is recommended to avoid or reduce severity of side effects.	Side effects include ataxia, slurred speech, and drowsiness. Most are mild to moderate in severity, and occur early in therapy.	In the absence of alcohol, most common side effects are drowsiness, skin eruptions (acne, dermatitis), fatigue, erectile dysfunction, headache, and a metallic or garlic-like aftertaste. A less common but serious side effect is hepatic toxicity (cholestatic or fulminant hepatitis, hepatic failure resulting in transplantation or death), which has been reported in patients taking disulfiram with and without prior history of abnormal liver function.
Safety and Other Considerations	Due to risk of fetal harm, women of reproductive age should be advised to use an effective contraceptive. Safe to use in patients with liver disease. Patients should be monitored for signs of hyperammonemia (unexplained vomiting, lethargy, confusion, changes in mental status, hyperthermia) and metabolic acidosis (hyperventilation, fatigue, anorexia, cardiac arrhythmias, stupor).	Safe to use in patients with liver disease. Requires conservative dosing in patients with renal impairment.	The disulfiram-alcohol reaction can present as an emergency situation. It is recommended that patients carry an identification card on their person listing symptoms of disulfiram-alcohol reaction and their clinician's contact information in the event of emergencies. Due to risk of hepatotoxicity, it is recommended to perform baseline and follow-up LFTs and to monitor CBC and blood chemistries. Patients and families should be advised to immediately report early signs or symptoms of hepatitis.

** Note: Safety and efficacy of these medications has not been fully established in these patient populations and their use would be at the discretion of the treating clinician. Specialist consultation, careful assessment of benefit and risks, fully informed patient consent, and regular monitoring and assessment is advised in these cases.*

6.3.4 Baclofen

Baclofen is a GABA receptor agonist that is primarily prescribed as a muscle relaxant, but has also been used for treating AUD. While not commonly prescribed in North America, it is an approved AUD pharmacotherapy in France, and commonly used off-label in Australia and Germany.[363] As baclofen is not metabolized in the liver, it was initially studied as a treatment option for individuals with severe AUD diagnosed with acute hepatitis, liver disease and cirrhosis.[364] Although early trials in this population showed some promise,[365,366] subsequent studies have yielded mixed results.[367-370]

A 2018 Cochrane review (12 RCTs, n=1,128) found no difference between baclofen and placebo for a range of primary (relapse to any drinking, total alcohol consumption) and secondary outcomes (alcohol craving, anxiety).[371] Three other meta-analyses published in 2018 reported similar and mixed findings. The first meta-analysis (13 RCTs, n=1,492) reported that baclofen was superior to placebo for some outcomes (time to relapse, percentage days abstinent), but not for overall abstinence rates.[372] The second meta-analysis (12 RCTs, n=590) reported that baclofen was associated with higher rates of abstinence than placebo but no difference in other outcomes (number of days abstinent, heavy drinking, craving).[373] The third meta-analysis (14 RCTs, n=1,522) found no difference between baclofen and placebo in abstinence rates or alcohol consumption.[374] Inconsistent findings across reviews create uncertainty as to whether baclofen is no more effective than placebo, or if it has marginally harmful or marginally beneficial effects in individuals with AUD. Overall, there is lack of clear evidence regarding the effectiveness of baclofen for the treatment of AUD.

Compared to placebo, baclofen is associated with increased rates of side effects including vertigo, drowsiness, paraesthesia ("pins and needles" sensation), and muscle spasms or rigidity.[371] Safety concerns have also been raised with off-label use of baclofen.[375] For example, a French national registry study (n=165,334) found that baclofen was associated with a dose-dependent increased risk of hospitalization (hazard ratio [HR] = 1.13, 95% CI 1.09 to 1.17) and death (HR = 1.31, 95% CI 1.08 to 1.60) compared to other AUD pharmacotherapies approved in France (naltrexone, nalmefene, acamprosate).[376]

6.3.5 Ondansetron

Ondansetron is a selective serotonin (5-HT_3) receptor antagonist approved for the treatment of nausea associated with chemotherapy that has also been studied for treating AUD. Based on the findings of several small pilot trials and human laboratory studies,[377] ondansetron appears to be selectively effective in two specific subsets of patients: individuals who developed an AUD at ≤25 years of age (e.g., "early-onset" AUD),[378] a subtype of AUD that is believed to have a genetic or biological basis,[379] and individuals who have a genetic variant of the serotonin transporter (5HTT) gene.[380] These findings have yet to be replicated in a large, multi-site clinical trial.[381] An initial clinical trial (n=71) that did not differentiate participants based on age of onset of AUD or by genotype found no significant difference in alcohol consumption between individuals who received a 6-week trial of ondansetron versus those who received placebo.[382]

Side effects most frequently reported in clinical trials of ondansetron for AUD include diarrhea, headache, and fever. Ondansetron prolongs the QT interval in a dose-dependent manner, and should not be prescribed to patients with underlying cardiac conditions, such as congenital long QT syndrome, cardiac hypertrophy, or those taking other medications associated with QT prolongation.[383,384]

6.3.6 Combination Pharmacotherapy

Combination pharmacotherapy is often used in psychiatry for treatment-refractory or -resistant mental health conditions, and there is growing interest in applying similar approaches to AUD. Theoretically, combining AUD pharmacotherapies could address a broader range of symptoms or augment the modest treatment effects that have been observed with AUD monotherapies in research studies and clinical practice.

A 2018 meta-analysis of 16 RCTs evaluating combination pharmacotherapy for the treatment of AUD concluded that no significant benefits were observed for the use of combinations over single medications alone in terms of alcohol-related outcomes, but noted that the current evidence base is limited.[385] Few well-controlled studies have been conducted in this area, and studies that have been published are limited by small sample sizes, low power, imprecise measures of treatment effects, and other methodological flaws.[385] More research is needed to determine the value of combination therapy, which holds the potential to generate important knowledge to advance this field. Select research evidence on safety and efficacy of two promising examples of combination AUD pharmacotherapy is reviewed below.

Naltrexone and Acamprosate

An RCT that randomized 160 participants to receive placebo, acamprosate, naltrexone, or combined acamprosate-naltrexone therapy for 12 weeks reported relapse rates of 75%, 50%, 35.3%, and 27.5%, respectively.[386] Significance tests showed that combination therapy was superior to acamprosate, but not naltrexone monotherapy, for the prevention of relapse to any drinking and heavy drinking.[386] In contrast, in the Combined Pharmacotherapies and Behavioural Interventions for Alcohol Dependence (COMBINE) trial, in which 1,383 patients were randomized to nine treatment groups, combination therapy was not more effective than naltrexone or acamprosate alone, CBT, or placebo among participants also receiving medical management (e.g., counselling to promote medication adherence, prevent relapse and support recovery).[303] In both trials, combination therapy was well tolerated, with only minor adverse effects (e.g., nausea) observed to occur more frequently in comparison to either medication alone.[303,386] There may be additive benefits in combining these medications; however, at this time, these benefits have not been well established, and clinical indications for use of combination therapy, optimal dosing, contraindications, and patient populations who would benefit from this approach have not been determined.

Naltrexone and Gabapentin

One RCT has evaluated whether the combination of naltrexone (50mg per day) and gabapentin (up to 1200mg per day) resulted in greater abstinence rates and lower alcohol consumption during the early stages of alcohol cessation than naltrexone alone or placebo.[387] In this trial, 150 individuals were randomly assigned to receive a 16-week course of naltrexone alone, naltrexone with gabapentin added for the first 6 weeks, or double placebo.[387] During the first 6 weeks, the naltrexone-gabapentin group had a longer interval to heavy drinking than the naltrexone monotherapy group (which was comparable to the placebo group).[387] The naltrexone-gabapentin group also had fewer heavy drinking days, and fewer drinks per drinking day than the naltrexone monotherapy and placebo groups.[387] After gabapentin was discontinued, there were no differences between treatment and placebo groups in alcohol-related outcomes.[387] A history of alcohol withdrawal was associated with better treatment outcomes in the naltrexone-gabapentin group.[387] The combination was well tolerated with the most commonly reported side effects being dizziness and daytime sedation.[387] While these results are promising, there is a need for larger, multi-site trials to confirm that the combination of naltrexone and gabapentin is safe and efficacious for the treatment of AUD, and to clarify optimal dosing and duration of combination therapy.

6.3.7 Pharmacogenetic Approaches to AUD Pharmacotherapy

Recent advances in the field of genetics have led to the identification of several candidate genetic polymorphisms that may predict individual responses to medications for treating AUD.[388] In some cases, initial studies have showed promise, but larger, more robust prospective studies have failed to demonstrate an association between genetic markers and treatment response. For example, several *post-hoc* analyses of cohort studies found that individuals with a specific polymorphism in the Asn40Asp gene responded more favourably to naltrexone,[389-391] but a subsequent large and well-powered trial found no evidence of any gene-treatment interaction effects.[392] Although use of pharmacogenetics is not feasible for treatment-matching at the present time, several pharmacogenetic studies are currently underway,[393-398] and hold potential for more targeted "personalized medicine" approaches to AUD treatment in the future.

6.3.8 Section Summary and Recommendation

This guideline recommends that pharmacotherapy with topiramate and gabapentin be considered on a case-by-case basis for patients who do not benefit from treatment with first-line therapy with naltrexone or acamprosate, have contraindications to their use, or express a preference for an alternative medication. Although the evidence base for topiramate and gabapentin is more limited than that of first-line therapies, research suggests that these medications are safe and effective in reducing alcohol consumption in some patients.

For topiramate, this recommendation is based on moderate quality evidence from several meta-analyses and clinical trials that have demonstrated that topiramate is associated with clinically significant improvements in multiple alcohol-related outcomes, with some evidence that treatment effect sizes are comparable or greater than those observed with naltrexone.[178,315] For gabapentin, there is a limited but promising body of evidence for efficacy,[261] and it has demonstrated advantages in the treatment of symptoms associated with protracted alcohol withdrawal (e.g., insomnia, anxiety).[399] The committee notes that clinicians should be aware of the potential for non-medical use and diversion of this medication and employ risk mitigation strategies if necessary (e.g., blister-packs, short-course prescriptions, witnessed ingestion at pharmacy).

This recommendation is also in line with other published guidelines. For example, topiramate has been recommended as a first-line treatment (along with disulfiram, acamprosate, and naltrexone) for AUD in the U.S. Department of Veterans Affairs/Department of Defense (VA/DoD) Clinical Practice Guideline for the Management of Substance Use Disorders.[400] Additionally, the American Psychiatric Association's Practice Guideline for the Pharmacological Treatment of Patients With Alcohol Use Disorder recommends topiramate or gabapentin for treatment of patients with AUD who would prefer these medications or who have not benefited from first-line medications (naltrexone, acamprosate).[401]

Due to comparatively weak evidence of efficacy, this committee does not recommend disulfiram over other available pharmacotherapies for AUD. However, it is recognized that some individuals may express a preference for this medication, for example, individuals seeking additional support to avoid alcohol in certain circumstances (e.g., special occasions) or occupations (e.g., safety sensitive positions). As clinical trials indicate that disulfiram is most effective when taken under structured and supervised conditions, disulfiram should only be prescribed to patients who are engaged in ongoing addiction care where adherence can be assessed regularly.

At this time, there is insufficient evidence to recommend use of ondansetron or baclofen for the treatment of AUD in routine practice. Further research is also needed before evidence-based recommendations can be made regarding combination pharmacotherapy. Clinicians are encouraged to consult with an addiction medicine specialist or the RACE line (Vancouver area: 604-696-2131; toll-free: 1-877-696-2131, www.raceconnect.ca) for expert guidance and decision support if considering one of these treatment approaches.

Recommendation 10 Alternative Pharmacotherapy for Alcohol Use Disorder

Patients with moderate to severe alcohol use disorder who do not benefit from, have contraindications to, or express a preference for an alternate to first-line medications, can be offered topiramate or gabapentin.

Quality of Evidence: MODERATE	Strength of Recommendation: STRONG

Remarks

- Selection of an appropriate medication should be made through a shared decision-making process between patient and provider after reviewing evidence of benefits and risks, and in the context of the patient's goals, needs and preferences.
- Contraindications, side effects, feasibility (dosing schedules, out-of-pocket costs), and patient history with either medication should also be taken into account.
- As with any medication prescribed off-label, it is important to conduct a full assessment, including careful review of concomitant medications for potential drug-drug interactions, and to clearly document patient consent prior to initiating treatment.
- Gabapentin is contraindicated in patients with a known hypersensitivity to the drug or its constituents. Caution is advised in prescribing gabapentin to patients **a)** with cognitive or mental impairment, **b)** taking opioids (prescribed or non-medical use), **c)** who are pregnant or breastfeeding, **d)** under the age of 18, and **e)** over the age of 65.
- Topiramate is contraindicated in patients with a known hypersensitivity to the drug or its constituents and in patients who are pregnant or planning to become pregnant. Caution is advised in prescribing topiramate to patients **a)** with renal disease or failure, **b)** with hepatic disease, **c)** under the age of 18, and **d)** over the age of 65. Due to dose-dependent risk of significant CNS side effects, dose should be gradually titrated upwards over a period of 4-8 weeks.

6.4 Duration of Treatment

There is a lack of research evidence to guide the optimal duration of AUD pharmacotherapy. Because AUD is a chronic, relapsing condition, and as emphasized in this guideline, an ongoing and individually-tailored approach to clinical management is required. Most clinical practice guidelines recommend that AUD pharmacotherapy be prescribed for at least 6 months, at which point the utility of continuing treatment can be re-assessed in collaboration with the patient.[284,400,401] If deemed clinically necessary, medications can be continued indefinitely unless safety concerns arise.[402]

6.5 Pharmacotherapy Options for Youth

Although medications are often used off-label to treat a range of psychiatric conditions in youth, they are infrequently prescribed for substance use disorders, and treatment of youth has traditionally emphasized psychosocial treatment alone.[403] While several psychosocial treatment interventions have been shown to be effective in youth with AUD (see Psychosocial Treatment Interventions in Youth), not all individuals benefit from this approach. Reported rates of relapse following psychosocial treatment alone for substance use in youth are high, ranging from 46% to 79% at 12 months post-intervention.[403]

Prospective studies have shown that unrecognized or untreated alcohol use disorder in adolescents often progresses to more severe forms of AUD and alcohol-related harms in adulthood.[404] Additionally, due to ongoing neurological and cognitive development, there is increasing evidence that adolescents and young adults are particularly vulnerable to adverse effects of heavy alcohol consumption on social and behavioural functioning.[164] For these

reasons, use of the most effective treatments, including pharmacotherapy, should be considered on a case-by-case basis for treatment of youth with moderate to severe AUD, particularly among those who have not benefited from non-pharmacologic treatment.

Two pilot studies of naltrexone have been conducted among youth. A small study enrolled five adolescents (mean age = 16.8 ± 3.11 years) diagnosed with moderate to severe AUD in a 6-week open label trial, and reported a significant reduction in alcohol consumption (-7.5 drinks/day) during treatment.[405] A crossover RCT enrolled 28 youth (aged 15-19) to receive naltrexone and placebo for 8-10 days each, with a washout period in between treatments.[406] The authors found that naltrexone reduced craving in both laboratory and natural conditions, and was associated with reductions in frequency of any and heavy drinking.[406] In addition, in two open-label randomized trials comparing naltrexone to disulfiram (n=110), adolescent participants (aged 15-18) who received naltrexone reported significantly lower levels of craving compared than those who received disulfiram.[407,408] In all four studies, naltrexone was well tolerated with few side effects, and no serious adverse events were reported. Acamprosate has not been studied in adolescent patient populations.

In the absence of a substantive evidence base, clinical practice guidelines recommend that pharmacotherapies approved for treatment of AUD in adults (naltrexone, acamprosate) can be considered on a case-by-case basis for treatment of moderate to severe alcohol use disorder in adolescents (aged 12-18).[220,284,364,409,410] Although alcohol is the most commonly used substance in youth, which does warrant routine screening, brief intervention, and advice on safer use (see Screening and Brief Intervention), it is emphasized that very few youths seen in primary care will meet the DSM-5 criteria for a moderate to severe alcohol use disorder. Consultation with a pediatric addiction medicine specialist or the RACE line (Vancouver area: 604-696-2131; toll-free: 1-877-696-2131, www.raceconnect.ca) is recommended prior to prescribing AUD pharmacotherapy to youth.

6.6 Pharmacotherapy Options for Pregnant Patients

Due to the lack of evidence of safety and efficacy in pregnancy, it is strongly emphasized that prescribing AUD pharmacotherapy to such individuals should be done in close consultation with a perinatal addiction medicine specialist.

There have been no RCTs or meta-analyses on the safety and efficacy of AUD pharmacotherapies in pregnant individuals. A 2018 case report and literature review suggests individual consideration be given to prescribing gabapentin, naltrexone, or acamprosate to pregnant individuals on a case-by-case basis, based on evidence that these medications appear to be compatible with pregnancy (i.e., FDA Category C[o]) and the known maternal and fetal risks of continued alcohol use or relapse in pregnancy.[411] The authors emphasize that the potential risks of medications must be carefully weighed against the known teratogenic risks of alcohol when making treatment decisions.[411]

With regards to other AUD pharmacotherapies reviewed in this guideline, topiramate is contraindicated in pregnancy due to its association with cleft palate if used in the first trimester;[412] and use of disulfiram in pregnancy is strongly recommended against, due to the potential risks of a severe disulfiram-alcohol reaction to the foetus.[266] As there is insufficient evidence to support use of baclofen and ondansetron in non-pregnant patients, neither medication would be considered appropriate for use in pregnancy.

[o] *FDA Category C: No adequate human studies; Evidence of risk in some animal studies; Potential benefits may still outweigh the risks.*

7 Continuing Care — Psychosocial Treatment Interventions

7.1 Primary Care-Led Psychosocial Treatment Interventions

7.1.1 Motivational Interviewing

Motivational interviewing (MI) is a counselling approach that empowers the patient to develop motivation to change, and creates a therapeutic alliance that is predominantly a partnership, rather than an expert/patient dynamic.[145] MI techniques have been adapted for use in primary care settings to support behavioural change and improve self-management for a range of chronic health conditions, including HIV/AIDS, diabetes, cardiovascular disease, and substance use disorders.[413-415] MI-based counselling does not require professional specialization and can be delivered by primary care physicians, nurse practitioners, nurses, and other allied health professionals who have completed appropriate training.[416]

In practice, clinicians engage patients in semi-directive discussion about health behaviours while adhering to the general principles of MI, which are to: express empathy, support self-efficacy, avoid argumentation, roll with resistance, and develop understanding of discrepancy.[144] The intended outcome is to bring awareness to any discrepancies between current behaviours and future goals. For individuals with AUD, the patient-provider dyad develops practical strategies to reduce alcohol consumption or achieve abstinence over one or multiple sessions, which can range from 15 to 60 minutes in duration, depending on the care delivery setting.[416] Depending on individual patient circumstances, MI can be adapted to be delivered before, during, and/or after an individual has made a decision to reduce or stop drinking alcohol.[416]

A 2011 systematic review of MI for the treatment of substance use disorders (59 RCTs, n=13,342 participants), including alcohol alone (29 RCTs) and in combination with other substances (19 RCTs), showed that MI significantly reduced substance use in comparison to no treatment.[416] Further, review results indicated that MI was as effective as other active psychosocial modalities (e.g., cognitive behavioural therapy, contingency management, counselling) in reducing substance use, although overall, authors noted that treatment effects were modest in scale, and outcomes were similar to assessment/feedback alone.[416] The strongest treatment effects were observed immediately post-intervention, with progressively weaker effects observed at each consecutive follow-up, such that no significant effects were observed more than 12 months post intervention.[416]

Additional systematic reviews have reported that, while individual patient variables appear to be unrelated to outcome (e.g., age, gender, AUD severity), MI appears to be most effective when delivered in an individual format rather than group settings, and in combination with assessment and feedback.[413] The effectiveness of brief MI for alcohol-related problems has also been confirmed in specific populations, including adolescents,[417-419] young adults,[420-422] older adults,[423,424] men who have sex with men,[425] and individuals living with HIV/AIDS,[426] concurrent depression and anxiety disorders,[427,428] severe mental illness (e.g., schizophrenia, psychosis),[429-431] chronic liver disease,[432] and individuals who have had repeat encounters with the criminal justice system as a result of their alcohol use.[433] MI led by nurses[434-437] and other allied health professionals[438] appear to be as effective as physician-led MI in supporting behavioural change.

7.1.2 Contingency Management

Contingency management (CM) is a well-studied approach for improving outcomes of substance use disorder treatment, particularly tobacco and stimulant use disorders.[439] CM uses positive reinforcement to encourage behavioural change; most often, financial incentives or vouchers are provided when an individual achieves specific goals as outlined in their treatment plan. Typically, treatment goals are abstinence-based, and positive or negative consequences are based on objective evidence of recent substance use (i.e., urine drug testing), but behavioural markers can also be used (e.g., adherence to medication, clinic attendance, participation in peer support groups). CM is not a standalone treatment for substance use disorders and is always delivered as part of a more comprehensive treatment plan.

Although a number of RCTs have found that CM is effective in improving treatment outcomes for other substance use disorders,[439,440] its usefulness for AUD has been limited by the technology available to test for and monitor alcohol use. Breath, blood, and urine alcohol tests can only determine whether alcohol has been consumed within the past 4 to 12 hours,[441] and do not provide any information about alcohol use between clinic visits. The ethyl glucuronide (EtG) biomarker can be detected in urine for 2-5 days after alcohol use,[442] but frequent testing is required when used to assess abstinence, and its sensitivity for detecting recent alcohol use is relatively low. For example, a pilot RCT (n=20,193 samples) reported that EtG urine tests were positive for 75% and 50% of cases where individuals reported alcohol use in the past 24 or 48 hours, respectively.[443]

While CM has shown benefits in controlled research studies and structured treatment programs, it is important to note that this approach is not widely used in primary care settings. Practical issues, such as lack of infrastructure and resources, time commitment (for patients and providers), lack of knowledge and training, and costs (vouchers, biological testing, staff training and time) have all been identified as barriers to uptake in primary care practice.[444-446] More research is needed to determine whether CM is an effective and feasible strategy for the management of AUD in "real-world" clinical care settings.

