# Provincial Guideline for the Clinical Management of

# High-Risk Drinking and Alcohol Use Disorder

## Pregnancy Supplement

BRITISH COLUMBIA | Ministry of Health

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

**Pregnancy Supplement – Provincial Guideline for the Clinical Management of High-Risk Drinking and Alcohol Use Disorder**

British Columbia Centre on Substance Use (BCCSU), B.C. Ministry of Health, and B.C. Ministry of Mental Health and Addictions. Pregnancy Supplement – Provincial Guideline for the Clinical Management of High-Risk Drinking and Alcohol Use Disorder. 2020. Vancouver, B.C.: BCCSU. Available at: https://www.bccsu.ca/clinical-care-guidance/.

**Author:** British Columbia Centre on Substance Use (BCCSU)

**Publisher:** British Columbia Centre on Substance Use (BCCSU)

**Document Purpose:** Clinical guidance

**Publication Date:** October 2020

**Target Audience:** Physicians, nurses and nurse practitioners, pharmacists, allied health care professionals, and all other clinical and non-clinical personnel who are involved in the care of pregnant and post-partum individuals who use alcohol.

**Contact:**
British Columbia Centre on Substance Use
400-1045 Howe Street, Vancouver, BC V6Z 2A9
inquiries@bccsu.ubc.ca

**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.

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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.

## Authors and Contributors

**Maryam Babaei**, MSc; Medical Writer, British Columbia Centre on Substance Use

### Provincial Guideline Supplement Committee

**Eric Cattoni**, MD, CCFP; Physician Co-Lead, Perinatal Addictions, BC Women's Hospital; Clinical Instructor, Department of Family Medicine, University of British Columbia; Medical Clinic Physician, Sheway

**Kirsten Ellingson**, MN; Clinical Nurse Specialist, Manager Mental Health and Substance Use, First Nations Health Authority

**Jana Encinger (Co-chair)**, RN, MSN; Director, Clinical Quality and Systems Improvement (Acute Care), Perinatal Services BC; Adjunct Professor, School of Nursing, University of British Columbia

**Valerie Giang (Co-chair)**, MD, CCFP; BC Centre on Substance Use Canada Addiction Medicine Fellow; Addiction Medicine Consultant, St. Paul's Hospital, Providence Health Care

**Janine Hardial**, MD, CCFP, FCFP; Medical Coordinator, Sheway, Vancouver Coastal Health; Consultant Physician, Perinatal Addictions Service, BC Women's Hospital; Clinical Assistant Professor, University of British Columbia

**Cheyenne Johnson**, RN, MPH, CCRP; Interim Executive Director, British Columbia Centre on Substance Use

**Sarah Lea**, MSc, MD; Family Physician, GROW Health; Perinatal Addiction Physician Lead Island Health; Clinical Instructor, Department of Family Practice, University of British Columbia

**Nickie Mathew**, MD, ABPN (Addiction Psychiatry), FRCPC (Forensic Psychiatry), ABPM (Addiction Medicine); Medical Director, Complex Mental Health and Substance Use Services, BC Mental Health Substance Use Services; Clinical Assistant Professor, Department of Psychiatry, University of British Columbia

**Seonaid Nolan**, MD, FRCPC, Dip. ABAM; Assistant Professor, Department of Medicine, University of British Columbia; Head, Interdepartmental Division of Addiction Medicine, Providence Health Care; Physician Program Director, Interdisciplinary Substance Use Program, Providence Health Care; Research Scientist, BC Centre on Substance Use; Health Professional Investigator, Michael Smith Foundation for Health Research Health

**Nancy Poole**, PhD; Director, Centre of Excellence for Women's Health; Prevention Lead, CanFASD Research Network

**Samantha Robinson**, RN, MPH; Interim Clinical Director, BC Centre on Substance Use; Adjunct Professor, School of Nursing, University of British Columbia