7.1.3 Section Summary and Recommendation

This guideline recommends the use of Motivational Interviewing (MI)-based counselling in the primary care management of AUD. With training, primary care physicians, nurse practitioners, nurses, allied health professionals and other support staff can deliver MI-based counselling effectively in the primary care setting, either alone or in combination with AUD pharmacotherapy.[83,145,447]

Several meta-analyses in adult patients with substance use disorders have found low to moderate quality evidence that MI results in significant (albeit modest) reductions in alcohol and other substance use in comparison to no treatment, and that MI was as effective as other active psychosocial modalities (e.g., cognitive behavioural therapy) and assessment/feedback in reducing substance use.[416,448-453]

Similarly, a 2016 meta-analysis of MI for the prevention of alcohol-related problems in youth reported low to moderate quality evidence that MI was associated with a small but significant reduction in alcohol consumption and problems compared to no intervention, assessment/feedback only, or other psychosocial treatment interventions.[454]

There is insufficient evidence to recommend routine use of contingency management (CM) approaches in the primary care management of AUD, and a need for further research to develop practice-friendly variants of CM that would be feasible in primary care settings.

Recommendation 11 Primary Care-led Psychosocial Treatment Interventions for AUD

Primary care clinicians or care teams should provide motivational interviewing-based counselling to all patients with mild to severe AUD to support achievement of patient-identified treatment goals.

Quality of Evidence: MODERATE	Strength of Recommendation: STRONG

Remarks

- Primary care providers and care teams should have access to appropriate training, education and resources to deliver MI in practice.

7.2 Specialist-Led Psychosocial Treatment Interventions

Patients and families who would benefit from or express interest in accessing more structured psychosocial treatment as part of their treatment plan should be referred to specialized services in the community. In this scenario, the primary care provider should continue to play an active role in the treatment and recovery process by connecting individuals to care and services, supporting attendance and patient- or program-defined goals, and monitoring response to treatment. The research evidence for several specialist-led psychosocial treatment modalities — cognitive behavioural therapy, family-based therapy, and mindfulness-based interventions — is reviewed below. Access and other key considerations when referring patients to specialist-led psychosocial treatment are also briefly reviewed.

This guideline does not explicitly endorse one form of specialist-led treatment over another, as research has not demonstrated that one particular approach is superior to any others. Therefore, factors such as patient and family preference, local availability, and accessibility (e.g., waitlists, out-of-pocket costs) can guide the referral process. To support informed decision-making, this section provides an overview of more common specialist-led psychosocial approaches to assist health care providers and care teams in selecting an option that best fits their needs.

7.2.1 Cognitive Behavioural Therapy

Cognitive behavioural therapy (CBT) is a structured, goal-directed form of psychotherapy delivered by a trained counsellor or therapist, where patients learn how their thought processes contribute to their behaviour and emotions.[455] Increased cognitive awareness is combined with techniques to help patients develop new and adaptive behaviours that can alter their social environment and, in turn, reinforce change in thoughts and emotions.[455] CBT for the treatment of substance use disorders is usually time-limited, consisting of approximately 10-20 one-hour sessions.[455]

A meta-analysis of 53 controlled trials of CBT (n=9,308) for adults with moderate to severe alcohol and other substance use disorders found that across studies, CBT had a small but statistically significant treatment effect in comparison to passive interventions (e.g., education programs) or no treatment.[456] Outcomes assessed varied by study, but grouped treatment effects included duration of abstinence, and relapse to any or heavy substance use.[456] The effect size of CBT remained significant when analyses were restricted to trials targeting hazardous or harmful alcohol use (23 RCTs; n=6133).[456] Similar to MI, treatment effects were strongest immediately following the intervention, and diminished over time.[456]

7.2.2 Family-Based Therapy

The defining feature of family-based therapy (FBT) for substance use disorders is that it treats individuals within the larger context of social systems where substance use may have first developed and is currently sustained. This approach has been particularly well studied in adolescent populations, where social and/or family environments may play a significant role in the development of substance use disorders.[457] Social network and family-based therapies actively engage friends and family members in the treatment process and may encompass a diversity of approaches and techniques, including CBT, interpersonal therapy, communication training, and skills building. FBT is typically delivered by a trained psychologist or counsellor.

Several systematic reviews and meta-analyses have reported that family-based approaches are efficacious for the treatment of AUD.[458,459] For example, a meta-analysis of 12 randomized trials (n=1,887) of FBT among adults with substance use disorders, including AUD (8 RCTs), showed that FBT was associated with a small but significant effect on treatment outcomes, with participants showing a greater number of days abstinent and fewer number of days of heavy substance use, as well as improvements in validated measures of relationship satisfaction and adjustment in comparison to than those who received individually-oriented treatments (e.g., MI, CBT, 12-step programs).[460] The effect of FBT also appeared to be more durable over time, with lower rates of relapse to substance use and/or heavy substance use at 6 and 12 months follow-up, compared to individualized psychosocial intervention approaches.[460]

7.2.3 Mindfulness-Based Interventions

Mindfulness-based interventions (MBI) are increasingly being used in the treatment of individuals with substance use disorders, including AUD. While MBI described in the literature vary in terms of structure and design, all generally share the same fundamental goals, which are achieved through individual or group practice: (1) the development of a state of awareness characterized by full attention to internal and external experiences as they occur in any given moment, and (2) the adoption of a mindset of acceptance of internal and external experiences without judgement.[461] In the context of substance use disorders, it has been proposed that MBI could help support individuals learn new skills to accept or cope with distressful events, which, in turn, could reduce substance use behaviours that may have previously been used as a means to suppress or avoid unpleasant emotional experiences.[462,463] Structured MBI programs are typically delivered by a trained psychologist or counsellor.

Systematic reviews of MBI for AUD have yielded mixed results. Three systematic reviews have concluded that MBI is associated with significant reductions in substance use, including alcohol use, compared to no intervention, non-specific education programs, and active comparators (e.g., 12-step, CBT), with some studies showing additional benefits in reducing craving and stress.[463-465] The number of studies included in these reviews ranged from 24 to 54, and the majority were not randomized trials.[463-465] In contrast, a meta-analysis that included only randomized controlled trials (9 RCTs, 7 RCTs for AUD) evaluating a standardized Mindfulness-based Relapse Prevention program[466] found no difference in relapse rates, frequency of substance use, retention in treatment, depression or anxiety scores from medical management alone, participation in a health education program, or other psychosocial treatment interventions (12-step, CBT, counselling).[467] The review did find a significant difference in favour of Mindfulness-based Relapse Prevention programs in terms of reducing withdrawal symptoms, craving, and substance-related harms, but the authors graded this evidence as weak.[467]

Overall, the evidence base for MBI is limited due to a relatively small number of randomized trials with small sample sizes, and heterogeneity in the study methodology and outcomes assessed. More rigorous randomized controlled trials are needed before a definitive conclusion can be drawn with regards to the effects of MBI on alcohol-related outcomes.

7.2.4 Psychosocial Treatment Interventions and Co-occurring Mental Health Disorders

Attention to the assessment, treatment, and monitoring of emotional and mental health is an essential component in caring for patients with AUD, especially given the high prevalence of co-occurring mental health diagnoses in this population (e.g., post-traumatic stress disorder, depression, anxiety).[59,468] Despite a limited number of controlled trials in more complex patient populations, there is some evidence that the inclusion of specialist-led psychosocial treatment interventions can improve outcomes for individuals with co-occurring substance use and mental health disorders, including anxiety and depression,[427,469] post-traumatic stress disorder,[470] and severe mental illness (e.g., schizophrenia, schizoaffective disorder).[471] However, it is noted that the evidence for efficacy in this patient population tends to be of lower quality, and the effect sizes calculated in meta-analyses were generally small to moderate in scale.[472]

7.2.5 Psychosocial Treatment Interventions in Youth

A 2008 meta-analysis (17 RCTs, n=2,307) evaluating various psychosocial treatment interventions for substance use disorders, including AUD, in patients aged 11-19, found that CBT had a significant, small to moderate effect on treatment outcomes, including the prevention of relapse and reduction of substance use.[473] The review authors also noted that group CBT appeared to be more effective than individual CBT among youth.[473]

Several meta-analyses of trials in adolescents with substance use disorders, including AUD, have shown that the effects of FBT on engagement and retention in treatment, reduction in alcohol and drug use, sustained abstinence, and improved psychological, social, and family functioning are comparable to those of CBT and superior to those of other psychosocial treatment interventions.[473-476] As with adult populations, effect sizes tended to diminish over time, however, a limited number of clinical trials that incorporated long-term follow-up have reported that treatment effects remain significant relative to comparator groups at 12 or more months post-intervention.[477]

7.2.6 Psychosocial Treatment Interventions in Pregnant Individuals

There is limited evidence regarding the effectiveness of psychosocial treatment interventions for the treatment of AUD in pregnant individuals. A 2009 Cochrane review of psychological and educational interventions for reducing alcohol use in pregnancy (4 RCTs, n=715) concluded that overall, there is insufficient data on the effectiveness in reducing alcohol consumption or supporting abstinence, with limiting factors including inconsistent results, small sample sizes, high risk of bias, and heterogeneity in intervention types and outcomes assessed across trials.[157] Nonetheless, although the evidence base is sparse, due to the known maternal and fetal risks of alcohol use in pregnancy, most clinical practice guidelines do recommend that pregnant individuals with AUD be offered psychosocial treatment interventions to support abstinence or reduced alcohol consumption.[4,268]

7.2.7 Duration of Treatment

There is a lack of research evidence to guide the optimal duration of psychosocial treatment interventions for AUD. A 2018 meta-regression of 48 studies (n=8,984) of outpatient psychosocial treatment interventions for AUD found that neither planned nor actual attendance in weeks, duration of sessions, or frequency of sessions per week were associated with improved long-term outcomes of individuals with AUD.[478] Additionally, other factors, such as an individual patient's needs, circumstances, and preferences and/or access to and availability of specialists, programs, and services in a particular community, often determine intensity and duration of psychosocial treatment interventions. As such, it is beyond the scope of this guideline to make recommendations on the

optimal duration of psychosocial treatment interventions. However, it is emphasized that primary care providers can play a critical role in ensuring patients are supported during transitions in care and after specialist-led psychosocial treatment has concluded.

7.2.8 Accessibility and Other Considerations

Important considerations when discussing options for referral to specialized psychosocial treatment services are that publicly-funded programs often have waiting lists, and the costs of private counsellors or facilities (i.e., non-publicly funded programs) are not covered by BC's Medical Services Plan or extended health insurance plans, necessitating out-of-pocket payment. In rural and remote areas, referral to specialized treatment programs may also require patients to travel long distances or leave their communities in order to access care, which may not be feasible or practical for some individuals. Again, it is emphasized that a lack of access to or a patient's decision not to participate in specialized psychosocial treatment should not be a barrier to accessing evidence-based pharmacotherapy and related services in primary and other care settings.

As noted above, a limitation of traditional CBT, FBT, and MBI approaches is that, unlike MI, they cannot be easily integrated or adapted into routine primary care practice, and specialized services may not be readily accessible. Research is underway to evaluate and refine accessible and practice-friendly variants, including telephone, text message, and web-based CBT and MBI approaches,[479-481] and manualized FBT tailored specifically for primary care,[477] but the efficacy and feasibility of implementing such interventions is not yet known.

7.2.9 Section Summary and Recommendation

This guideline recommends that patients and families who would benefit from or express interest in accessing more structured, specialist-led psychosocial treatment interventions should be provided with information and/or referred to programs in the community. It is emphasized, however, that a lack of access to or a patient's decision not to participate in specialized psychosocial treatment should not be a barrier to accessing evidence-based pharmacotherapy and related services in primary care.

Several reviews have found that cognitive behavioural therapy (CBT) is associated with small to moderate, but significant, reductions in likelihood of relapse and alcohol consumption in both adults[456] and youth.[473] Family-based therapies (FBT) have also been associated with small but significant effects on alcohol and other substance use outcomes, as well as improvements in relationship satisfaction and adjustment in both adults[458-460] and youth.[473-476]

There is limited and mixed evidence regarding the efficacy of mindfulness-based interventions, interpersonal therapy, and dialectical behavioural therapy in the treatment of AUD. More research is needed to clarify the role of these therapeutic approaches within the AUD continuum of care in order to make explicit recommendations.

Recommendation 12 Specialist-led Psychosocial Treatment Interventions for AUD

Adults and youth with mild to severe AUD can be provided with information about and referrals to specialist-led psychosocial treatment interventions in the community.

Quality of Evidence: MODERATE	Strength of Recommendation: STRONG

Remarks

- The referring clinician should continue to play an active role after connecting individuals to psychosocial treatment interventions by checking in with patients on their experience and overall satisfaction, encouraging regular attendance, and including related patient- or program-defined goals in their treatment plan.
- Referring clinicians should establish regular communication with specialist providers and programs to facilitate continuity of care, transitions in care, and to share relevant information (with the patient's permission, e.g., assessments, progress notes, discharge summaries).

7.3 Combining Pharmacotherapy and Psychosocial Treatment Interventions

Although the majority of AUD pharmacotherapy trials have also included medical management, structured psychosocial treatment interventions, and/or peer support groups as a standard treatment condition, very few studies have been explicitly designed to evaluate whether the combination of pharmacotherapy and psychosocial treatment is more effective than either treatment alone. Similarly, very few trials have assessed whether stepped care strategies, such as varying the intensity of psychosocial treatment or recovery-oriented support can improve pharmacotherapy treatment outcomes, or vice versa.

The COMBINE trial (n=1,383) randomized participants to receive 4 months of treatment with naltrexone, acamprosate, naltrexone in combination with acamprosate, or placebo.[303] Treatment groups were randomized to receive either medical management or a combined psychosocial treatment intervention (including elements of MI, CBT, and 12-step) delivered by a specialist.[303] At the end of the treatment period, there were no differences in alcohol-related outcomes (percent days abstinent, return to heavy drinking) between the combination of naltrexone and psychosocial treatment compared to groups who received naltrexone or psychosocial treatment alone.[303] In contrast, an earlier single-site trial (n=160) by the same study team compared naltrexone or placebo combined with motivational enhancement therapy (MET) or CBT in a 4-block RCT design, and showed that participants who received naltrexone and CBT had lower relapse rates, and a longer duration of time before returning to drinking and between drinking days, than those treated with naltrexone and MET or psychosocial treatment alone.[482]

Whereas there is limited empirical evidence to guide recommendations on the optimal combination of pharmacotherapy, psychosocial treatment, and recovery-oriented services, this guideline supports using a stepped and integrated care approach, in which treatment type and intensity are continually adjusted to match the individual patient's needs and circumstances over time. Such a strategy recognizes that many individuals may benefit from the ability to access different psychosocial treatment and recovery support options at different times in their recovery. The stepped approach may include treatment intensification (e.g., adding specialized psychosocial treatment to a pharmacotherapy-based strategy, consideration of structured treatment programs), transitions between different treatment options, and strategies to de-intensify pharmacological or psychosocial treatment at the patient's discretion, where the patient can opt to re-initiate pharmacotherapy or psychosocial treatment at any time if needs and circumstances change.

8 Community-Based Supports and Programs

8.1 Peer Support Groups

Peer-based support groups are widely available, no-cost, community-based meetings that are often recommended as an adjunct to clinical care and management of substance use disorders, or as a source of additional peer-based guidance, mentorship, and support in achieving and sustaining recovery. Peer support groups are often led by volunteers who have personally experienced addiction and are in recovery. While there have been very few controlled trials or systematic reviews of the effects of peer-based recovery support services in improving alcohol-related outcomes (i.e., relapse rates, alcohol consumption), it is recognized that peer-based support has consistently been identified as an important component of recovery from substance use disorders in the research literature[483,484] and by those with lived experience.[485-488]

8.1.1 Alcoholics Anonymous and 12-Step Programs

A widely recognized example of a peer support group is Alcoholics Anonymous (AA), an international fellowship of support groups comprised of individuals in recovery, which offers emotional support and a structured "12-step" approach to achieving abstinence. A central concept in AA is that substance use disorders are a spiritual disease, and that recovery is a journey involving belief in a higher power, personal exploration, and acceptance.

Although AA and other 12-step programs have been studied for several decades, few trials have been conducted and these are limited methodologically by a paucity of randomized trials, selection bias, and heterogeneity in the intervention, study populations, and outcomes assessed.[489,490] Moreover, most studies have not assessed standard alcohol use outcomes (e.g., abstinence, quantity or frequency of use), limiting the potential to compare effectiveness of 12-step groups to other treatment interventions for AUD, such as pharmacotherapy or psychosocial treatment interventions.[489,490]

To circumvent some of these issues, more recent research has focused on the twelve-step facilitation (TSF) approach,[491] rather than the effectiveness of the programs themselves in reducing alcohol consumption and/or preventing relapse. TSF is a manualized, structured counselling approach in which trained health care providers collaboratively review and discuss the core 12-step principles with their patients, and encourage regular attendance at community-based 12-step meetings.[491] TSF was originally designed as an individually-oriented therapy, but has also been studied as a family-based or group intervention, most often as part of a structured treatment program (e.g., inpatient or intensive outpatient treatment programs).[492] The TSF intervention is not widely used in primary care practice. A 2006 meta-analysis (8 RCTs, n=3,417) found that TSF approaches were as effective as other psychosocial treatment interventions (CBT, motivational enhancement therapy), in reducing alcohol use and preventing relapse.[492] Overall, the review concluded that there is a lack of high-quality RCT evidence that AA or other 12-step groups are effective in preventing relapse, or reducing alcohol consumption and alcohol-related harms.[492]

However, while the evidence base is limited, it is recognized that peer support groups, which are widely accessible in both urban and rural settings, can be beneficial to patients and families in navigating life changes and challenges related to treatment and recovery. For example, individuals who do benefit from participation in 12-step groups report that factors such as the group dynamic (e.g., feeling a connection to and a sense of belonging and community with others),[493] improved self-awareness,[494-496] an experience of acceptance and empathy from and for others,[497] and developing or strengthening a connection with their spirituality[498,499] were important in starting and maintaining their recovery.

Twelve-step support groups are reported to be most effective amongst those who identify with the core philosophy, and who attend meetings voluntarily on a regular basis.[500] Voluntary attendance is of particular importance, as evidence suggests that coerced or mandated attendance at peer support groups is not effective in reducing alcohol or other substance use or achieving abstinence.[501-503]

8.1.2 Self-Management and Recovery Training© (SMART© Recovery)

Self-Management and Recovery Training, or SMART Recovery, is a secular alternative to the 12-step model that has rapidly expanded in recent years. The SMART Recovery program was designed to reflect evidence-based practice elements of MI, CBT, Rational Emotive Behaviour Therapy (REBT), and mindfulness.[504] The "4-point program" of SMART Recovery, which encompasses building motivation, coping with urges, problem solving, and lifestyle balance, provides members with evidence-based tools and peer support to aid in their recovery.[504]

A 2017 systematic review of 12 studies of SMART Recovery programs concluded that while positive effects were found, the lack of RCTs, small sample sizes, and heterogeneity in methods and outcomes assessed across studies prevented drawing conclusions about its effectiveness.[505] To date, only one randomized trial has studied the impact of SMART Recovery among individuals with substance use disorders, and it compared in-person SMART meetings to "Overcoming Addictions" (OA), a web-based intervention based on the SMART Recovery program.[506] Individuals with AUD (n=189) were randomized to receive SMART, OA, or a combination of the two.[506] No differences were found between groups, but at the conclusion of the study there was a significant increase in the percentage of days individuals abstained from alcohol use (44% to 72%) and a reduction in the number of drinks per drinking day (8.0 to 4.6 drinks) for all study participants.[506] There is a need for further research, specifically well-designed clinical trials, to better establish the effectiveness of SMART Recovery and other non-12-step peer support groups in preventing relapse and reducing alcohol consumption and related harms.

8.1.3 Making Informed Referrals to Peer Support Groups

Several studies have found that active referral and encouragement from a clinician or a peer support worker during initial stages of treatment increases the likelihood that patients will attend community-based peer support meetings.[507-510] For example, an RCT (n=151) that compared active referral from a clinician, active referral from a peer, or information only about local 12-step groups among individuals undergoing inpatient withdrawal management found that active referrals significantly increased attendance rates at meetings during and after withdrawal management (post discharge attendance rates: peer referral 64%, clinician referral 48%, information only 33%), although there were no differences between groups in abstinence rates (44%, 41% and 36%, respectively).[510] Although in this trial peer-based referral had a stronger impact on attendance, the importance of clinicians adopting an active, informed and encouraging role in referring patients to peer support groups and other community-based services should not be underestimated, particularly for patients and families who may have little to no experience in navigating the AUD treatment system. Involving peer support workers or navigators as part of a clinical care team may also be a valuable strategy for facilitating patient access and engagement.[484]

If a patient identifies incompatibilities between their personal belief systems and the core philosophies of a peer support group as barriers to their participation, alternative options can be provided where available. For example, some individuals may prefer peer support groups with a secular mandate (e.g., SMART Recovery, LifeRing), or groups designed for specific populations (e.g., 2SLGBTQ+ individuals, youth, Indigenous peoples, individuals with co-occurring mental health issues). Some women may prefer to attend women-only meetings, or groups like the 16-step program.[511] Access to in-person meetings for other (non-12-step) peer support groups may be limited outside of urban centres, although several peer support groups do have online or "virtual" meetings.

8.1.4 Section Summary and Recommendation

There is a paucity of high-quality RCTs, systematic reviews, or meta-analyses on the effectiveness of peer support groups among individuals with AUD.

However, it is recognized that some individuals and families may benefit from or express an interest in accessing peer-based support, guidance, and mentorship—a core component of many peer-support programs—to navigate the changes brought about by starting AUD treatment and in the pursuit of long-term recovery.[483,484,512] Active referral and encouragement from a clinician or a peer support worker during the initial stages of treatment increases the likelihood that patients will attend community-based peer support meetings.[507-510]

Recommendation 13 Peer-based Support Groups for Individuals with AUD

Adults and youth with mild to severe AUD can be provided with information about and referrals to peer-support groups and other recovery-oriented services in the community.

Quality of Evidence: LOW	Strength of Recommendation: STRONG

Remarks

- Primary care providers should be aware of peer-support groups that are active locally and online, including groups for specific populations (e.g., men, women, 2SLGBTQ+, co-occurring disorders, etc.), age-appropriate options for youth, and services for families.
- The primary care clinician or care team should continue to play an active role after connecting individuals to peer support groups by checking in on their experiences and overall satisfaction, encouraging regular attendance, and including related patient- or program-defined goals in the patient's treatment plan.

8.2 Community-based Treatment and Recovery Programs

There are a number of recovery-oriented programs and services available in BC that can be beneficial to some patients with AUD. As many of these programs offer a comprehensive range of services, several of which have been reviewed in other sections (e.g., pharmacotherapy, psychosocial treatment interventions, peer-based support), this guideline does not make an explicit recommendation on this topic. However, it is recognized that some patients may benefit from or be interested in accessing more structured treatment and support programs. To support informed decision-making, clinicians should be aware of recovery-oriented programs in their communities, and able to connect patients and families with these resources as required. A brief evidence review of intensive outpatient programs, inpatient treatment, and supportive recovery housing is included below to support the shared decision making process between health care providers and patients.

8.2.1 Intensive Outpatient Programs

Intensive outpatient programs (IOP) are ambulatory programs for individuals with substance use disorders who do not require 24-hour care, but require more support than standard outpatient care. IOPs can also provide an intermediate level of support for individuals recently discharged from inpatient treatment programs. The structure and services provided by these programs varies depending on the setting (e.g., hospital, inpatient treatment, community-based public and private treatment centres) and staffing model (e.g., medical or non-medical personnel). Programs generally offer several hours of structured programming per day, and core services may include individual, group, or family therapy; connecting clients with social supports; life skills and vocational training; peer-support group meetings; therapeutic recreational activities; and developing coping skills and strategies to prevent relapse.

Three clinical trials that randomized clients to an IOP or inpatient treatment found that cumulative days abstinent, alcohol use, and alcohol-related problem scores did not differ significantly between service settings, suggesting that they are similarly effective.[513-515] As above, there were some methodological flaws in these trials, including small sample sizes, non-equivalent groups, single-site studies, selection bias, and lack of appropriate controls. Intensive outpatient programs may have advantages for some individuals with AUD who would benefit from an intermediate level of support, the ability to develop and practice new skills and strategies while living in the community, and continuity of care for a longer duration. It is noted that standardization of core services offered in IOPs could aid in future comparative effectiveness research, and help improve quality and effectiveness of programming.

8.2.2 Inpatient Treatment Programs

Inpatient treatment facilities provide a 24-hour, substance-free environment for individuals with alcohol and other substance use disorders. These programs vary in the types of services and treatment models employed, but all typically include core services such as individual and group counselling, life skills training, and peer support groups. Some programs may also include more tailored services, such as vocational training, medical and mental health services, couples/family counselling, and nutritional counselling. Some also offer aftercare services to patients upon program completion, ranging from follow-up counselling, and supportive recovery housing, to intensive outpatient programs.

Evaluating the effectiveness of inpatient treatment in comparison to other treatment modalities has proven to be methodologically challenging. Although a small number of RCTs and other research studies have been conducted, most have not employed a rigorous experimental design and significant methodological limitations have been noted, such as a lack of adequate controls and comparator groups; over-reliance on retrospective, quasi-experimental and pre-post methods; selection bias; limited generalizability due to setting, study population, and inclusion/exclusion criteria; and heterogeneity in treatment types and outcomes assessed.[516] Additionally, due to ethical concerns associated with randomizing patients to a comparator group that might not provide a sufficient level of care for a patient's needs (e.g., no treatment, outpatient care), several trials excluded participants with moderate to severe AUD and comorbid conditions, to ensure that all study participants received treatment that was clinically appropriate.[516]

In this context, while several systematic reviews have concluded there is low to moderate quality evidence that inpatient treatment programs are effective for reducing substance use and improving health, mental health, social and criminal justice-related outcomes among program participants, there is insufficient evidence that inpatient treatment programs are more effective than other treatment approaches, including outpatient management.[516-520]

Nonetheless, several practice guidelines have identified specific patient populations that may benefit from the more structured treatment environment provided in an inpatient care setting (Box 7).

Box 7 Considerations for Referral to Inpatient Treatment Programs[517,521,522]

- Individuals who have not benefited from multiple previous treatment attempts
- Individuals with co-occurring substance use or mental health disorders
- Individuals with concurrent medical conditions
- Individuals in an unstable social environment or circumstances
- Pregnant individuals
- Indigenous peoples — some inpatient treatment programs offer cultural interventions and tailored programming

8.2.3 Supportive Recovery Housing

Supportive recovery housing (i.e., stabilization and transitional living residences and assisted living residences) is a direct support service that provides individuals with substance use disorders or co-occurring mental health and substance use disorders with safe, typically substance-free accommodation. Supportive recovery housing is time-limited or transitional, not permanent, housing, and is often offered to individuals who have completed inpatient treatment as part of a stepped approach to returning to the community. Services offered to residents are generally non-medical, and may include a combination of peer coaching or mentoring, group work, and structured activities (e.g., therapeutic recreational activities), with a focus on education and life-skills training to support reintegration with the community.

Very few controlled studies have evaluated the effectiveness of supportive recovery housing for improving substance-related outcomes. Two RCTs that compared supportive recovery housing to usual aftercare (e.g., individual or group counselling, 12-step) reported that individuals residing in supportive recovery housing had reduced substance use, and improved employment and criminal justice outcomes compared to individuals in the usual aftercare group.[523,524] However, both trials had methodological limitations, including selection bias, non-equivalent groups, small sample sizes, single-site evaluations, and lack of appropriate statistical controls, which limits ability to draw meaningful conclusions from these results.[525] There is a need for more rigorous research in this area, not only to assess comparative effectiveness of this service option, but also to establish quality standards and best practices for supportive recovery housing programs to optimize patient health outcomes.

8.3 Psychosocial Support Services

Providing patients with referrals to community-based support services may be helpful in supporting overall recovery by improving an individual's psychosocial circumstances and other survival needs. Although no systematic reviews have examined the impact of providing supports for various social needs (e.g., housing support, vocational and skills training, social supports, financial assistance) in the context of AUD, studies have demonstrated that providing access to housing and meeting other survival needs can significantly enhance treatment outcomes.[526,527] There is likely a benefit to AUD care being offered in the context of interdisciplinary primary care teams that are equipped to address these needs when possible. Where patients have encountered barriers to engagement in care, intensive case management,[528-530] assertive community outreach teams,[530-532] and peer-based outreach and support services[483,484] may also be effective strategies to improve retention in treatment.

9 Managed Alcohol Programs

Managed alcohol programs (MAP) are a harm reduction strategy used to minimize the personal harm and adverse societal effects of severe AUD, particularly as experienced by individuals who may be homeless or unstably housed.[533,534] Typically, a MAP will dispense small doses of alcohol to clients at regular intervals, as a means of both regulating alcohol intake and reducing unsafe consumption of non-beverage alcohol.[533] In the community, MAPs are often coupled with, and offered within, housing programs to provide a safe and inclusive alternative to abstinence-only housing for individuals with severe AUD.[534] This low-threshold approach enables clients to gain access to other health and social services that may be offered within the program.[533] In acute care settings, MAPs have also been implemented to support patients with severe AUD for whom withdrawal management or short-term abstinence during their hospital stay is not feasible.[535] There are several MAPs currently operating in BC in both acute care and community settings. For a list of MAP services in and across Canada, refer to the Canadian Institute for Substance Use Research's Overview of MAP Sites in Canada.

Several studies of community-based MAPs have reported that the regulation of alcohol consumption through MAPs may reduce harm and improve quality of life amongst participants.[536-538] For example, a 2018 observational study compared alcohol consumption of participants (n=175) from six residential MAPs across Canada (Vancouver, Thunder Bay, Toronto, Ottawa, and Hamilton) with a control group matched for age, sex, and ethnicity (n=189).[539] Results showed that participants who had been MAP clients for longer than two months had fewer standard drinks per day (15.1 drinks) than newer MAP participants (20.2) and controls (22.2).[539] Long-term MAP residents were also significantly less likely to report a range of alcohol-related harms (e.g., physical health issues, involvement in illegal activities, social problems) over the past 30 days than newer MAP participants and controls.[539] Several reviews also report greater reductions in alcohol consumption and related harms (e.g., emergency health service utilization, criminal behavior, housing problems, non-beverage alcohol use) and improved engagement in ongoing medical and psychiatric care among MAP clients in comparison to control groups recruited from similar settings that do not offer managed alcohol services (e.g., homeless shelters).[533,535,538,540]

A 2018 review of five randomized and non-randomized trials of hospital-based MAPs found this intervention to be superior and/or non-inferior to no treatment and standard withdrawal management protocols (i.e., treatment with benzodiazepines) for preventing or treating alcohol withdrawal symptoms among hospitalized patients with severe AUD.[535]

Similar to other structured treatment programs, there are some ethical and practical challenges associated with conducting randomized trials of MAPs, and as a result, there have been no RCTs or meta-analyses comparing the efficacy and safety of MAPs in community settings with other interventions for AUD. The current evidence base is limited, and of available studies, factors such as heterogeneity among outcome measures and reliance on self-reported data have been noted as limitations.[535,541]

While making explicit recommendations on the use of MAPs as a harm reduction strategy is outside the scope of this guideline, the committee wishes to acknowledge the growing body of evidence supporting this approach for individuals with severe AUD. This guideline emphasizes the need for further research and specialized guidance to support the implementation of MAPs in community and clinical care settings as a part of a comprehensive strategy to reduce the significant harms experienced by individuals with severe AUD.

10 Conclusion

Despite the significant burden of disease, social harms, and economic costs associated with alcohol use in Canada, high-risk drinking and AUD frequently go unrecognized and untreated in the health care system. Recent literature has highlighted the vital role of primary care providers in meeting the health care needs of individuals with AUD.[58] This guideline presents a systematic review of the research and provides evidence-based clinical recommendations for the identification, intervention, management, and continuing care of individuals with high-risk drinking and AUD.

This guideline emphasizes the importance of clinicians providing education to patients about *Canada's Low-Risk Alcohol Drinking Guidelines* and performing regular screening for drinking in excess of low-risk limits. Research evidence shows that simple validated screening procedures can be incorporated in primary care routines to reliably identify high-risk drinking and AUD, whereas the current reliance on case identification alone often results in missed opportunities for the timely detection of individuals at risk.[32] Identification of high-risk drinking enables clinicians to intervene at a point where the secondary prevention of AUD is possible through brief counselling interventions.[117,118,164] As such, this guideline recommends annual alcohol use screening of all adult and youth patients, followed by brief intervention in patients who exceed low-risk drinking guidelines and are at increased risk of alcohol-related harms.

Patients who screen positive for AUD should be offered a full range of pharmacological and psychosocial treatment interventions within a framework of comprehensive and continuing care. Treatment and support should be individually tailored and adjusted appropriately based on AUD severity, comorbidities, psychosocial circumstances, and evolving personal preferences and needs. As a standard of patient-centered and recovery-oriented care, treatment goal setting (i.e., abstinence or reduced alcohol consumption) and selection of a management pathway should involve shared decision making, with the recognition that a reduction in drinking is a valid and realistic treatment goal for some patients.[83]

Up to 50% of individuals with long-term alcohol dependence will experience alcohol withdrawal symptoms upon cessation of drinking.[182-184] Research has shown that appropriate clinical management of withdrawal symptoms can prevent the development of a severe alcohol withdrawal syndrome, including seizures and delirium tremens, as well as early relapse.[177,178] To facilitate tailored treatment selection, this guideline recommends using the Prediction of Alcohol Withdrawal Severity Scale (PAWSS), a score-based, clinician-administered tool for assessing the risk of severe withdrawal complications. This recommendation is supported by a recent meta-analysis that found the PAWSS to be the most useful and accurate predictive assessment tool currently available.[195,197]

This guideline recommends outpatient withdrawal management for patients who are at low risk of developing severe complications (i.e., PAWSS<4) and have no other comorbid conditions that would be a contraindication to outpatient management.[207,208,210] Further, this guideline recommends that patients at high risk of developing severe withdrawal complications (PAWSS≥4) should be referred to an inpatient facility where alcohol withdrawal can be medically supervised and closely monitored.

The evidence supporting commonly used pharmacotherapies for outpatient withdrawal management (i.e., benzodiazepines, anticonvulsants, and α2-adrenergic agonists) was also reviewed. While acknowledging the robust evidence base supporting the use of benzodiazepines for alcohol withdrawal management, this guideline highlights safety concerns with the use of this class of medications for outpatient management, including side effects, risk of diversion, non-medical use, dependence, adverse drug-drug interactions, as well as the dangers of combining benzodiazepines with alcohol.[175] For these reasons, non-benzodiazepine medications, such as carbamazepine, gabapentin, and clonidine, are recommended for the outpatient management of mild to moderate withdrawal.[237-241]

However, benzodiazepines remain the preferred option for the inpatient treatment of severe alcohol withdrawal, because only benzodiazepines have demonstrated efficacy for preventing seizures and delirium tremens.[227-229]

This guideline strongly recommends that all patients who complete withdrawal management be offered a connection to ongoing AUD care, treatment, and support. Withdrawal management alone does not constitute treatment for AUD as demonstrated by high post-withdrawal relapse rates reported in the literature.[269-275]

This document also reviewed the evidence on the safety and efficacy of a range of pharmacological and psychosocial treatment interventions that can be offered as part of a continuing care strategy in the clinical management of AUD. Although pharmacotherapy has been shown to play an important role in supporting the achievement of treatment goals among patients with moderate to severe AUD, it is under-utilized in primary care practice. As a part of a comprehensive long-term treatment and support plan, pharmacotherapy can help prevent a return to drinking among patients whose goal is abstinence, and reduce heavy drinking episodes and overall alcohol intake for patients who wish to reduce their alcohol consumption.[178] There is a well-established evidence base that supports offering naltrexone or acamprosate as a first-line pharmacotherapy medication to all patients with moderate to severe AUD.[178,285,300] More specifically, and in line with several meta-analyses,[178,307,308] naltrexone is recommended for patients with a treatment goal of abstinence or reduced drinking, and acamprosate is recommended for patients with a treatment goal of abstinence. For patients for whom first-line medications are not appropriate or preferable, this guideline recommends topiramate or gabapentin, which are supported by a growing body of evidence.[261,315,401]

This guideline recommends that clinicians provide motivational interviewing (MI)-based counselling to all patients with mild to severe AUD to support the achievement of their treatment and recovery goals. Available meta-analyses report low to moderate quality evidence that MI results in a modest but significant reduction in alcohol and other substance use compared to no treatment.[416] Research has also shown that MI is as effective as other active psychosocial modalities (e.g., cognitive behavioural therapy) in reducing substance use.[413-415]

Additionally, this guideline recommends that all patients with AUD receive information about specialist-led psychosocial treatment interventions (e.g., cognitive behavioural therapy, family-based therapy), as well as peer-based support groups and other recovery-oriented services in the community. The evidence suggests that specialist-led psychosocial interventions may have a modest but significant impact on likelihood of relapse and return to heavy drinking among adolescent and adult patients.[456,458,459,473-476] Although there is a lack of high-quality evidence supporting the effectiveness of peer support groups, the committee recognizes the value of peer-based support, guidance, and mentorship to patients and families in navigating changes during the process of recovery, and recommends that clinicians provide all patients and families affected by AUD with information on and referrals to local peer support groups.[483,484,512]

While this guideline has presented specific evidence-based recommendations for the optimal screening, diagnosis, treatment, and care of individuals with AUD, the committee recognizes the need for further work to develop an integrated and comprehensive system of addiction care in British Columbia, including a robust continuum of evidence-based care options that are available and accessible to all patients and families across the province. Additionally, the committee recognizes the need to enhance collaboration between different sectors and across the continuum of care to better support patients and families as they navigate the treatment and recovery process. The present document is intended to serve as a foundation for the development of policies, practice tools, and educational resources that will enable primary care clinicians to assume a central role within this emerging provincial system of care.

Appendices

Preface

The following appendices have been provided to support clinical practice and were developed using a different methodology than the main guideline. Here, recommendations have been derived through discussion and consensus of an interdisciplinary working group convened in addition to the guideline committee. The practice guidance herein was informed by review of existing national and international evidence-based clinical practice guidelines issued by recognized addiction medicine organizations and authorities. Where appropriate, Health Canada-approved drug product monographs were consulted to ensure compliance with provincial and national safety regulations and standards for practice. Recommendations adhere to the CPSBC Professional Standards and Guidelines for Safe Prescribing of Drugs with the Potential for Misuse/Diversion (www.cpsbc.ca/files/pdf/PSG-Safe-Prescribing.pdf).

Appendix 1 Alcohol Use Screening

Universal alcohol use screening of adult and youth patients has a significant role in health promotion, as the identification of high-risk alcohol use facilitates the prevention of the wide range of alcohol-related conditions as well as AUD. This appendix provides an instructive overview of the screening process in three steps: Step 1 – Starting the Conversation, Step 2 – Screening for High-Risk Alcohol Use, and Step 3 – Assessment and Diagnosis of an AUD.

Step 1 Starting the Conversation

Introducing the topic of alcohol use to patients in a non-judgmental, conversational, and clear manner can foster a candid conversation and improve the accuracy of self-reported alcohol use. The following strategies are recommended to establish comfort and trust prior to beginning screening questions.

Use Canada's Low-Risk Alcohol Drinking Guidelines as a Communication Tool

Briefly reviewing Canada's Low-Risk Alcohol Drinking Guidelines can help guide conversations toward alcohol use screening. An example patient handout describing the low-risk drinking guidelines is provided on the next page. Clinicians should clarify what is meant by "alcoholic beverages" and standard drink sizes using the patient handout.

Sample Script:

> *"Have you heard about Canada's Low-Risk Alcohol Drinking Guidelines? I talk to all of my patients about these guidelines. They contain important information about safer alcohol use that everyone needs to know."*

Secure consent and assure the patient of the confidentiality of the conversation

Patients' reluctance to share information about their alcohol use can be a barrier to obtaining accurate screening results and establishing an effective therapeutic relationship for next steps. It is important to:

- Ask the patient's permission before screening,
- Assure the patient of the confidentiality of the information they share, and
- Emphasize that you ask all your patients about alcohol use.

Sample Script:

> *"I regularly ask my patients about alcohol and other substance use. Would it be alright for us to talk about this now?"*

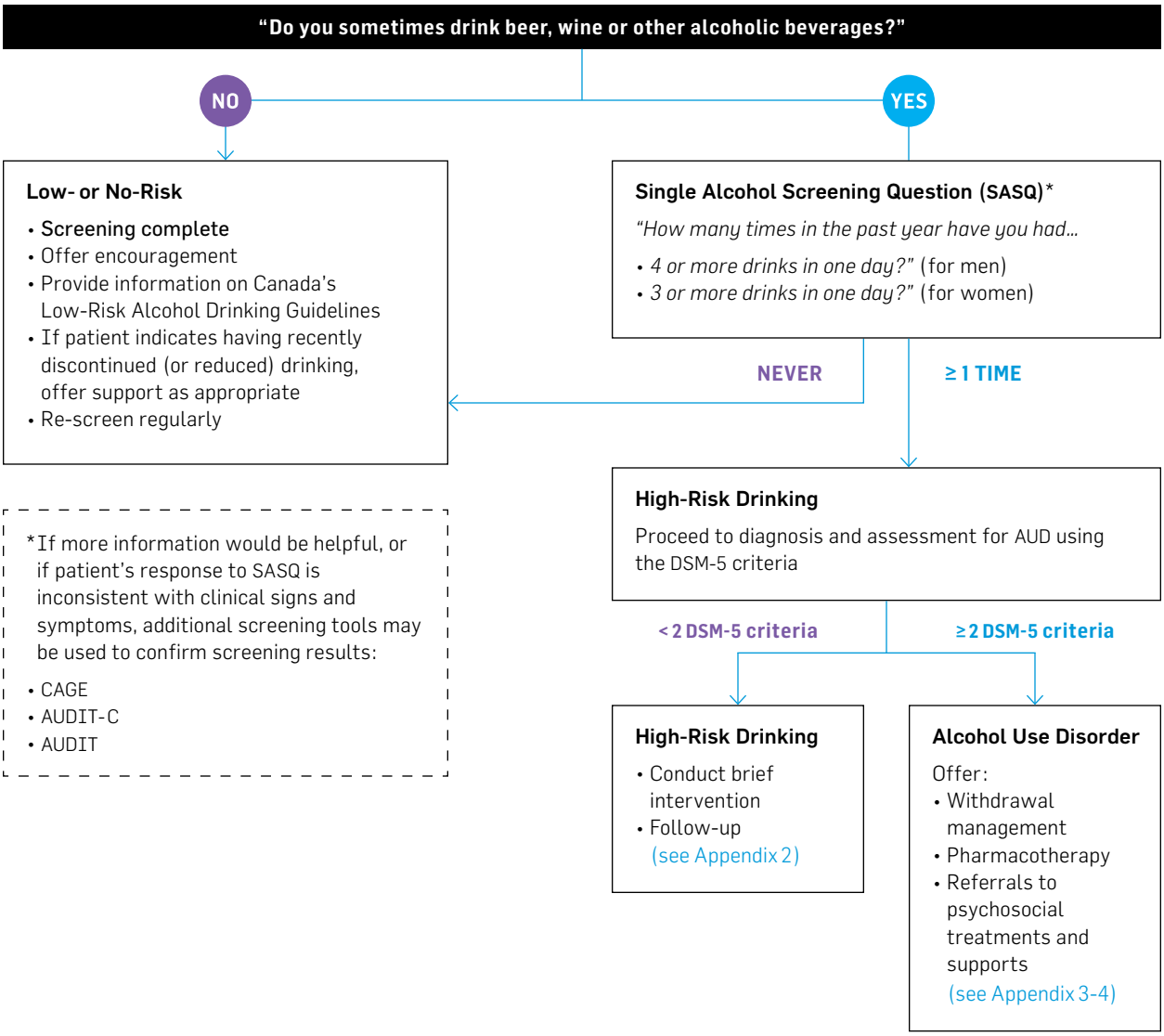
> *"Now that we've talked about some of the effects of alcohol on our health, would you mind if I ask you some questions about your alcohol use?"*

Step 2 Screening for High-Risk Alcohol Use

Alcohol Use Screening in Adult Patients

This guideline recommends single-question alcohol screening (SASQ) using the low-risk limits for adult men and women set by Canada's Low-Risk Drinking Guidelines, as illustrated below (Figure 1). If it has not already been established, clinicians should first ask if the patient occasionally drinks alcohol as a pre-screening question.

Figure 1 Alcohol Use Screening Pathway for Adult Patients



Single Alcohol Screening Question (SASQ)

> *"In the past year, how often have you consumed more than 3 drinks (women) or 4 drinks (men) on any one occasion?"*

Never:
Screening is complete.

- Offer encouragement.
- Review the low-risk limits and situations where drinking should be reduced or avoided:
  - In older adults (>65 years of age)
  - When driving, at work, and caring for children or other dependents
  - When taking medications or using substances that interact with alcohol
  - If patient has a health condition that could be exacerbated by alcohol
- For adolescent and pregnant patients, recommend abstinence.
- If patient reports not drinking, ask about their alcohol use history.
  - For patients with a personal or family history of AUD who have cut down or stopped drinking, ask about their progress and offer encouragement and support as needed.
- Re-screen annually.

One or More:
Positive result for high-risk drinking.

- Record the patient's average weekly alcohol consumption in standard drinks for follow-up appointments:
  - Ask patient: *"On average, how many days a week do you drink alcohol?"*
  - Ask patient: *"On a typical drinking day, how many drinks do you have?"*
  - (Drinking days x number of drinks per drinking day = weekly average).
- If patient responses are vague or inconsistent with clinical symptoms and signs of alcohol use, an additional screening tool can be used to assess high-risk use (e.g., CAGE, AUDIT or AUDIT-C, see Figure 1).
- Proceed to diagnosis and assessment for AUD (Step 3).

Additional validated screening tools can be used at the discretion of the treating clinician to clarify risk if responses to SASQ are unclear or inconsistent with clinical signs and symptoms of alcohol use. When indicated and feasible, working through more comprehensive screening questionnaires together can also provide patients the opportunity to reflect on their drinking and the impact it may have on their life, and for the care provider to provide feedback and answer any questions the patient may have. Several commonly used screening tools—the CAGE questions, the Alcohol Use Disorders Identification Test (AUDIT), and the AUDIT-Consumption (AUDIT-C) are described briefly below, and summarized in Table 10.

The Cut-down, Annoyed, Guilty, Eye Opener (CAGE) Tool

CAGE is an mnemonic device that stands for "Cut-down, Annoyed, Guilty, and Eye-opener".[542] The CAGE tool is frequently used in primary care due to its brevity, ease of recall, and sensitivity for detection of AUD and related problems. The CAGE tool consists of four yes/no questions as shown in Box 8 below.

Box 8 The CAGE Tool [542]

1	Have you ever felt you ought to Cut down on your drinking?
2	Have people Annoyed you by criticizing your drinking?
3	Have you ever felt bad or Guilty about your drinking?
4	Have you ever had a drink in the morning (Eye-opener) to steady your nerves or get rid of a hangover?

Using a cut-point of 2 or more "yes" responses, the CAGE has an estimated sensitivity of 84% and specificity of 85% for the detection of AUD and alcohol-related harms.[120] Some studies have reported that the CAGE has a lower sensitivity in youth, non-white, female, and older patient populations than in adult white men;[543-546] however, of available alcohol screening tools, only the CAGE appears to as effective as more complex tools (e.g., the Michigan Alcohol Screening Test or MAST) for identifying AUD in older adults, and due to its relative brevity, may be more practical to administer in routine clinical practice.[547,548]

As a standalone screening tool, the CAGE is less sensitive and specific than SASQ and the AUDIT/AUDIT-C for detecting high-risk drinking, however, when used as a follow-up for patients who screen positive to SASQ, the overall sensitivity for detection of an AUD increases to over 90%, and only requires an average of 3-4 questions to be asked per patient.[121]

The Alcohol Use Disorders Identification Test (AUDIT/AUDIT-C)

The AUDIT (see Box 9) was developed by the World Health Organization (WHO) to assist in the early identification of hazardous[p] or harmful[q] alcohol consumption, and is one of the most widely studied alcohol screening tools. The AUDIT is also frequently used as a reference standard for the evaluation of other alcohol screening tools. The AUDIT consists of 10 questions that assess alcohol consumption, symptoms of AUD, and alcohol-related harms. Each question is assigned a score of 0-4 that corresponds to frequency of occurrence, resulting in a total score ranging from 0 to 40 points. For adult patients, a score of 8 or higher indicates hazardous or harmful use. The condensed AUDIT-Consumption (AUDIT-C, Box 10) tool consists of three questions about alcohol consumption, and uses sex-specific cut-points: for adult male patients, a score of 4 or higher indicates hazardous or harmful drinking, while in adult female patients, a score of 3 or higher indicates hazardous or harmful drinking.

The 10-item AUDIT takes approximately 3 minutes, while the 3-item AUDIT-C requires approximately 1-2 minutes to administer or complete. Using a cut-point of 8, the AUDIT has an estimated sensitivity of 97% and specificity of 78% for the identification of hazardous alcohol use in general primary care populations.[120] The AUDIT-C has a sensitivity of 86% and specificity of 78% for the identification of hazardous alcohol use in general primary care populations using sex-specific cut points (women—3, men—4).[120] The AUDIT and AUDIT-C have been validated in a range of practice settings, including primary care clinics, assessment and emergency rooms, and acute care wards,[549-555] and across sexes, ethnicities and age groups, including adolescents (aged 11-18 years), young adults (aged 19-25 years), and older adults (aged 65 years and over).[128,556-560] The AUDIT and AUDIT-C can be less sensitive for the identification of high-risk drinking in women, youth, older adults and ethnic patient populations compared to white adult men.[560]

[p] *Hazardous use: A pattern of alcohol use that increases the risk of harmful physical and/or mental health consequences as well as social consequences for the individual. Hazardous use occurs in the absence of addiction or alcohol use disorder.*

[q] *Harmful use: A pattern of alcohol use associated with health consequences and/or that causes damage to health. Damage may be physical or mental. Harmful use commonly, but not invariably, has adverse social consequences, but social consequences alone are not sufficient to justify a diagnosis of harmful use. Harmful use occurs in the absence of addiction or alcohol use disorder. (ICD-10 code, previously known as "non-dependent use" in ICD-9).*

Time constraints, lack of experience, and the requirement to calculate scores have been cited by health care providers as barriers to more widespread uptake and use of AUDIT and AUDIT-C in primary care.[122,124-126] As an alternative, self-administered print and electronic versions of these tools are available and can be provided to patients to complete in advance of scheduled clinical appointments or while they are waiting to be seen. Self-administered versions of the AUDIT and AUDIT-C appear to be as effective as clinician-administered screening for the identification of hazardous or harmful alcohol use.[561]

Providers who elect to use the AUDIT or AUDIT-C in their practice should be aware that low-risk limits and standard drink sizes used in these instruments are slightly different than those used in Canada's Low-Risk Alcohol Drinking Guidelines.

Box 9 The Alcohol Use Disorders Identification Test (AUDIT)[562]

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 [Skip to Qs 9-10]
(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) 1 or 2
(1) 3 or 4
(2) 5 or 6
(3) 7, 8, or 9
(4) 10 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

Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0

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

Interpretation: Scores of 8 or higher indicate hazardous or harmful use. Proceed to diagnosis and assessment for AUD.

Total score:

Box 10 The AUDIT-Consumption (AUDIT-C) Tool [550]

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 units of alcohol do you drink on a typical day when you are drinking? (0) 1 or 2 (1) 3 or 4 (2) 5 or 6 (3) 7, 8, or 9 (4) 10 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	
Interpretation: In men, a score of 4 or more is considered positive for hazardous drinking. In women, a score of 3 or more is considered positive for hazardous drinking. If score is positive, proceed to diagnosis and assessment for AUD.	Total score:

Table 8 Comparison of Selected Alcohol Use Screening Tools (Adults)[120]

TOOL	OUTCOME	SE %	SP %	COMMENTS
SASQ	High-risk drinking	84	78	• Provider-administered in <1 min • Designed for use in a busy primary care setting • Less effective for detection of high-risk drinking and AUD than more complex screening tools, can be combined with another tool to reduce likelihood that cases will be missed • Logical flow from providing general education on Low-Risk Alcohol Drinking Guidelines to using low-risk limits as SASQ • Well suited for a general primary care population, where most patients will not screen positive
	AUD	88	67	
CAGE	AUD	84	85	• Self- or provider-administered in <2 min • More effective for identifying moderate to severe AUD than mild AUD or high-risk drinking • Not useful as a standalone screening tool, as patients with high-risk drinking could be missed • Less effective in detecting AUD in young adults, women, people of non-white ethnicity[563] • Can be used as an "ultra-brief" follow-up when patients screen positive to SASQ • Well suited for general primary care population, where most patients will not screen positive
AUDIT	Hazardous drinking	97	78	• Self- or provider-administered in 3-4 min • Well studied, has been validated in multiple settings and patient populations • Less sensitive in female patients • Uses different standard drink sizes and daily drink limits than Low-Risk Alcohol Drinking Guidelines[r] • Requires provider scoring (or an electronic health record (EHR) system or other tool to compute scores)
	Harmful drinking	95	85	
AUDIT-C	Hazardous drinking	86	78	• Self- or provider-administered in 1-2 min • Well studied, has been validated in multiple settings and patient populations • Uses different criteria and standard drink sizes than Low-Risk Alcohol Drinking Guidelines[r] • Requires provider scoring (or an EHR system or other tool to compute scores)

Alcohol Use Screening in Adolescent Patients

This guideline recommends using the NIAAA screening tool for adolescent patients (aged 11-18 years). Additional validated screening tools can be used at the discretion of the treating clinician to clarify risk if responses to the NIAAA screening questions are unclear or inconsistent with clinical signs and symptoms of alcohol use. A commonly used substance use screening tool for adolescents—the CRAFFT—is described briefly below. Performance characteristics for use of the NIAAA screening tool, the CRAFFT, and the AUDIT in adolescents are also summarized in Table 9.

[r] *AUDIT/AUDIT-C: Standard drink size = 10 g of ethanol, Low-risk limits = no more than 2 drinks per day, no more than 5 days per week; Canada's Low-Risk Alcohol Drinking Guidelines: Standard drink size = 13.45 g of ethanol, Low-risk limits = no more than 2 drinks per day (women) or 3 drinks per day (men), no more than 5 days per week.*[9,146]

The NIAAA Screening Tool[131]

The NIAAA tool is a 2-question modification of SASQ designed to identify adolescents (age 11-18 years) who are at increased risk of alcohol-related problems including AUD. The screening questions are presented below. For adolescents aged 11-14, it is recommended to first ask about alcohol use among friends as a less-threatening introduction to the topic, followed by personal use questions (i.e., question 1 then 2). For patients who are 15-18 years old, the screening questions should be asked in reversed order (i.e., question 2 then 1).

> **Question 1.** *"Have any of your friends consumed alcohol in the past year?"*
> **Question 2.** *"Have you consumed any alcohol in the past year?"*

If a patient reports that they do not consume alcohol:

- Offer encouragement and reinforce healthy choices.
- If the patient's friends drink:
  - Ask how the patient views or feels about their friends' drinking.
  - Ask about their plans or thoughts about delaying drinking until of legal age.
  - Elicit and affirm the patient's reasons for not consuming alcohol.
  - Re-screen at next visit.
- If friends do not drink:
  - Provide support for the patient's choices social circle and activities.
  - Elicit and affirm the patient's reasons for not consuming alcohol.
  - Re-screen annually.

If patient reports drinking:

- Ask patient to estimate the number of drinking days they have had in the past year and assess risk based on the following thresholds:

Age category	Risk threshold
11-15 years	Any drinking days over past year
16-17 years	6 or more drinking days over past year
18 years	12 or more drinking days over past year

- For patients who drink less than the risk threshold, highlight the risks of alcohol use and provide brief intervention to reduce risk (Appendix 2). Follow-up next visit.
- Patients who drink above the risk threshold are considered to be at increased risk of AUD. Proceed to assessment and diagnosis (Step 3).

The Car, Relax, Alone, Forget, Friends, Trouble (CRAFFT) Screening Tool[564]

The CRAFFT screening tool (Box 11) is one of the most widely used screening tool in North America for the assessment of alcohol and drug use in adolescents.[131,162,565] A score of 2 or more to the six CRAFFT questions has a sensitivity of 80% and specificity of 86% for detecting any substance use disorder[564,566] and sensitivity of 98% and specificity of 73% for AUD in adolescents.[567]

Box 11 The CRAFFT Instrument

PART A		
During the PAST 12 MONTHS, on how many days did you:		NUMBER OF DAYS
1	Drink more than a few sips of beer, wine, or any drink containing alcohol? Put "0" if none.	
2	Use any marijuana (weed, oil, or hash by smoking, vaping, or in food) or "synthetic marijuana" (like "K2," "Spice")? Put "0" if none.	
3	Use anything else to get high (like other illegal drugs, prescription or over-the-counter medications, and things that you sniff, huff, or vape)? Put "0" if none.	
Interpretation • If patient answered "0" for all questions above, ask Part B "CAR" CRAFFT question only. • If patient answered more than "0" for any of the questions above, ask all six CRAFFT questions below.		

PART B			
CRAFFT Questions — Check "NO" or "YES" in columns on right.		NO	YES
C	Have you ever ridden in a CAR driven by someone (including yourself) who was "high" or had been using alcohol or drugs?		
R	Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?		
A	Do you ever use alcohol or drugs while you are by yourself, or ALONE?		
F	Do you ever FORGET things you did while using alcohol or drugs?		
F	Do your FAMILY or FRIENDS ever tell you that you should cut down on your drinking or drug use?		
T	Have you ever gotten into TROUBLE while you were using alcohol or drugs?		
Interpretation Two or more "YES" answers to the CRAFFT questions indicate increased risk need for further assessment.			

Table 9 Comparison of Selected Alcohol Use Screening Tools (Youth) [567]

TOOL	OUTCOME	SE %	SP %	COMMENTS
NIAAA screener	High-risk use	56	92	• Takes 1-2 minutes to administer and score • Designed for use in busy primary care settings • Age-specific cut-offs improve sensitivity, but can be difficult to recall from memory • Less sensitive than CRAFFT for detection of AUD
	AUD	87	84	
CRAFFT	High-risk use	56	92	• Self- or provider-administered in 3-4 min • Screens for alcohol and drug use • Has been validated in diverse patient populations • Less sensitive for detection of high-risk drinking • Has high sensitivity for detection of AUD
	AUD	98	73	
AUDIT	High-risk use	33	99	• Self- or provider-administered in 3-4 min • Less sensitive for detection of heavy drinking or AUD among youth compared than adult populations • Uses different criteria and standard drink sizes than Low-Risk Alcohol Drinking Guidelines • Requires provider scoring (or an electronic health record (EHR) system or other tool to compute scores)

Alcohol Use Screening in Pregnancy

It is imperative that education, screening and assessment of alcohol use in pregnancy is delivered in a balanced and non-judgmental manner to prevent unintended negative consequences, such as loss to care.[4,568] Research has shown that stigma and fear of judgment is a significant barrier to accessing and staying engaged in treatment among pregnant individuals who use substances.[4]

This guideline recommends use of SASQ combined with supportive dialogue for alcohol use screening in pregnancy as described above. Structured instruments can also be used to clarify alcohol use and risk, if preferred. The AUDIT, AUDIT-C, CAGE, and CRAFFT tools have been validated in pregnant patients,[268,569] and additional screening instruments have been developed for use in pregnancy (e.g., TWEAK, T-ACE, Substance Use Risk Profile-Pregnancy) that are not reviewed in this guideline.[570-572]

For additional clinical guidance on alcohol use during pregnancy and postpartum, clinicians can refer to the Alcohol Use and Pregnancy Consensus Clinical Guidelines[4] issued by the Society of Obstetricians and Gynaecologists of Canada. The Centre of Excellence for Women's Health also has several guides to support clinicians in engaging with women and their partners on alcohol use available on their website: http://bccewh.bc.ca/2017/05/alcohol-and-pregnancy-brief-intervention-guides/.

In partnership with Perinatal Services BC, the BCCSU will be releasing prescriptive guidance for the Clinical Management of High-Risk Drinking and Alcohol Use Disorder in Pregnancy in the Fall of 2019, including recommendations and practice support tools for alcohol use screening, which will be available at the following link: http://www.bccsu.ca/clinical-care-guidance/.

Step 3 Assessment and Diagnosis of an Alcohol Use Disorder

Patients who screen positive for drinking above low-risk limits should undergo further assessment, and if appropriate, a structured interview using the DSM-5 criteria to confirm the diagnosis and severity of AUD (see Table 10 on next page). Confirmation or exclusion of an AUD, and an assessment of AUD severity and the patient's risk of complications, determines subsequent steps in the treatment pathway.

Patients who are drinking above low-risk limits but do not have an AUD should be administered a brief counselling intervention and encouraged to reduce their alcohol consumption (see Appendix 2).

Brief intervention alone is not effective for individuals with an AUD.[143] Patients who are diagnosed with an AUD should be undergo a more comprehensive assessment (see Appendix 3, Baseline Assessment), including, as appropriate and indicated: a detailed medical, mental health and substance use history; physical examination; laboratory investigations; and risk assessment for developing severe complications of withdrawal (i.e., seizures, delirium tremens; see Box 12 — Prediction of Alcohol Withdrawal Severity Scale).

All patients should be offered evidence-based treatment for AUD (see Appendix 4 — AUD Pharmacotherapy and Appendix 5 — Motivational Interviewing).

Table 10 DSM-5 Diagnostic Criteria for Alcohol Use Disorder[2]

	A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period, indicates presence of an AUD.[2]	Sample Clinical Interview Questions[573] In the past year (12 months), have you...
1	Alcohol is often taken in larger amounts or over a longer period than was intended	Had times when you ended up drinking more, or longer, than you intended?
2	There is a persistent desire or unsuccessful efforts to cut down or control alcohol use	More than once wanted to cut down or stop drinking, or tried to, but couldn't?
3	A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects	Spent a lot of time drinking? Or being sick, or getting over other aftereffects of drinking?
4	Craving, or a strong desire or urge to use alcohol	Wanted a drink so badly you found it hard to think of anything else?
5	Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home	Found that drinking, or being sick from drinking, often interfered with taking care of your home or family? Have you missed work or class due to alcohol use?
6	Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol	Continued to drink even though it was causing trouble with your family or friends?
7	Important social, occupational, or recreational activities are given up or reduced because of alcohol use	Given up or cut back on activities that were important or interesting to you, or gave you pleasure, in order to drink?
8	Recurrent alcohol use in situations in which it is physically hazardous	More than once, gotten into situations while or after drinking that increased your chances of being harmed, such as drinking and driving, or having unplanned or unsafe sex?
9	Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol	Continued to drink even though it was making you feel depressed or anxious, or adding to another health problem? Or, continued drinking after having a memory blackout?
10	Tolerance, as defined by either of the following: a) A need for markedly increased amounts of alcohol to achieve intoxication or desired effect b) A markedly diminished effect with continued use of the same amount of alcohol	Had to drink much more than you once did to get the effect you want? Or found that your usual number of drinks had much less effect than before?
11	Withdrawal, as manifested by either of the following: a) The characteristic withdrawal syndrome for alcohol b) Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms	Found that when the effects of alcohol were wearing off, you had withdrawal symptoms, such as trouble sleeping, shakiness, restlessness, nausea, sweating, a racing heart, or a seizure? Or sensed things that were not there?

Severity: MILD: presence of 2-3 symptoms, MODERATE: presence of 4-5 symptoms, SEVERE: presence of 6 or more symptoms.

Modifiers for the diagnosis include:

- **Early remission:** After full criteria for AUD were previously met, none of the criteria for AUD have been met (with the exception of craving) for at least 3 months but less than 12 months.
- **Sustained remission:** After full criteria for AUD were previously met, none of the criteria for AUD have been met (with the exception of craving) during a period of 12 months or longer.
- **Controlled environment:** If the individual is in an environment where access to alcohol is restricted.

Appendix 2 Brief Intervention for High Risk Drinking

This guideline recommends that clinicians administer a brief intervention (BI) to all adult and youth patients who screen positive for high-risk drinking to support behavioural change to reduce alcohol consumption. BI is a brief or ultra-brief variant of motivational interviewing (MI), an evidence-based psychosocial treatment intervention (see Appendix 5).[144] BIs are typically structured using the FRAMES approach (Table 11).[144,146]

Table 11 The FRAMES Model for MI-Based Brief Interventions[144,146]

Feedback	Provide individualized *feedback* on screening or assessment results. Asking open-ended questions about how the patient feels or thinks about the feedback can aid discussion.
Responsibility	Using a strengths-based, patient-centred approach, emphasize that *responsibility* for making the choice to change behaviour ultimately rests with the individual.
Advice	Seek permission from the patient first before giving advice. Provide clear *advice* that cutting down or stopping alcohol use will reduce risk of future problems. Many patients are unaware that their current drinking patterns could potentially lead to health or other problems, or make existing problems worse. Increased awareness of their personal risk can provide reasons to consider changing behaviour.
Menu	Review a *"menu"* of different options for reducing alcohol use and encourage patient to choose the strategies that they feel best fit their circumstances and needs. Providing choice reinforces a patient's sense of control and responsibility and can strengthen motivation to change. Using a shared-decision making framework, set goals that are realistic and meaningful to the patient.
Empathic	Use a warm, *empathic* counseling style, which involves listening, understanding, and reflecting that understanding back to the patient (e.g., "reflective listening"), and is associated with improved BI outcomes.
Self-Efficacy	Encourage and reinforce the patient's *self-efficacy* and confidence in their ability to change. Individuals who believe that they can make changes are much more likely to do so than those who feel powerless or helpless to change their behaviour.

The 5As Model for Brief Alcohol Interventions

The 5As model is widely used in primary care and other clinical settings to support behavioural change, including dietary changes, exercise plans, smoking cessation, and substance use.[48,148] Guidance for adapting the 5As approach as a brief alcohol intervention is provided below.[574-576]

Ask	Screen and document alcohol use for every patient. Identify individuals who are drinking above low-risk limits. (See Appendix 1)
Advise	Inform patient of screening result and provide advice to reduce or stop drinking
Assess	Assess patient's willingness to change their drinking behaviour
Assist	For the patient willing to reduce or stop alcohol use, provide a menu of treatment and support options, and collaboratively set treatment goals and plans
Arrange	Schedule a follow-up and/or referral

Ask

The first step of the 5As intervention is asking patients about their alcohol use—screening—which is covered in Appendix 1.

Advise

Clearly describe the screening result and its implications on the patient's health, and provide direct personalized recommendations. Where possible, relay relevant health risks in reference to patient's concerns, laboratory investigations, and medical findings (e.g., anxiety, insomnia, liver function tests, gastroesophageal reflux disease, blood pressure).

Sample Script:

> *"You are drinking more than is medically safe.*
> *I think your drinking is putting your health at risk and is not good for you."*
> *"I strongly recommend that you cut down or stop drinking."*

Assess

Engage patient in a brief conversation to assess their motivation and ability to reduce or discontinue their alcohol use at this time.

Sample Questions:

> *"Are you willing to consider making changes in your drinking?"*
> *"How do you feel about my recommendation? Do you have any questions?"*
> *"What do you think? Would that work for you? Does that make sense?"*

Assist

If patient expresses readiness to change:

- Express your support and offer encouragement.
- Affirm your confidence in patient's motivation and ability to change.
- Collaboratively set goals that are meaningful to the patient. Goals do not have to be limited to reducing or stopping alcohol use.
- Agree on a specific plan and a change date or schedule.
- In line with the patient's goals, provide a menu of options, including pharmacotherapy, psychosocial interventions, recovery-oriented and community-based supports.
- Provide educational material and referrals to social supports and community resources.
- Schedule a follow-up visit.

If patient does not express readiness to change:

- Restate your concern about patient's health.
- Ask about any barriers to change the patient may be experiencing, and invite the patient to consider how these could be navigated.
- Encourage the patient to take time to reflect on the conversation.
- Reaffirm your willingness to support when patient is ready.
- Offer educational material and referrals to relevant health care and community resources.
- Follow-up. Repeat screening and brief intervention regularly.

Arrange

Schedule follow-up visits at the end of a screening and brief intervention session. In follow-up visits, document alcohol use and assess if patient has been able to meet and sustain planned goals.

If patient has met planned intervention goal:

- Congratulate, reinforce, and support continued change.
- Coordinate care with referral partners if the patient has accessed additional support. Communicate with external/community agencies on patient's progress.
- Assess and address any co-occurring medical conditions and mental health symptoms (e.g., insomnia, depression, anxiety) noting that these may improve with reduction in alcohol use.
- Set new goals and schedule follow-up appointments.

If patient has been unable to meet planned intervention goal:

- Acknowledge that change is difficult.
- Relate drinking to problems a patient may be experiencing (e.g., health, psychological, social) as appropriate.
- If the following measures are not already being taken, consider:
  - Referring patient to external or community-based resources (e.g., peer support groups).
  - Recommending the involvement of family (if appropriate).
  - Offering pharmacotherapy to patients with AUD.
  - Reassessing or adjusting current treatment.
- Continue to assess and address any co-occurring medical conditions and mental health symptoms (e.g., insomnia, depression, anxiety).
  Note: Pharmacological management of depression and anxiety is less effective while the patient continues to use alcohol.
- Schedule follow up appointments.

Additional Resources

The Public Health Agency of Canada hosts a video series on brief interventions to support behavioural change, including safer alcohol use, using the 5As and the 5Rs (Relevance, Risks, Rewards, Roadblocks, Repetition) models. Available at: https://www.canada.ca/en/public-health/services/chronic-diseases/videos-on-supporting-behaviour-change.html.

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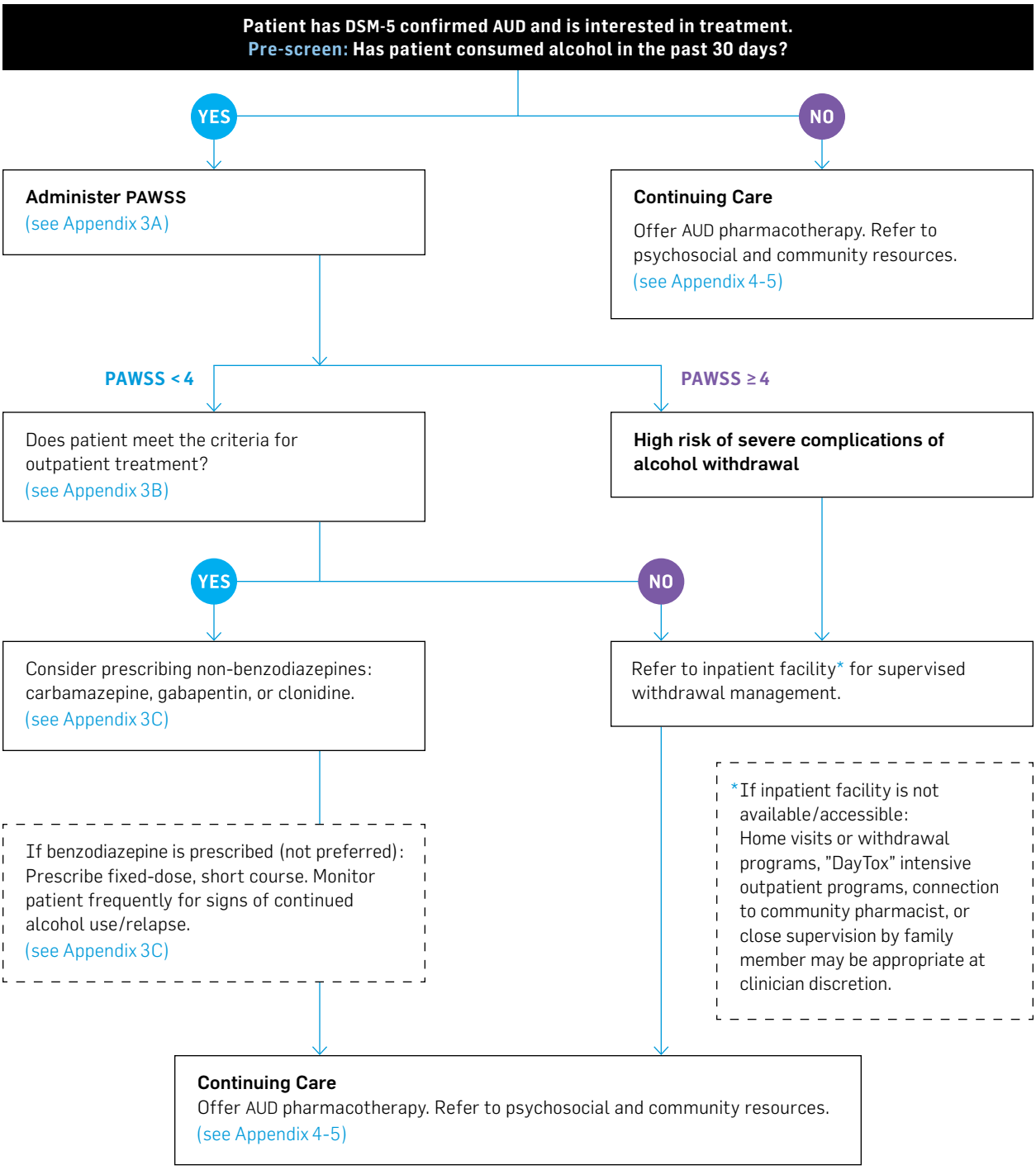
Appendix 3 Withdrawal Management

Figure 2 Withdrawal Management Pathway for Adult Patients



A. Assessment Tools

Box 12 Prediction of Alcohol Withdrawal Severity Scale (PAWSS)[195]

PART A: THRESHOLD CRITERIA — Yes or No, no point	
Have you consumed any amount of alcohol (i.e., been drinking) **within the last 30 days**? **OR** Did the patient have a positive (+) blood alcohol level (BAL) on admission?	
If the answer to either is YES, proceed to next questions.	
PART B: BASED ON PATIENT INTERVIEW — 1 point each	
1	Have you been recently **intoxicated/drunk**, within the last 30 days?
2	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)
3	Have you **ever** experienced any previous episodes of alcohol withdrawal, regardless of severity?
4	Have you **ever** experienced blackouts?
5	Have you **ever** experienced alcohol withdrawal seizures?
6	Have you **ever** experienced delirium tremens or DTs?
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) greater than 200mg/dL? (SI units 43.5 mmol/L)* **OR** *Have you consumed any alcohol in the past 24 hours?
10	Is there any evidence of increased autonomic activity? e.g., heart rate >120 bpm, tremor, agitation, sweating, nausea

*Due to the common absence of a BAL the committee has added this modification. Please see next page.

Interpretation

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 (AWS).

A score of ≥4 suggests HIGH RISK for moderate to severe (complicated) AWS; prophylaxis and/or inpatient treatment are indicated.

An online version of the original (unmodified) PAWSS can be found at: https://www.mdcalc.com/prediction-alcohol-withdrawal-severity-scale.

Remarks and Cautions

The PAWSS has not been validated in outpatient care settings, or in youth or pregnant patient populations. While this guideline endorses the usefulness of the PAWSS for risk assessment in all settings and populations, it emphasizes that, when making clinical decisions, **this tool should be used in conjunction with best clinical judgment based on a comprehensive assessment of a patient's medical history, current circumstances, needs, and preferences.**

Modifications

Question 9 — Blood Alcohol Level (BAL)

The vast majority of outpatient care settings will not be equipped to assess BAL at the point-of-care. As an alternative, the committee recommends that the PAWSS administrator ask patients:

> *Have you consumed any alcohol in the past 24 hours?*

Based on rates of alcohol metabolism and elimination in humans,[577] it is very unlikely that a patient who has not consumed alcohol in the past 24 hours would have a BAL greater than 200 mg/dL. While any alcohol consumption in the past 24 hours is a conservative measure of BAL > 200 mg/dL (i.e., this low threshold may over-identify those at risk), it is the consensus of the committee that the benefits of identifying individuals at risk of severe complications outweigh the risk of false negatives for this questionnaire item.

Alternatively, if a portable breath alcohol concentration device (i.e., a "breathalyzer") is available, breath alcohol concentration can be used in place of BAL. Research indicates that breath alcohol concentration is strongly correlated with BAL.[578,579]

Qualifiers

The following questionnaire items should be clearly understood by the PAWSS administrator and defined for the patient to maximize the accuracy of results.

Question 4 — Blackouts

Blackouts are transient episodes of retrograde amnesia typically **without loss of consciousness** that accompany various degrees of alcohol intoxication.[195] Blackouts can be an indicator of severe intoxication or long-term alcohol use, as a considerable degree of alcohol tolerance is required to ingest the amount of alcohol that could trigger a subsequent episode of amnesia without loss of consciousness.[195] The PAWSS administrator should clearly distinguish between alcohol-related blackouts and loss of consciousness (i.e., "passing out") as they pose the question to the patient.

Question 5 — Withdrawal Seizures

Withdrawal seizures are typically generalized and brief tonic-clonic seizures that occur 6-48 hours after reduction or discontinuation of alcohol use.[210] Patients may mistake other experiences, such as tremor, for a seizure; it is important to define what is meant by a withdrawal seizure and differentiate it from other withdrawal symptoms. Patients with AUD are at increased risk of idiopathic epilepsy or seizure for other reasons,[580,581] so the PAWSS administrator should clearly define withdrawal seizures as those that occur within 1-2 days of ceasing or greatly reducing alcohol use.

Question 6 — Delirium Tremens (DTs)

Delirium tremens is a severe consequence of alcohol withdrawal that requires immediate hospitalization and management; if left untreated, the risk of death is approximately 3-5%.[582] Symptoms include profound disorientation, confusion and agitation, accompanied by severe autonomic hyperactivity.[582] In colloquial language, delirium tremens or "DTs" has come to loosely represent general symptoms of alcohol withdrawal. The PAWSS administrator should clearly distinguish delirium tremens from other withdrawal symptoms to avoid false positive results.

Box 13 Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar)[203]

Patient _____ Date _____ Time _____
(24 hour clock, midnight = 00:00)

Pulse or heart rate, taken for one minute _____ Blood Pressure _____

Nausea and Vomiting

Ask *"Do you feel sick to your stomach? Have you vomited?"* Observation.

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, pins and needles sensations, any burning, any numbness, or do you feel bugs crawling on or under your skin?"* Observation.

0 none
1 very mild itching, pins and needles, burning or numbness
2 mild itching, pins and needles, burning or numbness
3 moderate itching, pins and needles, burning or numbness
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

Tremor

Arms extended and fingers spread apart. Observation.

0 no tremor
1 not visible, but can be felt fingertip to fingertip
2
3
4 moderate, with patient's arms extended
5
6
7 severe, even with arms not extended

Auditory Disturbances

Ask *"Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?"* Observation.

0 not present
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

Observation.

0 no sweat visible
1 barely perceptible sweating, palms moist
2
3
4 beads of sweat obvious 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?"* Observation.

0 not present
1 very mild sensitivity
2 mild sensitivity
3 moderate sensitivity
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

Continue to next page

Box 13 (Continued)

Anxiety Ask *"Do you feel nervous?"* Observation. 0 no anxiety, at ease 1 mild 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	**Headache, Fullness in Head** Ask *"Does your head feel different? Does it feel like there is a band around your head?"* Do not rate for dizziness or lightheadedness. Otherwise, rate severity. 0 not present 1 very mild 2 mild 3 moderate 4 moderately severe 5 severe 6 very severe 7 extremely severe
Agitation Observation. 0 normal activity 1 somewhat more than normal activity 2 3 4 moderately fidgety and restless 5 6 7 paces back and forth during most of the interview, or constantly thrashes about	**Orientation and Clouding of Sensorium** 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 disoriented for date by no more than 2 calendar days 3 disoriented for date by more than 2 calendar days 4 disoriented for place/or person
The CIWA-Ar is not copyrighted and may be reproduced freely. This assessment for monitoring withdrawal symptoms requires approximately 5 minutes to administer. The maximum score is 67 (see instrument). Patients scoring less than 10 do not usually need additional medication for withdrawal.	Total CIWA-Ar Score _____ Rater's Initials _____ Maximum Possible Score 67

Interpretation

Score	Severity
0-9	Very mild withdrawal
10-15	Mild withdrawal
16-20	Moderate withdrawal
>20	Severe withdrawal

Notes

- Training is required to administer this tool accurately; a regular audit and feedback process is recommended to ensure intra- and inter-rater variability is within an acceptable range.[583,584]
- This tool should be used in conjunction with best clinical judgment when making decisions on appropriate medication protocols, schedules, and dosages.
- Due to the need for a clinical interview, the CIWA-Ar is not appropriate where there is a language barrier or if the patient is cognitively impaired, delirious, or displaying a decreased level of consciousness.[204]

Box 14 Short Alcohol Withdrawal Scale (SAWS)[205]

Please put a tick in the boxes to show how you have been feeling for all of the following conditions **in the last 24 hours**.				
	NONE 0 points per check	MILD 1 point per check	MODERATE 2 points per check	SEVERE 3 points per check
Anxious				
Sleep disturbance				
Problems with memory				
Nausea				
Restless				
Tremor (shakes)				
Feeling confused				
Sweating				
Miserable				
Heart pounding				

Interpretation

Score	Severity
< 12	Mild withdrawal
≥ 12	Moderate to severe withdrawal

Notes

- The SAWS tool is suitable for self-assessment. It may be completed by the patient or a clinician to assess symptoms of mild to moderate alcohol withdrawal.
- The SAWS may be used as a standalone tool or as supplement to CIWA-Ar for patients who require more frequent assessment.

B. Selecting the Appropriate Care Setting

Patient Criteria for Outpatient Alcohol Withdrawal Management [212,213]

- PAWSS score <4 (see Box 12)
- Absence of contraindications including, but not limited to:
  - Severe or uncontrolled comorbid medical conditions (e.g., diabetes, COPD, heart disease, decompensated cirrhosis)
  - Acute confusion or cognitive impairment
  - Acute illness or infection requiring medical intervention
  - Co-occurring serious psychiatric symptoms or disorders (e.g., suicidal ideation, psychosis)
  - Chronic or complex pain disorders
  - Co-occurring severe substance use disorders (excluding tobacco)
  - Pregnancy
- Ability to attend daily medical visits for first 3-5 days, and alternating day visits thereafter
  - For patients and/or practices in rural or remote areas where daily in-person visits are not feasible, remote follow-up options such as telemedicine, or secure phone or video calls, are acceptable alternatives (but see notes below)
- Ability to take oral medications
- Has a reliable family member or community-based contact who can monitor symptoms during acute withdrawal period (i.e., 3-5 days) and support adherence to medications (see notes below)
- Any other medical or social condition that, in the treating clinician's best judgment, would present serious risks to patient safety if alcohol withdrawal was managed on an outpatient basis

Additional Considerations

- Patients who do not have support from family or community should not be denied treatment; inpatient treatment should be considered as an alternative. If inpatient care is not an option due to patient preference or scarcity of beds, patients with insufficient social supports should be accommodated and treated through alternative strategies such as supplementary follow-up visits and/or connection to local pharmacist.
- In communities where medically-supervised home withdrawal management programs are available, primary care follow-ups can be supplemented by home visits as appropriate.
- Intensive outpatient withdrawal management programs (e.g., "DayTox") may also be an option in some communities.
- A patient's track record of adherence to clinical recommendations should be considered as a factor in this decision.

C. Prescribing Pharmacotherapy for Outpatient Withdrawal Management

Baseline Assessment and Preparation

- Confirm DSM-5 diagnosis of AUD (see Table 10).
- Conduct physical and mental health assessment to determine appropriate setting and pathway for withdrawal management. See previous page for criteria for outpatient withdrawal management.
- Obtain a complete substance use history including assessment for tobacco and other substance use disorders. Identify any concurrent use of CNS depressants (e.g., opioids, benzodiazepines, Z-drugs, other sedatives).
- Conduct a nutritional assessment and advise on supplementation. Assess and provide advice to correct fluid imbalances and electrolyte deficiencies. It is recommended that all patients with AUD receive multivitamin supplementation including thiamine (100mg), folic acid (1mg), and vitamin B6 (2mg).[585]

  Note: BC PharmaCare does not provide benefit coverage for over-the-counter vitamins or supplements.
- Review patient's record on PharmaNet to assess for potential drug-drug interactions and contraindications with concomitant prescriptions.

  Note: A PharmaNet review is required if benzodiazepines are prescribed for withdrawal management. Please refer to the College of Physicians and Surgeons of BC's *Professional Standards and Guidelines for Safe Prescribing of Drugs with the Potential for Misuse/Diversion:* https://www.cpsbc.ca/files/pdf/PSG-Safe-Prescribing.pdf.
- Identify and address the risk of impaired driving.

  Note: Section 230 of the Motor Vehicle Act (MVA) requires that physicians and nurse practitioners file a report with RoadSafetyBC if any patient who has a medical condition that makes it dangerous for them to drive continues to do so against medical advice. For more information, please refer to: https://www2.gov.bc.ca/assets/gov/driving-and-transportation/driving/publications/reporting-a-condition-fact-sheet-for-doctors.pdf.
- Patients undergoing withdrawal management should be advised not to drive or operate machinery until treatment is complete and symptoms are resolved.

Laboratory Investigations

The following tests may be ordered to assess general health, alcohol-related comorbidities, and other conditions that could impact pharmacotherapy selection:

- Complete blood count (CBC), serum electrolytes, glucose, liver function and renal function panels.
- Pregnancy test for patients of childbearing capacity.
- Electrocardiogram (ECG) for patients with cardiac disease or a history of arrhythmia or syncope.
- Chest x-ray for patients with chronic respiratory problems or respiratory symptoms.

Note: Treatment should be initiated immediately whenever possible, and should not be delayed by waiting for laboratory test results unless patient safety would be compromised.

Pharmacotherapy Options

This appendix lists medications for withdrawal management in order of supporting evidence; it does not stratify treatments in terms of first- and second-line options. Prescribers should select the most appropriate medication for a particular patient based on their medical history, circumstances, and preferences.

Of note, while the efficacy of benzodiazepines for withdrawal management is supported by the largest body of evidence, this guideline recommends non-benzodiazepine pharmacotherapies for outpatient withdrawal management due to their superior safety profile.

To facilitate decision making, this appendix includes profiles of each alcohol withdrawal medication reviewed in this guideline, including sample dosing protocols. With the exception of benzodiazepines, which include Health-Canada approved medications for AUD (chlorazepate,[586] diazepam,[257] and oxazepam[587]), use of the medications reviewed below would be considered "off-label". As with any medication that is being prescribed off-label, it is important to conduct a full assessment including carefully reviewing concomitant medications for potential drug-drug interactions, and documenting patient consent in their chart. All five medications are eligible for full coverage through PharmaCare drug benefits Plan C, Plan W and Fair PharmaCare. None are covered by Plan G for treatment of alcohol withdrawal.

As comparative safety and efficacy of off-label pharmacotherapies has not been fully established in adolescent, pregnant, older adult, or more complex patient populations (e.g., concurrent medical conditions, co-occurring mental health and substance use disorders), prescribing these medications in these cases would be at the clinician's discretion following a careful assessment of risks, benefits, drug-drug interactions and contraindications (particularly for pregnant individuals). Clinicians are encouraged to call the Rapid Access to Consultative Expertise (RACE) line to speak with an addiction medicine specialist for additional information and case-specific guidance:

RACE™

Vancouver Area: 604-696-2131
Toll Free: 1-877-696-2131
Hours of operation are Monday to Friday, 0800-1700
www.raceconnect.ca

Contraindications, cautions, and side effects have been abstracted from clinical trials and supplemented with data from Health Canada-approved product monographs for specific clinical indications. For medications prescribed off-label, duration and dosages differ from those used for indicated conditions (e.g., seizure disorders, hypertension). Clinicians must be aware of these differences when prescribing off-label medications for alcohol withdrawal.

<table>
<tr><th colspan="2">Benzodiazepines[257]</th></tr>
<tr><td>Contraindications</td><td>1. Severe respiratory insufficiency
2. Hepatic disease
3. Sleep apnea
4. Myasthenia gravis
5. Narrow angle glaucoma</td></tr>
<tr><td>Cautions</td><td>1. Lactose intolerance
2. Renal impairment
3. Breast feeding
4. Potential for non-medical use, diversion, and dependence</td></tr>
<tr><td>Side Effects</td><td>• The most common side effects of benzodiazepines are drowsiness and dizziness.
• Less common side effects include changes in skin colour, nausea, headache, blurred vision, tremors, hypotension, GI disturbances, and memory loss.</td></tr>
<tr><td>Coverage</td><td>Benzodiazepines are eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C and W.</td></tr>
<tr><td>Concurrent Alcohol Use</td><td>Benzodiazepines potentiate the effects of alcohol; concurrent alcohol use can result in serious safety risks including oversedation, falls, delirium, respiratory depression (e.g., non-fatal or fatal overdose), and need for prolonged hospitalization.</td></tr>
<tr><td>Safety Considerations</td><td>• If benzodiazepines are selected for outpatient withdrawal management, consider a fixed dosing schedule to limit risks. Benzodiazepines should be discontinued after withdrawal symptoms have resolved (typically 5-7 days).
• All patients and families should be aware of the risk of dependence and tolerance, and receive education on safe use, the signs of an overdose, and emergency contact information.
• Where appropriate, consider the following strategies to reduce risk: daily dispensing from a pharmacy, involving family members or caregivers to administer medication and monitor patient response, frequent follow-up visits, or daily check-ins by phone.</td></tr>
<tr><td>Sample Dosing Protocol[207,212]</td><td>Example four-day fixed and flexible protocols for diazepam (Valium)

<table>
<tr><th>SCHEDULE</th><th>DAY 1</th><th>DAY 2</th><th>DAY 3</th><th>DAY 4</th></tr>
<tr><td>Fixed</td><td>10 mg QID</td><td>10 mg TID</td><td>10 mg BID</td><td>10 mg at bedtime</td></tr>
<tr><td>Flexible*</td><td>10 mg every 4 to 6 hours as needed based on symptoms**</td><td>10 mg every 6 to 8 hours as needed</td><td>10 mg every 12 hours as needed</td><td>10 mg at bedtime as needed</td></tr>
</table>
* Flexible dose schedules should only be prescribed to patients with proven reliability and adherence to clinical recommendations. Enlisting family members or caregivers to assess symptom severity and dispense medication is recommended.
** Symptoms: Pulse rate >100 beats per minute, diastolic BP >90 mmHg, or signs of withdrawal.
Abbreviations: QID – four times per day, TID – three times per day, BID – two times per day.</td></tr>
</table>

<table>
<tr><th colspan="2">Carbamazepine</th></tr>
<tr><td>Contraindications[244]</td><td>1. Hypersensitivity to carbamazepine or other components in the tablets
2. Hepatic disease
3. Bone marrow depression
4. Serious blood disorder
5. Atrioventricular heart block</td></tr>
<tr><td>Cautions[244]</td><td>• Carbamazepine use has been associated with rare blood dyscrasias and Stevens Johnson Syndrome, which usually develops within the first few months of taking this medication.
• Since the onset of potentially serious blood dyscrasias may be rapid, patients should be informed of early toxic signs of a potential hematological problem.
• Patients should be advised to immediately consult their physician if they experience reactions such as fever, sore throat, rash, ulcers in the mouth, easy bruising, or if petechial or purpuric hemorrhage appear.
• Patients of Asian ethnicity are at increased risk of carbamazepine toxicity due to higher prevalence of the HLA-B*1502 allele. Genetic testing to exclude those at high-risk must be performed before prescribing to this patient population. Consultation with a pharmacist is recommended.</td></tr>
<tr><td>Side Effects[237]</td><td>• The most commonly reported side effects are dizziness, pruritus, ataxia, headache, drowsiness, nausea.
• Side effects are often minor and temporary, but can occur in up to 18% of patients.</td></tr>
<tr><td>Coverage</td><td>Carbamazepine is eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C and W.</td></tr>
<tr><td>Concurrent Alcohol Use</td><td>No safety risk if used concurrently with alcohol.</td></tr>
<tr><td>Safety Considerations[237,244,245]</td><td>• Conduct a critical risk-benefit appraisal when considering carbamazepine in patients with a history of cardiac, hepatic or renal damage, adverse hematological reactions to other drugs, or previously interrupted treatments with carbamazepine. A comprehensive clinical assessment including appropriate laboratory investigations should be conducted prior to treatment initiation.
• A CBC including platelets and possibly reticulocytes and serum iron should be requested to ensure healthy bone marrow function prior to prescribing carbamazepine. If low platelet counts are observed, the patient should be monitored closely.
• Patients should also be aware of symptoms of dermatological or hepatic reactions. In addition to baseline testing, hepatic function in elderly patients and patients with a history of liver disease must be monitored in the course of treatment.
• Prescribers should review carbamazepine's drug-drug interactions with a pharmacist or other source when considering this medication for alcohol withdrawal management.</td></tr>
<tr><td>Sample Dosing Protocol[238-243,588,589]</td><td>
<table>
<tr><th>Day 1</th><th>Day 2</th><th>Day 3</th><th>Day 4-5</th></tr>
<tr><td>Start with 200 mg QID</td><td>Taper down to 200 mg TID</td><td>200 mg BID</td><td>200 mg OD</td></tr>
</table>
Note: This protocol applies to immediate-release (IR) tablets. For withdrawal management, most clinical trials have used a standard tapered 5-day regimen. There is no PRN regimen for this medication.
Abbreviations: PRN – as needed/when necessary, QID – four times per day, TID – three times per day, BID – two times per day, OD – once daily.
</td></tr>
</table>

Gabapentin	
Contraindications[244,258]	Hypersensitivity to gabapentin
Cautions[258]	Renal impairment – Gabapentin is eliminated solely by renal excretion. Dosage adjustments are recommended for patients with renal impairment (including elderly patients with declining renal function) and patients undergoing hemodialysis.
Side Effects[258]	The most common side effects are ataxia, slurred speech, and drowsiness.
Coverage	Gabapentin is eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C and W.
Concurrent Alcohol Use[258,261]	A higher-than-therapeutic dose and concurrent alcohol or opioid use increases the risk of respiratory depression, profound sedation, syncope, and death. Patients who continue to use alcohol or other CNS depressants should be observed closely for signs and symptoms of CNS depression, and the dose of gabapentin may need to be adjusted accordingly. **Note:** Studies suggest concomitant use of alcohol and gabapentin at therapeutic doses does not increase sedation or motor impairment.
Safety Considerations[258]	• Patients with compromised respiratory function, respiratory or neurological disease, renal impairment and the elderly are at higher risk of experiencing severe adverse effects on the CNS including sedation, somnolence, loss of consciousness as well as serious cases of respiratory depression. • Gabapentin is eliminated primarily by renal excretion; dosage adjustment may be required in elderly patients and patients with renal impairment. • Prescribers should review gabapentin's drug-drug interactions when considering this medication for alcohol withdrawal management.
Sample Dosing Protocol[261]	**Note:** This protocol applies to immediate-release (IR) tablets. • Start with 300 mg TID + additional 300 mg PRN + 600 mg to 1200 mg HS. • Titrate quickly to 600 mg TID + 600 mg to 1200 mg HS as tolerated. • If symptoms persist, an additional 300 mg TID PRN + 600 mg to 1200 mg HS PRN can be prescribed. **Do not exceed daily dose of 3600 mg.** • On resolution of acute withdrawal symptoms, taper to 600 mg TID + 600 mg to 900 mg HS. • Taper to zero over next 3-5 days, decreasing dose by 600 mg daily. **Abbreviations:** TID – three times per day, PRN – as needed/when necessary, HS – at bedtime. **Clinical Tip:** To determine whether any additional gabapentin is needed for treatment of breakthrough withdrawal symptoms, the patient can be instructed to use the Short Alcohol Withdrawal Scale (SAWS) to determine PRN dosing (see Box 14). Regardless of whether the patient is at 300 mg or 600 mg TID regular, additional doses of gabapentin 300 mg TID PRN can be taken if SAWS scores are ≥12 and/or the patient is experiencing craving, insomnia, or irritability.

Clonidine (adjunct treatment)	
Contraindications[244,259]	1. Sinus node function impairment 2. Severe bradyarrhythmia 3. Galactose intolerance
Cautions[259]	May cause hypotension in patients with a history of low blood pressure.
Side Effects[259]	The most common side effects include hypotension, dry mouth, dizziness, fatigue, headache, nausea, vomiting, constipation, malaise, sleep disorder, sedation, and erectile dysfunction.
Coverage	Clonidine is eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C and W.
Concurrent Alcohol Use[259]	Clonidine and alcohol can have additive effects in lowering blood pressure. If consumed together, patients may experience headache, dizziness, light-headedness, fainting, and/or changes in pulse or heart rate.
Safety Considerations[256,259]	• As a standalone treatment, clonidine should only be used for treating mild-moderate withdrawal symptoms in patients at low risk of severe complications. Clonidine is more often prescribed as an adjunct treatment. • Safe to use with benzodiazepines or other anticonvulsants (gabapentin, carbamazepine, valproic acid) as an adjunct treatment for alcohol withdrawal. • Patients and families should receive education on the signs and symptoms of hypotension.
Sample Dosing Protocol[254,256]	• Starting dose is 0.1 mg to 0.2 mg BID. • To ensure blood pressure control during sleep, it is recommended that the last dose of the day be taken immediately before retiring. • Daily dose can be increased in increments of 0.2 mg according to patient response and tolerance. • Final dosage of clonidine ranges from 0.1 mg to 0.6 mg BID. Abbreviations: BID – two times per day.

Valproic Acid	
Contraindications[244,260]	1. Mitochondrial disease 2. Hepatic disease or dysfunction 3. Urea cycle disorders
Cautions[260]	1. Pregnant patients or patients intending to become pregnant 2. Older adults (≥65 years)
Side Effects[260]	The most common side effects are hypotension, dry mouth, dizziness, fatigue, headache, nausea, vomiting, constipation, malaise, sleep disorder, sedation, and erectile dysfunction.
Coverage	Valproic acid is eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C and W.
Concurrent Alcohol Use[260]	No significant safety risk if taken concurrently with alcohol.
Safety Considerations[260]	• Due to limited evidence of efficacy, valproic acid should be considered only when all other withdrawal pharmacotherapy options are contraindicated. • Extreme caution should be exercised when considering valproic acid for pregnant patients or individuals with childbearing capacity due to the risk of dose-dependent teratogenic effects such as spina bifida. • Conservative dosing is recommended for older adults (≥65 years of age.) • Prescribers should review valproic acid's drug-drug interactions when considering this medication for alcohol withdrawal management.
Sample Dosing Protocol[590,591]	**If CIWA <10 prior to treatment:** • Start at 250 mg TID for 5 days • If withdrawal symptoms persist, titrate to 500 mg TID for days 1-3 • Once stabilized, then 250 mg TID for days 4-5 • Discontinue medication on day 6 **If CIWA ≥10 prior to treatment:** • Start at 500 mg TID for days 1-3 • Reduce to 250 mg TID for days 4-5 • Discontinue medication on day 6 **Note:** Published dosing protocols for valproic acid use symptom-triggered schedules based on CIWA-Ar score (see Box 13). **Abbreviations:** TID – three times per day.

Appendix 4 AUD Pharmacotherapy

This guideline recommends naltrexone and acamprosate as first-line pharmacotherapies for AUD. In addition to other individual factors, selection between these medications depend on patient's treatment and recovery goals. Naltrexone is recommended for patients with a goal of abstinence or reduced drinking, and acamprosate is recommended for patients who have a goal of abstinence (see Figure 3). This appendix provides dosing instructions and practical considerations to facilitate treatment selection and administration.

This appendix also offers information to support selection of alternative pharmacotherapies — topiramate, gabapentin, and disulfiram — if first-line medications are contraindicated, not effective or not preferred (see Figure 3). With the exception of disulfiram, which is a Health-Canada approved medication for AUD, use of these alternative medications would be considered "off-label". As with any medication that is being prescribed off-label, it is important to conduct a full assessment including carefully reviewing concomitant medications for potential drug-drug interactions, and documenting patient consent in their chart.

In the event that a baseline assessment has not been performed previously (i.e., if patient is initiating pharmacotherapy while actively drinking and/or without first completing withdrawal management), the Baseline Assessment and Preparation section of Appendix 3 should be followed.

All five medications reviewed in this appendix are eligible for full coverage through PharmaCare drug benefits Plan C, Plan W and Fair PharmaCare. Naltrexone, acamprosate, and disulfiram are also covered by Plan G.

As comparative safety and efficacy of AUD pharmacotherapies has not been fully established in adolescent, pregnant, older adult, or more complex patient populations (e.g., concurrent medical conditions, co-occurring mental health and substance use disorders), prescribing these medications in these cases would be at the clinician's discretion following a careful assessment of risks, benefits, drug-drug interactions and contraindications. Clinicians are encouraged to call the Rapid Access to Consultative Expertise (RACE) line to speak with an addiction medicine specialist for additional information and case-specific guidance:

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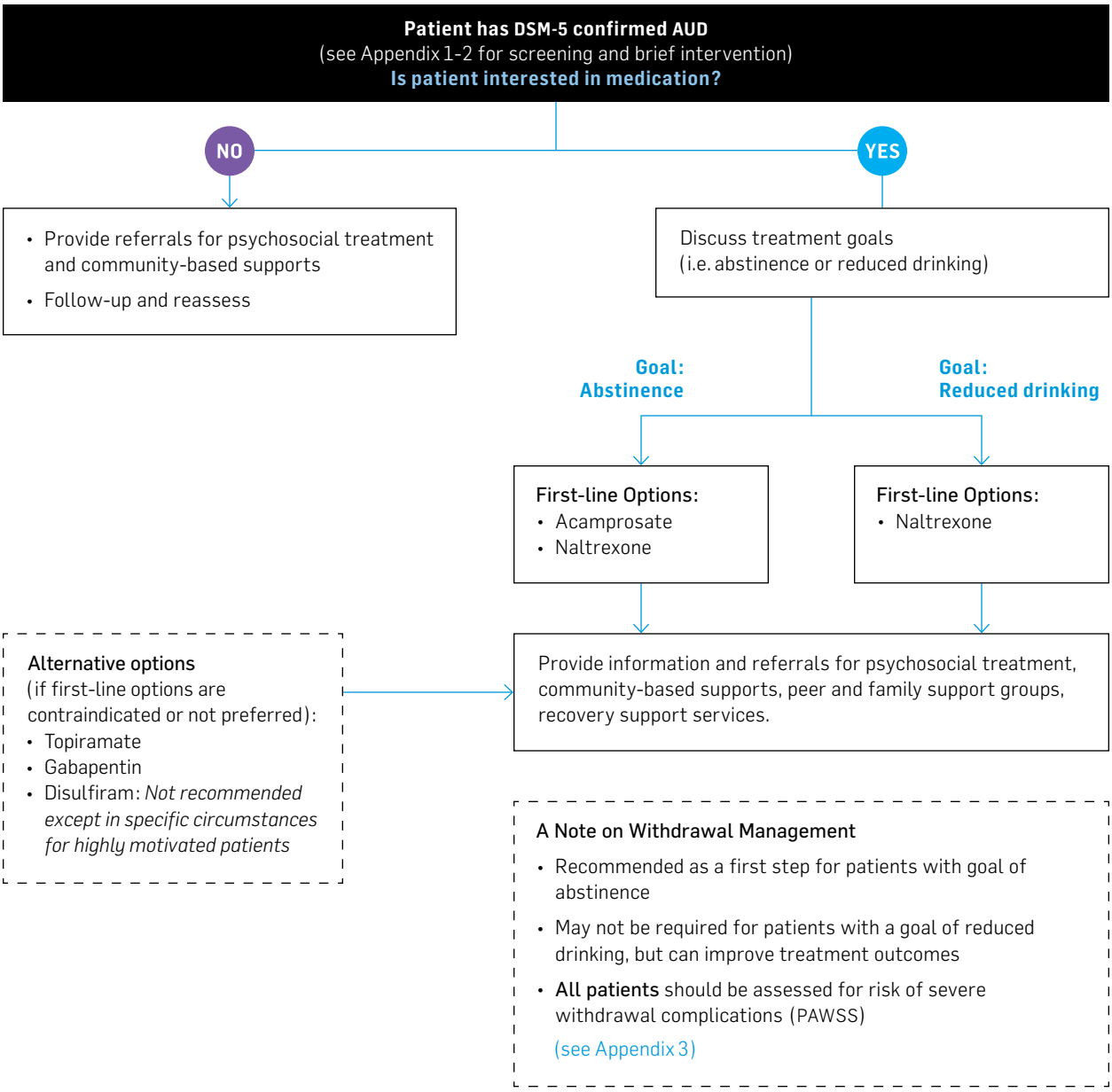
Contraindications, cautions, and side effects have been abstracted from clinical trials and supplemented with data from Health Canada-approved product monographs for specific clinical indications. Duration and dosages used for indicated conditions (e.g., seizure disorders, hypertension) may differ from those used for off-label indication of alcohol withdrawal management. Data should be interpreted with this caution.

Figure 3 Continuing Care Pathway for Adult Patients with AUD



First-line AUD Pharmacotherapies

	Naltrexone[309]	Acamprosate[310]
Contraindications	1. History of sensitivity to naltrexone 2. Current opioid use or opioid use disorder (analgesia, opioid agonist treatment, or non-medical use) 3. Acute opioid withdrawal 4. Acute hepatitis or liver failure	1. History of hypersensitivity to acamprosate 2. Severe renal impairment (creatinine clearance ≤ 30 mL/min) 3. Breastfeeding
Cautions	1. Renal impairment 2. Hepatic impairment 3. Concomitant use of other potentially hepatotoxic drugs 4. Pregnancy and breastfeeding* 5. Pediatric patients (<18 years)*	1. Moderate renal impairment (creatinine clearance of 30-50mL/min) 2. Pregnancy* 3. Pediatric and geriatric (>65 years) patients*
Side Effects	Nausea, headache, and dizziness. These are generally mild and temporary. Can be avoided if naltrexone is started at a lower dose and/or if the patient is abstinent from alcohol.	Diarrhea is the most commonly reported side effect, vomiting and abdominal pain are reported less frequently. Side effects are usually transient and resolve quickly.
Coverage	Collaborative Prescribing Agreement is required; eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C, G, and W.	Collaborative Prescribing Agreement is required; eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C, G, and W.
Concurrent Alcohol Use	Safe to start while patients are using alcohol, but may be more effective and side effects minimized if started following completion of withdrawal management.[178,179]	Safe to start while patients are using alcohol, but may be more effective if started following completion of withdrawal management.[177,178]
Safety and Other Considerations	• Liver function tests (LFT) should be assessed at treatment initiation, and again at 1, 3, and 6 months. If LFTs are elevated at baseline, more frequent monitoring is indicated. • Patients should be advised of the risk of hepatic injury and to stop use of medication if they experience symptoms of acute hepatitis (fatigue, anorexia, nausea, and vomiting).	• No dose adjustment is required for patients with mild renal impairment (creatinine clearance 50-80 mL/min). • Dose reduction is required for patients with moderate renal impairment (creatinine clearance 30-50 mL/min).[31] • No known hepatic toxicities.
Dosing[284]	• Start at 12.5 mg once daily. • Titrate up as tolerated to 50 mg once daily over 2 weeks.	Two 333 mg tablets three times per day.

** Note: Safety and efficacy has not been fully established in these patient populations. Careful assessment of benefit and risks, fully informed patient consent, and close monitoring is advised.*

Alternative Pharmacotherapies

<table>
<tr><th colspan="2">Topiramate[356]</th></tr>
<tr><td>Contraindications</td><td>1. Hypersensitivity to topiramate
2. Pregnant or planning to become pregnant
3. Breastfeeding</td></tr>
<tr><td>Cautions</td><td>1. Concomitant use of valproic acid
2. Conditions or therapies that predispose patients to acidosis (renal disease, severe respiratory disorders, status epilepticus, diarrhea, surgery, ketogenic diets, certain drugs)</td></tr>
<tr><td>Side Effects</td><td>• Side effects are most often CNS-related, and may include psychomotor slowing, difficulty concentrating, speech/language problems, somnolence, fatigue, and mood disturbance (irritability, depression).
• Most are mild to moderate in severity, and occur early in therapy.
• Starting at a low dose with slow titration up to a stable dose over a period of several weeks is recommended to avoid or reduce severity of side effects (see below).</td></tr>
<tr><td>Coverage</td><td>Topiramate is eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C and W.</td></tr>
<tr><td>Concurrent Alcohol Use</td><td>Safe to start while patients are using alcohol; has been studied for indication of reducing alcohol consumption in non-abstinent individuals.</td></tr>
<tr><td>Safety and Other Considerations</td><td>• Due to risk of fetal harm, women of reproductive age should be advised to use an effective contraceptive.
• Safe to prescribe to patients with liver disease.
• Patients should be monitored for signs of hyperammonemia (unexplained vomiting, lethargy, confusion, changes in mental status, hyperthermia) and metabolic acidosis (hyperventilation, fatigue, anorexia, cardiac arrhythmias, stupor).</td></tr>
<tr><td>Sample Dosing Protocol[316,317,320,322]</td><td>Topiramate is generally well tolerated, but some individuals do experience significant side effects, particularly at higher doses or with more rapid increases in dosage. A gradual dose titration over several weeks is strongly recommended (e.g., ~4-8 weeks to full dose). Topiramate does not interact with alcohol and can be initiated while a patient is still drinking.

The recommended initial target dose for topiramate monotherapy in adults is 100 mg/day, administered in two divided doses, as needed and tolerated.

<table>
<tr><th></th><th>Week 1</th><th>Week 2-3</th><th>Week 3-4</th></tr>
<tr><td>Morning Dose</td><td>None</td><td>25 mg</td><td>50 mg</td></tr>
<tr><td>Evening Dose</td><td>25 mg</td><td>25 mg</td><td>50 mg</td></tr>
</table>

If doses above 100 mg/day are required, the dosage may be increased at weekly intervals in increments of 50 mg up to a maximum of 400 mg/day. Dose and titration rate should be guided by side effects and clinical outcome. Some patients may benefit from a slower titration schedule or smaller increments in dose. Daily doses above 400 mg have not been adequately studied.</td></tr>
</table>

Gabapentin[258]	
Contraindications	Hypersensitivity to gabapentin
Cautions	Renal impairment
Side Effects	Side effects include ataxia, slurred speech, and drowsiness. Most are mild to moderate in severity, and occur early in therapy.
Coverage	Gabapentin is eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C and W.
Concurrent Alcohol Use[258,261]	If taken at a higher than therapeutic dose and concurrently with alcohol or opioids, the risk of respiratory depression, profound sedation, syncope, and death is increased. Patients who use alcohol or other CNS depressants should be observed carefully for signs and symptoms of CNS depression, and the dose of gabapentin may need to be adjusted accordingly. **Note:** Studies suggest concomitant use of alcohol and gabapentin at therapeutic doses does not increase sedation or motor impairment.
Safety and Other Considerations	• Patients with compromised respiratory function, respiratory or neurological disease, renal impairment and the elderly are at higher risk of experiencing severe adverse effects on the CNS including sedation, somnolence, loss of consciousness as well as serious cases of respiratory depression. • Gabapentin is eliminated primarily by renal excretion; dosage adjustment may be required in elderly patients and patients with renal impairment. • Prescribers should review gabapentin's drug-drug interactions when considering this medication as treatment for AUD. • Care should be taken when prescribing to the elderly, those with renal impairment, or those with cognitive impairment. In these populations, close follow-up must be ensured. Do not prescribe to actively delirious patients.
Sample Dosing Protocol[261,328]	• Start gabapentin at a dose of 100 mg to 300 mg TID. • If the patient continues to experience anxiety or cravings, TID doses can be increased up to a suggested maximum daily dose of 1800 mg. • If patient continues to experience insomnia, a higher HS dose may be warranted. **Note:** This protocol applies to immediate-release (IR) tablets.

Disulfiram[352]	
Contraindications	1. Concurrent or recent use of metronidazole, alcohol or alcohol-containing preparations 2. Alcohol intoxication 3. Severe myocardial disease, coronary occlusion 4. Active psychosis 5. Hypersensitivity to disulfiram or to other thiuram (rubber) derivatives
Cautions	1. Pregnant and breastfeeding patients 2. Pediatric patients 3. Disorders including diabetes mellitus, hypothyroidism, seizure disorders, cerebral damage, chronic or acute nephritis, hepatic cirrhosis or insufficiency, abnormal EEG results, or co-occurring substance use disorders.
Side Effects	• In the absence of alcohol, most common side effects are drowsiness, skin eruptions (acne, dermatitis), fatigue, erectile dysfunction, headache, and a metallic or garlic-like aftertaste. • A less common but serious side effect is hepatic toxicity (cholestatic or fulminant hepatitis, hepatic failure resulting in transplantation or death), which has been reported in patients taking disulfiram with and without prior history of abnormal liver function.
Coverage	Disulfiram is eligible for full coverage under Fair PharmaCare, and PharmaCare Plans C, G and W. **Note:** This medication is no longer commercially sold and must be compounded at a community pharmacy. Prescribers should contact the patient's pharmacy in advance to ensure that it is available or can be accessed.
Concurrent Alcohol Use[284,352]	Due to severity of disulfiram-alcohol reaction, **patients must not consume alcohol while taking disulfiram.**
Safety and Other Considerations	• Clinicians should obtain full informed consent of patient before prescribing disulfiram. Patients and families must receive education on side effects and risks associated with the disulfiram-alcohol reaction. • Disulfiram should never be administered to a patient until they have abstained from using alcohol for at least 12 hours. • The disulfiram-alcohol reaction can present as an emergency situation. It is recommended that patients carry an identification card on their person listing symptoms of disulfiram-alcohol reaction and their clinician's contact information in the event of emergencies. • Due to risk of hepatotoxicity, it is recommended to perform baseline and follow-up liver function tests and to monitor CBC and blood chemistries. Patients and families should be advised to immediately report early signs or symptoms of hepatitis.
Sample Dosing Protocol	• 250 mg per day, administered as a single daily dose in morning or evening. • Patients experiencing daytime sedation can be instructed to take their dose in the evenings. If sedation persists, dose can be reduced to 125 mg. • Patients who can still drink alcohol without experiencing a disulfiram-alcohol reaction despite good adherence (very rare) can be increased to 500 mg daily. • Do not exceed a daily dose of 500 mg.

Appendix 5 Motivational Interviewing

It is strongly recommended that providers complete Motivational Interviewing (MI) training to maximize the effectiveness of this intervention. This appendix provides a brief overview of MI principles and guidance on using this intervention with patients who have AUD. MI training programs and continuing education courses are listed in the Resources section.

Principles of Motivational Interviewing

MI is a conversational person-centered counseling method that seeks to empower patients to examine and address feelings of ambivalence that may impact their motivation to change. This intervention is based on the recognition that when clinicians issue directives or otherwise exert pressure (whether real or perceived) on patients to change their behaviour, this often results in pushback or resistance. By following the overarching principles of MI listed below,[144,592] clinicians can empower patients to define and pursue well-being in their own way.

- **Partnership:** The MI counsellor[s] joins the patient as a collaborator, not an authority, to understand the patient's individual obstacles to change and to work together to overcome them.
- **Acceptance:** In conversation, the MI counsellor consistently acknowledges and affirms the patient's inherent worth, potential, and autonomy. This allows the MI counsellor to approach the patient with "accurate empathy" — an active, non-judgmental interest in the patient perspective, which is the key to collaborative progress towards well-being.
- **Compassion:** The MI counsellor's ultimate concern is the patient's safety and wellbeing, and understanding what that means from the patient's perspective.
- **Evocation:** Rather than imposing a set of goals and values on the patient, the MI counsellor evokes from the patient what their goals are and how they prefer to receive help and support.

Task 1 Active Listening

Active listening strategies can help build a productive partnership with the patient. The strategies of active listening are often referred to by the mnemonic "OARS", which stands for **O**pen questions, **A**ffirmations, **R**eflective listening, and providing **S**ummaries.[592]

Open questions: The goal of asking open questions is to support the patient to say more. The MI counsellor's goal is for the patient to speak for at least half of the total session time. Open questions invite the patient to explore their feelings about, motivations for, and barriers to change.

Sample Questions:

"Help me understand…?"
"How would you like things to be different?"
"How would you feel about…?"
"How would you go about…"
"Why is this important?"
"What are the good things about… and what are the less good things about it?"
"What do you think you will lose if you give up…?"
"What do you want to do next?"

[s] *The term "MI counsellor" is used in this section to denote the clinician or staff member who is administering MI-based counselling. MI counsellors may include physicians, nurse practitioners, nurses, psychologists, pharmacists, social workers, staff or volunteers who have completed appropriate training.*

Affirmations: The MI counsellor should express active interest in interactions with the patient by acknowledging and amplifying actions, thoughts, and values that are noteworthy or merit credit. Such affirmations can be as simple as acknowledging that the patient made the effort to come to the appointment or recognizing the patient's willingness to persist in seeking healthy change.

Example Affirmations:

"*I appreciate that you are willing to meet with me today.*"
"*You are clearly a very resourceful person.*"
"*You handled yourself really well in that situation.*"
"*That's a good suggestion.*"
"*If I were in your shoes, I don't know if I could have managed nearly so well.*"
"*I've enjoyed talking with you today.*"

Reflective Listening: Periodically provide reflective statements that repeat, paraphrase, interpret what the patient is saying. In addition to maintaining engagement and clarity, carefully selected, timed, and worded affirmations are key to the effectiveness of MI, as they may enable the patient to reconsider a certain position or belief, and recognize contradictions, blind spots, and/or opportunities for change.

Examples of Reflective Statements:

"*So you feel….*"
"*It sounds like you….*"
"*You're wondering if….*"
"*On the one hand you want a better life, on the other hand you are not confident you are ready to give up old behaviours.*"

Provide Summaries: Summaries are a specific form reflective listening that punctuate the session and recognize key concerns in the conversation. These are particularly useful in transition points—after the patient has spoken about a particular topic, has recounted a personal experience, or when the session is nearing an end. **Summaries can provide a stepping-stone towards change by distilling the productive aspects of the conversation**. Like reflections, summaries are concise and strategically constructed to recognize problems, concerns, and desire to change. End summaries with an invitation to correct or complete a thought:

"*Did I miss anything?*
"*Is that accurate? Anything you want to add or correct?*"

Task 2 Eliciting Change Talk

Active listening may enable the patient to recognize and voice their own desire and potential for change.[592,593] Through reflective and evocative questions, the MI counsellor can elicit and support productive thinking that reflects statements the patient makes about the need, willingness, or ability to make healthy behavioural changes.[592,593]

Methods for Evoking Change Talk[593]

- Using the "importance ruler": *"How important would you say it is for you to…?*
- *"On a scale of zero to ten, where zero is not at all important and ten is extremely important, where would you say you are?"* This scale can also be used to gauge confidence to change.

0	1	2	3	4	5	6	7	8	9	10

Not at All Important ⟷ Extremely Important

- Exploring the decisional balance: *"What do you like about your present pattern? What concerns you about it?"*
- Elaborating: *"What else…?"*
- Exploring extremes: *"What concerns you most about…?"*
- Exploring goals and values: *"What things are most important to you?"*

Types of Change Talk

A patient's change talk generally falls into two categories: talk in preparation of change and talk about change that is already happening.[592]

Preparation

- Desire to change: *"I **want** to get better,"; "I **wish** I were more comfortable around people."*
- Ability to change: *"I've **been able** to stop at times in the past,"; "I **can** do this."*
- Reasons for change: *"I **would** sleep better,"; "I **will** feel healthier."*
- Need to change: *"I can't stand living like this anymore,"; "This is worse than I thought."*

Active Change

- Commitment: *"I **am going to** get help for this problem,";*
- Actions: *"I **have** talked to my boss about needing time off to get help,";* and
- Taking steps: *"I **have** started cutting back on my alcohol use to make it easier later to stop."*

Task 3 Collaborative planning

Once the MI counsellor establishes through OARS that they have understood the patient's concerns and current "state of change" (i.e. through noting signifiers of preparation for change or active change), they may offer feedback and share information based on MI counsellor's experience and expertise as requested by the patient.[592] Offering advice is always preceded by asking the patient's permission, as well as inviting them to give their ideas and thoughts first.

In the course of MI, increased change talk and signs of increased motivation signal an opportunity to bridge towards planning for change. Strategic questions may prompt the patient to ask for advice; unsolicited advice should never be imposed on the patient.

The core principles of active listening (OARS) apply to the all the stages of MI, including planning. The MI counsellor should move at the patient's pace and "roll with resistance". In response to the patient's increased motivation for change, the MI counsellor can pose more specific and goal-oriented open questions, providing reflections and affirmation to acknowledge and mobilize motivation into planned action.

Resources

Skinner W, Canadian Centre on Substance Use and Addiction (CCSA). The Essentials of Motivational Interviewing. Ottawa, Ontario: CCSA. 2017. Available at: http://www.ccsa.ca/Resource%20Library/CCSA-Motivational-Interviewing-Summary-2017-en.pdf.

Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Substance Abuse Treatment. *Enhancing Motivation for Change in Substance Abuse Treatment. Treatment Improvement Protocol (TIP) Series, No. 35. HHS Publication No. (SMA) 13-4212*. Rockville, MD: SAMHSA. 2013. Available at: https://store.samhsa.gov/system/files/sma13-4212.pdf.

Motivational Interviewing Network of Trainers (MINT)
www.motivationalinterviewing.org
An international group of MI trainers that holds training events and provide educational material to support effective use of MI. The MINT website features a comprehensive list of MI resources including books, educational material, and relevant articles, as well as online courses.

Change Talk Associates
https://changetalk.ca
A Vancouver-based association that provides in-person and virtual MI training and support in collaboration with the University of British Columbia Continuing Studies (UBC CS). Their website offers a list of online resources as well as the schedule of upcoming events.

Supplement: Working with Specific Patient Populations

The recommendations in this guideline should be considered applicable and relevant to the general adult and youth patient population, however, it is recognized that there are additional considerations when working with specific patient populations. This section provides some background on the prevalence of alcohol-related harms and management strategies for working with the following patient populations: Indigenous peoples, sex/gender, 2SLGBTQ+ populations, pregnant individuals, youth, older adults, and individuals with co-occurring mental health and substance use disorders. This section is not intended to provide prescriptive clinical practice guidance for management of AUD in these patient populations, but rather, to provide an overview of general considerations for establishing positive partnerships and providing patient-centred, safe and effective care. Links to online resources have been provided where available.

The specific populations described herein are not intended to be an exhaustive list of all patients impacted by alcohol, but to highlight cases where individuals and families would benefit from tailored approaches to AUD care. It is also emphasized that these are not discrete categories, and that intersectionality is an important factor to consider in treatment planning and service delivery.

Physicians and nurse practitioners in British Columbia are encouraged to call the Rapid Access to Consultative Expertise (RACE) line to speak with an addiction medicine specialist for additional information and case-specific guidance:

RACE™

Vancouver Area: 604-696-2131
Toll Free: 1-877-696-2131
Hours of operation are Monday to Friday, 0800-1700
www.raceconnect.ca

Indigenous Peoples

A Note on Terminology: The source material reviewed in this section uses several different terms to describe the Indigenous Peoples of (what is now known as) Canada, some of which are legal terms directly tied to the Canadian constitution and various acts (e.g., Section 35 of the Constitution Act, 1982; the Indian Act, R.S.C. 1985). Terms used in the original source material have been reproduced here for consistency and accuracy.

In Canada, the term **Indigenous Peoples** is considered to be inclusive of all the Peoples of Turtle Island[t] and all their descendants, and includes those that have status[u] or not, and those who self-identify as Indigenous. It is important to be aware of the diversity that exists between and among Indigenous Peoples in Canada, and to use language that reflects a specific peoples, community, or Nations, where possible and appropriate.

The term **Aboriginal** originates from Section 35 of the Constitution Act, 1982, wherein the Aboriginal peoples of Canada are defined as "Indian, Inuit and Métis Peoples". This collective term refers to not a single group, but three very different and distinct groups. The term reflects the legal and social responsibility of the Federal

[t] *Turtle Island refers to the continent of North America.*

[u] *"**Status**" is a legal term for a person who is registered as an "Indian" under the* Indian Act*, or a person who belongs to a First Nation or Indian Band that signed a treaty with the Crown; this can be denoted as "**Status, Registered** or **Treaty Indian**" or "**Status, Registered,** or **Treaty First Nations**". This term has origins and connection to colonial policies.*

Government to these groups, and excludes those who are not formally recognized by the Government of Canada. In the section below, it is used to specify that health data being reported is specific to people who are registered under the Indian Act, R.S.C. 1985.

First Nations is the preferred collective term that replaced "Indian" in Section 35 of the Constitution Act, 1982. It refers to Indigenous Peoples of Canada who are neither Métis nor Inuit. First Nations Peoples can include both status and non-status Indians. Clinicians need to be aware of this distinction when referring to health care benefits, programs, or services that are only accessible to status Indians.

Inuit Peoples are Indigenous Peoples of northern Canada (Nunavut, Northwest Territories, Quebec and Labrador).

Métis Peoples are a distinct Nation from other Indigenous Peoples in Canada, and have roots in mixed Indigenous and European ancestry.

According to the 2016 Census, more than 1.67 million people in Canada self-identify as Aboriginal, making up 4.9% of the Canadian population.[594] Census data shows that Aboriginal Peoples are the fastest growing population in Canada—having grown by 42.5% from 2006 to 2016, with about 44% of their total population under the age of 25 in 2016.[594]

The most recent Canadian data show that a greater proportion of Aboriginal Peoples aged 12 and over are abstinent from alcohol (27.4%) than non-Aboriginal Canadians (24.6%).[595] However, the prevalence of heavy drinking, AUD, and alcohol-related harms among Aboriginal Peoples who do drink alcohol is significantly higher than in non-Aboriginal Canadians.[595] For example, 25.1% of First Nations peoples reported heavy drinking[v] in the past month, compared to 19.6% of non-Aboriginal Canadians.[595] Nationally, the rate of alcohol-related mortality is estimated to be 5.43 times higher in First Nations men and 10.11 times higher in First Nations women compared to non-Aboriginal populations.[65] Similarly, in BC, the age-standardized mortality rate (ASMR) for alcohol-related deaths among registered Status Indians in BC was approximately 5 times higher than the alcohol-related ASMR for other BC residents from 1993 to 2006.[596] These statistics must be interpreted within a broader social framework that acknowledges the historical and ongoing impacts of colonization, institutionalized racism, direct and intergenerational trauma on the social determinants of health among the Indigenous Peoples of Canada. The health and social inequities faced by Indigenous Peoples have created conditions where some individuals use alcohol and other substances to cope with racism, discrimination, poverty, trauma, violence, or other sources of distress in their daily lives.[69,70]

Recent research has highlighted the important role of culturally safe and informed approaches to reduce disparities in substance use care for Indigenous populations.[56,597] This guideline strongly recommends that all health care professionals and staff undertake Indigenous cultural safety and cultural humility training to improve their ability to establish safe, positive partnerships with Indigenous patients and families (see Cultural Safety). A human rights-based approach is also essential due to Canada's history of discriminatory, unethical, and harmful treatment of Indigenous Peoples in the mainstream health care system.[72] In addition to incorporating Indigenous cultural safety and cultural humility in standard medical practice, several principles of providing ethical care to Indigenous Peoples have been identified in the literature:[598]

- Respecting the individual and their authority over their own health and healing journey;
- Practising conscious communication, active listening, and paying close attention to how a person responds to questions and conversation, both in their speech and body language, to ensure patient comfort and safety;

[v] *Statistics Canada: heavy drinking is defined as five or more drinks on a single occasion at least once a month.*

- Using interpreters if fluency in English or French is a barrier to communication;
- Involving family members in decision-making and as key sources of support, and respecting an individual's definition of family, which can include many extended relations;
- Recognizing that some individuals may prefer alternative methods for communicating and receiving information about their health—the practice of "offering truth"[599] and honouring a patient's decision on the type of information they wish to receive and how they wish to receive it may be helpful in this context;
- Practising non-interference in a patient's decision-making, unless there has been a clear misunderstanding—strong advice or persuasive language from a person in a position of power (i.e., clinician to patient) can be interpreted as coercive; and
- Respecting Indigenous Peoples have the inherent and recognized right to access cultural practices as part of their health care.

Clinicians should inquire about their patients' use of traditional medicines and cultural practices, and accommodate these needs as part of culturally safe approach to wellness and substance use care. The value of using the teachings of Mi'kmaq Elder Albert Marshall's "Two-Eyed Seeing" approach, which respects and integrates the strengths of both Indigenous knowledge and Western medicine,[600] has been increasingly recognized in holistic wellness and substance use care for Indigenous Peoples.[601] A diverse range of substance use programs that combine regionally-tailored cultural interventions (e.g., participating in sociocultural learning—traditional languages, art, story-telling, teachings; sweat lodges, smudging, and ceremonial practices; land-based activities and healing; access to Elders and Knowledge Keepers) with Western medicine have been described in the literature.[601] Although individual cultural interventions vary depending on place and the Indigenous groups who developed and practice them, culturally-based substance use programs that provide a connection to and enhance cultural identity are shown to improve wellness of Indigenous clients.[601]

The Society of Obstetricians and Gynaecologists of Canada's (SOGC) Consensus Guideline for Health Professionals Working With First Nations, Inuit, and Métis[602] may be a useful clinical resource. While this guideline does include specific guidance on sexual and reproductive health care for Indigenous Peoples, the majority of recommendations are relevant and applicable to general clinical practice and the Canadian health care system at large. Clinicians who provide care to Indigenous Peoples should be familiar with the First Nations Benefit Program (Plan W) and the Non-Insured Health Benefits program, including eligibility and coverage requirements, and the exceptions and special permissions needed in some cases.[w] Clinicians should also be aware of regional and provincial resources available to Indigenous patients and families in BC. There are several First Nations substance use treatment centres that offer culturally-based services in BC. Detailed information for each treatment centre, including eligibility requirements, can be found on the FNHA website. Each regional health authority in BC has an Indigenous or Aboriginal Health Program, which offer tailored services and programs to support Indigenous patients and families in accessing health and wellness services:

- Fraser Health: https://www.fraserhealth.ca/health-topics-a-to-z/aboriginal-health
- Interior Health: https://www.interiorhealth.ca/YourHealth/AboriginalHealth/Pages/default.aspx
- Island Health: https://www.islandhealth.ca/our-services/aboriginal-health-services

[w] *Eligibility for the FNHA Health Benefits program extends to include all First Nations people (who have a status number) who are residents of British Columbia (excluding persons who receive health benefits by way of a First Nations organization pursuant to self-government agreements with Canada). Examples of individuals who may not be eligible for FNHA benefits but would be eligible for Non-Insured Health Benefits include Inuit peoples or First Nations people who are temporary residents of British Columbia and/or those who are registered in BC but are currently living in another province.*[603]

- Northern Health: https://www.indigenoushealthnh.ca/
- Vancouver Coastal Health: http://www.vch.ca/your-care/aboriginal-health

Indigenous Peoples in the Lower Mainland can also be referred to the Metro Vancouver Indigenous Services Society (MVISS), which offers culturally-based and trauma-informed individual, group, and family counselling, and other Indigenous healing and support services. The Metro Vancouver Aboriginal Executive Council (MVAEC) also maintains a directory of Indigenous programs and services (including substance use and recovery services) on their website: http://new-mvaec-directory.editmy.website/directory/directory-list.

Sex and Gender

Sex and gender are important social determinants of health and influence the physiological and psychosocial aspects of many health conditions, including substance use disorders.[604] Yet, the influence of sex and gender on alcohol use and related harms is often overlooked.[604]

It is well-established that male and female bodies process alcohol differently, and many guidelines take this into account by setting lower alcohol consumption limits for women, including Canada's Low-Risk Alcohol Drinking Guidelines (see Table 3).[605] Female bodies are more vulnerable to the effects of alcohol partly due to their comparatively lower average weight, water content, and levels of enzymes that break down alcohol.[606] Additionally, the higher fat content of the female body results in slower rates of alcohol absorption and metabolism.[606] As a result, with increasing alcohol intake, the risk of developing a range of alcohol-related conditions, including stroke, diabetes, and liver disease, increases more rapidly in females compared to males.[606-608]

Drinking behaviours and consequences are also influenced by both sex and cultural perceptions of gender. For example, substance use is more prevalent among girls than boys during early adolescence[609] and girls are more likely to use alcohol and other substances to manage negative emotions (e.g., depression).[610,611] In men (including transgender men), traditional perceptions of masculinity have been associated with the motivation to consume alcohol and corresponding alcohol-related problems.[612,613] Another consequence of gendered cultural perceptions is that young adult men are less likely than women to accept or adopt harm reduction strategies, such as limiting number of drinks, switching from alcoholic drinks to non-alcoholic alternatives, or having a designated driver.[614]

Research has also revealed correlations between gender and substance use treatment access and outcomes. Intersections between gender inequality, stigma, and poverty can be barriers to accessing health care in young women with alcohol use issues.[615] Health care providers are less likely to refer women than men to outpatient or inpatient alcohol treatment programs, even though research shows there are no gender differences in treatment retention or completion rates.[616] Additionally, when they do seek care, women who use alcohol while pregnant or parenting experience disproportionately higher rates of judgment, stigma, and punitive approaches than men in similar circumstances.[617,618]

The impact of sex and gender on alcohol use and related harms, including AUD, underscore the importance of sex/gender-informed and gender-inclusive care. The Centre of Excellence in Women's Health has several resources available through their Trauma Gender Substance Use Project, including a *Gender-Informed Approaches to Substance Use Resource List* and the *New Terrain toolkit*[57] to support integration of trauma-informed, gender-informed, and gender-transformative approaches in clinical practice. Clinicians and care teams should also be familiar with and offer patients the option of sex/gender-specific substance use treatment and support services in their communities, if available and as appropriate.

2SLGBTQ+ Populations

Lesbian, gay, bisexual, trans, Two-Spirit, queer, and other gender and sexually diverse individuals (2SLGBTQ+) face unique challenges that clinicians should be aware of and address when providing substance use care. Both adults[619-621] and youth[622,623] who identify as 2SLGBTQ+ report disproportionately higher rates of high-risk alcohol use and alcohol-related harms compared to individuals who do not identify as 2SLGBTQ+. 2SLGBTQ+ individuals also tend to enter treatment with a relatively higher severity of substance-related problems[617,618] and greater physical and mental health care needs[624,625] than individuals who do not identify as 2SLGBTQ+. Suggested explanations for these disproportionate rates include the stress of being in a minority group, dealing with social prejudice and discrimination, and internalized stigma.[626,627] Additionally, a lack of cultural competence within the health care system is believed to deter 2SLGBTQ+ individuals from accessing or staying engaged with medical care.[626,627]

A non-judgmental attitude, active demonstration of awareness of and sensitivity to 2SLGBTQ+ issues, and a reinforcement of confidentiality can help 2SLGBTQ+ individuals feel safe accessing care.[628] Strategies for creating a welcoming care environment may include having information about 2SLGBTQ+ programs and services displayed in waiting rooms and common areas (e.g., pamphlets, posters, resource guides); ensuring clinic forms and other materials use inclusive language; using open-ended questions when asking about gender and sexuality; and establishing contacts and referral partners in the 2SLGBTQ+ community.[628] 2SLGBTQ+ individuals may also have experienced discrimination in the health care system and thus require extra sensitivity from health care providers in order to build trust.[628]

Additional information and guidance on working with 2SLGBTQ+ individuals can be found in SAMHSA's A Provider's Introduction to Substance Abuse Treatment for Lesbian, Gay, Bisexual, and Transgender Individuals[628] and Trans Care BC's Gender-affirming Care for Trans, Two-Spirit, and Gender Diverse Patients in BC: A Primary Care Toolkit.[629] Trans Care BC also maintains a searchable directory of gender-affirming, trans-friendly support groups and health care services in BC that can be accessed on their website: http://www.phsa.ca/transcarebc/care-support/access-care/srvc-directory.

Youth

This guideline defines adolescents as individuals aged 11-18 years, young adults as individuals aged 19-25 years, and youth as individuals aged 11-25 years (e.g., inclusive of adolescent and young adult age categories). It is noted that youth-oriented service providers in the community may use different definitions; clinicians should confirm that a patient is within the age range served by a particular program before making a referral. Further, research studies also use different definitions and age categories for youth; as such, age ranges and definitions used by study authors are reported in the evidence review.

The lack of tailored, age-appropriate approaches to and options for substance use care have consistently been cited as barriers to engaging youth in treatment.[630,631] Strategies that primary care clinicians and care teams can use to improve retention and engagement in care in youth include: emphasizing confidentiality of services, including family members in care, fostering development of longitudinal therapeutic relationships, offering pharmacotherapy when indicated, providing referrals to youth-oriented psychosocial treatment interventions and supports, and ensuring treatment is provided without a pre-determined end date.[95,264,475,632-635] Inclusion of peer support staff or referrals to peer support services in the community may also support a youth-centered approach to care.[636,637]

In British Columbia, youth under 19 years of age do not need parental consent in order to receive medical treatment, including substance use care. Capacity to consent for youth under 19 is determined based on the capacity to fully understand the treatment and possible consequences of treatment.[638] A patient under 19 seeking treatment who is determined able to understand the treatment and give consent should not require parental permission or notification. Informed consent and discussion of rationale for treatment should be documented. For more information on determining capacity to provide consent in those under 19, clinicians may refer to guidance from the Canadian Medical Protective Association[639] and the Royal College of Physicians and Surgeons of Canada.[640]

Evidence-based guidance for screening, brief intervention, withdrawal management, and AUD pharmacotherapy in youth patients has been included in this guideline. Additional information, medication factsheets, and other resources for youth patients and their families can be accessed through BC Children's Hospital's Kelty Mental Health Centre: https://keltymentalhealth.ca/healthcare-professionals. Youth and families can also access information on mental health and wellbeing, substance use, youth-oriented social support and services (including online and peer support platforms), and self-management tools on the FoundryBC website: https://foundrybc.ca/get-support/.

Pregnant Individuals[x]

Abbreviated evidence-based guidance for screening, brief intervention, withdrawal management, and AUD pharmacotherapy in pregnant patients has been included in this guideline. For additional clinical guidance on the management of alcohol use during pregnancy and postpartum, clinicians can refer to the Alcohol Use and Pregnancy Consensus Clinical Guidelines[4] issued by the Society of Obstetricians and Gynaecologists of Canada. In partnership with Perinatal Services BC, the BCCSU will be releasing guidance for the Clinical Management of High-Risk Drinking and Alcohol Use Disorder in Pregnancy in the Fall of 2019, which will be available at the following link: http://www.bccsu.ca/clinical-care-guidance/.

There are no universally accepted standards for safe use of alcohol in pregnancy, and most jurisdictions, including Canada, recommend no alcohol use.[4,268] However, according to the most recent Canadian data (the Maternity Experiences Survey), 10.5% of those surveyed reported that they continued drinking alcohol (frequently or infrequently) after realizing they were pregnant.[641] This is likely an underestimation of the true prevalence of alcohol use in pregnancy, as fear of judgment and stigma can lead to significant under-reporting in this population.[4,641]

Alcohol is a known teratogen (e.g., a substance that is known to cause congenital malformations or birth defects in the fetus if consumed during pregnancy). Prenatal exposure to alcohol is associated with Fetal Alcohol Spectrum Disorder (FASD), a wide range of conditions that can include growth restriction, developmental delay, neurological abnormalities, and physical health, behavioral, and cognitive issues throughout life,[4,266,268,642] and is believed to affect approximately 1% of the Canadian population.[4] Research suggests there is a dose-dependent relationship between the amount of alcohol consumed during pregnancy and severity of alcohol-related effects in the child,[643] however, the degree and type of impairment varies considerably from one individual to the next, and with timing and pattern of alcohol use.[568]

In line with clinical practice guidelines from the Society of Obstetricians and Gynaecologists of Canada,[4] it is recommended that primary care clinicians and care teams advise patients and families that the safest choice is

[x] *While the majority of pregnant individuals identify as women, this term does not reflect the identities and experience of all pregnant people. Gender-neutral language has been used in this section where possible. Respect for individual identities and use of corresponding or chosen pronouns is an important component of patient-centred care.*

not to consume alcohol during pregnancy. Education, screening and assessment of alcohol use in pregnancy should be delivered in a balanced and non-judgmental manner to prevent unintended negative consequences, such as loss to care.[4,568] Research has shown that stigma and fear of judgment is a significant barrier to accessing and staying engaged in treatment among pregnant individuals who use substances.[4] The Centre of Excellence for Women's Health has several guides to support clinicians in engaging with women and their partners on alcohol use, pregnancy, and prevention of Fetal Alcohol Spectrum Disorder (FASD), including referral information, on their website: http://bccewh.bc.ca/2017/05/alcohol-and-pregnancy-brief-intervention-guides/.

Trauma- and violence-informed care is essential in the care and management of pregnant individuals with AUD. Pregnancy can be a period of particular vulnerability for individuals who have experienced trauma.[644,645] Some women may also be at increased risk of intimate partner violence during pregnancy, particularly in the case of unintended pregnancies.[646-648] As emphasized above, clinicians should be familiar with the principles of trauma-informed practice and as well as the signs of and strategies to address intimate partner violence in their patients.[649-651]

Older Adults

This guideline defines "older adults" as patients aged 65 or older, although it is understood that some age-related conditions may be present in some adults who are younger than 65, and should be managed similarly.

According to the most recent Canadian data, approximately 7.8% of older adults surveyed met the criteria for heavy drinking[y],[11] and 0.6% meet the criteria for an AUD.[110] However, under-reporting substance use may be more common in older adults compared to younger counterparts due to stigma and fear of judgment, as well as cognitive and memory deficits that can impact accuracy of self-report.[652,653] Thus, clinicians should approach screening of older adults with patience and sensitivity, while also being mindful of clinical signs of alcohol-related problems.

Clinicians should be aware that older adults are more vulnerable to the effects and harms of alcohol than younger counterparts.[654] In addition to lowered alcohol tolerance related to reduced activity of gastric and liver enzymes, older adults may also have multiple co-morbidities that can be exacerbated by alcohol use.[654,655] However, despite increased risks of alcohol-related harms, drinking above low-risk limits and AUD among older adults is frequently overlooked and unrecognized in primary care practice.[654] As with the general population, alcohol use screening should be always be included in routine primary care assessments in older adults.

Clinicians should also be aware of potential signs of alcohol-related problems in older adults, including worsening chronic conditions (e.g., hypertension, diabetes, osteoporosis); changes in effectiveness of prescribed medications; increased frequency of injuries (e.g., falls, fractures, burns); onset or worsening of cognitive or psychiatric disorders (e.g., confusion, anxiety, depression, insomnia, memory loss); increased social isolation or distress; and poor nutrition and hygiene.[656]

Limited data suggests that AUD treatment outcomes among older adults are similar, and in some cases superior, to those observed in younger patient populations.[657] Due to a higher prevalence of comorbid medical conditions and increased susceptibility to severe complications of alcohol withdrawal, older adults may benefit from a higher intensity, more structured approach to care, such as referrals to inpatient withdrawal management, inpatient treatment programs, or intensive outpatient programs.[655] Additionally, as older patients tend to have a higher prevalence of medical conditions and/or take multiple medications for chronic disease management, impact on comorbid conditions and potential drug-drug interactions should be carefully reviewed when selecting AUD pharmacotherapies.

[y] *Statistics Canada: Heavy drinking was defined as males who reported having 5 or more drinks, or females who reported having 4 or more drinks, on one occasion, at least once a month in the past year.*

Co-occurring Mental Health and Substance Use Disorders

Individuals with co-occurring mental health and substance use disorders, including AUD, typically experience more severe substance-related, psychiatric and physical health symptoms, and face higher risk of psychosocial challenges, including unemployment, poverty, food and housing insecurity, and a lack of social support.[658,659] As is emphasized in this guideline, comprehensive medical management that adequately addresses co-occurring physical and mental health disorders is essential to patient-centred care. Additionally, referrals to psychosocial supports and peer-based services in the community should be routinely offered to address social determinants of health and health inequities experienced by this population.

Co-occurring Alcohol Use and Mental Health Disorders

The co-occurrence of substance use disorders and mental health disorders is not uncommon. Canadian data is lacking, but in the U.S., a nationally representative sample of adults reported an estimated 12-month prevalence rate of co-occurring substance use and mental health disorders of 43.3%,[660] and that over 50% of individuals with a severe psychiatric illness (e.g., schizophrenia, psychosis) were estimated to have a co-occurring substance use disorder.[471] Among individuals with AUD, the most commonly reported co-occurring mental health disorders were major depression disorder (15.6%), post-traumatic stress disorder (10.8%), specific phobia (10.6%), and generalized anxiety disorder (7.1%).[661]

Differential diagnosis and treatment of co-occurring disorders can be challenging due to the significant overlap in the symptoms of mental health and substance use disorders, particularly in the early stages of treatment for substance use disorders. For example, untreated anxiety and depression may lead to the development of AUD if individuals use alcohol over an extended time period to relieve their symptoms.[658,659] Conversely, anxiety and depression can also be symptoms of alcohol withdrawal and AUD.[658,662] Thus, assessment of co-occurring disorders should involve consideration of a patient's history, including family history of substance use and mental health disorders, as well as the sequence and timelines of the development of symptoms in order to accurately identify the pre-existing disorder(s).[658-660]

Following the diagnosis of AUD, and as part of standard care, individuals should be screened for common co-occurring mental health disorders followed by careful assessment to determine if specific symptoms (e.g., anxiety, depression, insomnia) are independent or alcohol-related diagnoses.[658,663] It is preferable to initiate treatment for AUD before starting pharmacotherapy for depression or anxiety disorders, as antidepressant and anxiolytic medications may be ineffective while a patient is still using alcohol.[658,664-666] Additionally, several medication classes that are commonly prescribed off-label for chronic anxiety and insomnia, including benzodiazepines and benzodiazepine-like medications, should be avoided in patients with AUD due to increased risk of injury or overdose if consumed concurrently with alcohol.[667-671]

Mental health symptoms should be regularly reassessed during initial stages of treatment, as research has shown that AUD treatment can lead to a significant reduction in alcohol-related depression and anxiety symptoms after 2-4 weeks.[663,672,673] Persistent mental health symptoms would warrant further investigation and treatment. Clinicians should also be aware of and accommodate any potential cognitive and functional impairments related to diagnosis of a co-occurring mental health disorder.[660]

Depending on the complexity and severity of co-occurring physical, psychiatric, and alcohol-related symptoms, patients with co-occurring disorders may benefit from a higher intensity or more structured approach to care, such as referrals to inpatient withdrawal management, inpatient treatment programs, or intensive outpatient programs, or to specialist-led psychosocial treatment interventions in the community.[514,516,518,521,527] The integration of peer-based support and outreach services (staffed by individuals who have lived experience with co-occurring disorders, treatment, and recovery) within primary care clinics or referral to such services in the community may also be beneficial for this population.[674-676]

Co-occurring Substance Use Disorders

Individuals with AUD and one or more co-occurring substance use disorders report higher levels of alcohol consumption (i.e., number of drinking days per week, amount of alcohol consumed per drinking day), and exceed low-risk drinking guidelines more often than individuals with AUD alone.[677]

Reported prevalence rates for co-occurring AUD and other substance use disorders vary in the literature, depending on the source and population studied. Nationally representative U.S. studies have reported that between 15% and 25% individuals with an AUD also met diagnostic criteria for another substance use disorder (tobacco, opioids, cocaine and other illicit drug(s)) in the past year.[677-679] Conversely, a study of 2000 treatment-seeking primary care patients found that nearly 75% of those with an AUD also met the criteria for one or more co-occurring substance use disorders.[680] Although prevalence rates do vary, it is clear that individuals with co-occurring substance use disorders represent a significant population requiring AUD care.

All individuals with high-risk drinking or AUD should be screened for co-occurring substance use. For those individuals who screen positive, co-occurring substance use disorders should be treated concurrently, when possible, with the severity of each disorder guiding treatment decisions. If concurrent treatment is not possible, patient safety should be prioritized and treatment should be triaged in order of the substance use disorder that carries the highest risk of immediate harm to that individual. Specific guidance for commonly co-occurring substance use disorders is provided below.

Alcohol and Tobacco Use Disorder

Tobacco use disorder is the most commonly reported co-occurring substance use disorder in people with AUD.[681] Nationally representative U.S. data indicates that between 44% and 51% of individuals who met criteria for an AUD in the past year were also current smokers.[682,683]

Current smoking is associated with increased alcohol consumption, days per month of alcohol consumption, severity of AUD, and severity of alcohol withdrawal symptoms in individuals with AUD.[684,685] Individuals with co-occurring alcohol and tobacco use disorders are also more likely to be heavy smokers, initiate smoking at a younger age, and experience more difficulty quitting smoking than individuals with tobacco use disorder alone.[681,686] In addition, individuals with co-occurring alcohol and tobacco use disorders are more likely to experience negative health consequences, including cognitive impairment and increased risk of cirrhosis, pancreatitis, cardiovascular disease, and some cancers including head and neck cancers.[687-690] Finally, a number of studies have reported that continued smoking is associated with a greater likelihood of relapse to AUD, while tobacco cessation is associated with improved outcomes for individuals engaged in AUD treatment.[686,691-693]

For the reasons cited above, concurrent or successive tobacco cessation treatment should be prioritized in individuals with co-occurring alcohol and tobacco use disorders.[694] Although commonly undertreated in addiction treatment programs,[695,696] research has found that between 44% to 80% of individuals with co-occurring

tobacco and other substance use disorders report an interest in tobacco cessation interventions and motivation to quit smoking.[686,697,698] Further, the addition of tobacco cessation interventions does not appear to negatively impact alcohol- or drug-related treatment outcomes in individuals with co-occurring substance use disorders,[694] and, in some cases, has been associated with improvements. A 2016 systematic review found a consistent association between tobacco cessation interventions—both pharmacotherapy and combined counselling and pharmacotherapy—and tobacco abstinence, with no evidence of negative effects on abstinence from alcohol and other drugs.[699]

First-line pharmacotherapies for tobacco cessation—bupropion and varenicline—can be safely prescribed in combination with first-line AUD pharmacotherapies. A 2015 review identified combination therapy with varenicline and naltrexone as the most effective option for reducing both alcohol and tobacco use in individuals with co-occurrence of these substance use disorders.[700] Research is also underway to evaluate several combined alcohol and tobacco use disorder interventions in primary care.[701,702]

Alcohol and Opioid Use Disorder

Concurrent use of opioids and alcohol is associated with an increased risk of respiratory depression, overdose, and death.[703,704] Approximately one-third of individuals prescribed opioid agonist treatment (OAT) for the management of an opioid use disorder (OUD) also meet the criteria for high-risk drinking or an AUD.[705-708] Although alcohol use is a known risk factor for fatal overdose among individuals prescribed opioids,[709-711] and associated with suboptimal adherence to OAT,[712,713] there is limited guidance on effective management strategies for this patient population.[714] One European guideline exists for addressing problem alcohol use among people who use drugs, including individuals with OUD, in primary care settings.[715]

For individuals on OAT who meet criteria for high-risk drinking but do not have an AUD, physician or nurse-delivered brief intervention has been found to reduce alcohol consumption in RCTs[716,717] and non-randomized studies.[718-720] Motivational interviewing may also be effective for reducing high-risk drinking in patients prescribed OAT.[437,721] Though not specific to individuals on OAT, the lack of high-quality research in this area was noted in a 2018 meta-analysis of psychosocial interventions to reduce alcohol consumption among people who use illicit drugs (primarily opioids and stimulants).[722] Due to methodological differences between studies (7 RCTs, n=825), the review authors could only perform a limited number of aggregate analyses, and as a result, no clear recommendations could be made for or against the use of psychosocial interventions for concurrent high-risk use of alcohol and other substances.[722]

For patients diagnosed with co-occurring AUD and OUD, AUD pharmacotherapy should be offered with consideration of drug-drug interactions with OAT, as applicable. More specifically, naltrexone is an opioid antagonist and is contraindicated in patients prescribed OAT, thus, acamprosate should be considered as first-line for treating co-occurring AUD in this patient population.[300] Individuals with both AUD and OUD (not taking OAT) may also benefit from extended-release naltrexone, as there is evidence that it is effective for both conditions.[311,314] However, extended-release naltrexone is not an approved drug in Canada, and is currently available only through Health Canada's Special Access Programme. Buprenorphine/naloxone, a partial opioid agonist, may also be a preferred OAT medication in this patient population due to its superior safety profile compared to methadone (e.g., lower risk of respiratory depression and overdose, alone or in combination with alcohol),[723] and preliminary evidence showing that high-dose (32mg/day) buprenorphine reduced both alcohol use and craving compared to low-dose buprenorphine and to methadone in individuals with co-occurring alcohol and opioid use disorders.[724]

Although gabapentin has a growing evidence base supporting its use for withdrawal management and relapse prevention for AUD,[261] there are specific concerns for individuals with OUD. This includes the possibility of high doses of gabapentin being used with opioids to potentiate euphoric effects, as well as the additive effects on respiratory suppression, which can increase risk of overdose.[349] If these medications are co-prescribed, clinicians should be aware of these risks and monitor patients appropriately. Topiramate has not been well studied for treatment of AUD in patients with co-occurring OUD, but has been studied for treatment of co-occurring stimulant and opioid use disorders.

Alcohol and Benzodiazepine Use Disorder

Concurrent use of benzodiazepine receptor agonists (BZRAs; i.e., benzodiazepines and "z-drugs") and alcohol is associated with increased risk of respiratory depression, overdose, and death.[667,668,725] Although Canadian data is lacking, European and U.S. data indicate that 19–41% of individuals seeking or receiving treatment for AUD also report non-medical BZRA use, including DSM-5 sedative, hypnotic, or anxiolytic use disorder (hereafter referred to as "sedative use disorder).[726-729]

There is a lack of evidence-based clinical guidance for the management of co-occurring AUD and sedative use disorder. In the absence of a clear approach, and in context of the known risks and harms of combining BZRAs and alcohol, it is recommended that each substance use disorder be treated individually and concurrently. For sedative use disorder, providing patients with evidence-based information on the benefits and risks of BZRA use, alone and in combination with alcohol, can significantly improve patients' chances of successfully reducing or discontinuing their use.[730] A gradual and stepped dose reduction or taper should be initiated for individuals who have been using BZRAs for more than four weeks (whether prescribed or non-medically) and/or those who meet criteria for a sedative use disorder.[731] In the majority of cases, a BZRA taper can be initiated and monitored safely and effectively in an outpatient primary care setting.[731] Additional guidance on tapering BZRAs in primary care is available from the College of Family Physicians of Canada.[732]

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