**Bernd Wittmann**, MD, FRCSC; ObGyn, MFM Consultant, Amara Clinic, Surrey

### External Review Panel

**Jackie Ferguson**, MD, FRCSC; Saskatchewan Health Authority, Department of Obstetrics & Gynecology, Regina

**Rod Knight**, PhD; Assistant Professor, Department of Medicine, University of British Columbia; Research Scientist, British Columbia Centre on Substance Use; Scholar, Michael Smith Foundation for Health Research

**Mona Kwong**, BSc (Pharm), MSc, PharmD; Pharmacy Advisor, BC Centre on Substance Use; Clinical Pharmacist and Manager, Pharmasave Howe Street; Clinical Consultant Pharmacist, Infinity Medical Specialists Clinic; Clinical Instructor, Faculty of Pharmaceutical Sciences, University of British Columbia

**A.J. Lowik**, MA, PhD Candidate, University of British Columbia; Graduate Academic Assistant, BC Centre on Substance Use

**Patrick L.L. McDonald**, MD, MSc, dip. ISAM; Addiction Medicine Fellow, BC Centre on Substance Use; Department of Psychiatry, University of British Columbia

**Alice Ordean**, MD, CCFP, MHSc, FCFP, FASAM; Medical Director, Toronto Center for Substance Use in Pregnancy, Department of Family Medicine, St. Joseph's Health Center, Toronto

**Andrea Ryan**, MD, CCFP, dip. ISAM; MD, CCFP, Dip. ISAM; Clinical Instructor, Department of Family Medicine, University of British Columbia; Physician Lead, Addiction Medicine Consult Team (AMCT), St. Paul's Hospital; Addiction Consultant, St. Paul's Hospital; Research Fellow, BC Centre on Substance Use

**Sarah Smith**, MD; PGY3 Obstetrics and Gynecology, University of Saskatchewan

**Sharon Vipler**, MD, CCFP(AM), dipl. ABA; Clinical Assistant Professor, Program Medical Director, University of British Columbia; Regional Dept. Head, Addiction Medicine and Substance Use Services, Fraser Health Authority

## Health System Reviewers and Partners

Perinatal Services BC
Provincial Health Services Authority

BRITISH COLUMBIA Ministry of Health

BRITISH COLUMBIA Ministry of Mental Health and Addictions

## Acknowledgements

The Guideline Supplement Committee gratefully acknowledges Emily Wagner and Josey Ross for their supervisory support and editorial contribution. The committee would also like to thank the following BCCSU staff members for their contribution to this work: Maya Bird, Jessica Bright, Trish Emerson, Yuko Endo, Kevin Hollett, Grace Nie, Warren O'Briain, and Kelsey Van Pelt.

This work was undertaken, in part, thanks to funding from the Province of British Columbia. Additional funding support was provided by the Canadian Institutes of Health Research through the Canadian Research Initiative in Substance Misuse (SMN–139148).

## Disclaimer for Health Care Providers

The recommendations in this guideline supplement represent the view of the provincial guideline supplement committee, arrived at after careful consideration of the available scientific evidence and following external expert peer review. The application of the recommendations in this document 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 perinatal alcohol use and alcohol use disorder, BC health care professionals are expected to take this guideline supplement 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 supplement should be interpreted in a way that would be inconsistent with compliance with those duties.

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This guideline supplement 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. This guideline supplement 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

This document is intended to supplement the BCCSU Provincial Guideline for the Clinical Management of High-Risk Drinking and Alcohol Use Disorder (Guideline) with clinical guidance specific to pregnant and post-partum patients. While the Guideline has provided a comprehensive description of the harms of high-risk drinking and alcohol use disorder (AUD) in general adult and youth populations, it is recognized that pregnant individuals who use alcohol face an additional set of obstetrical risks. Some of the negative pregnancy outcomes associated with alcohol use during pregnancy include spontaneous abortion, intrauterine growth restriction, preterm birth, and fetal alcohol spectrum disorder.

Increased frequency of healthcare service use during pregnancy and post-partum periods present a unique opportunity for clinicians to identify and address alcohol use; however, stigma regarding substance use during pregnancy and lack of knowledge regarding appropriate screening and treatment options present barriers to early detection and treatment of alcohol use and AUD in this population.

To address this discrepancy, this guideline supplement reviews the evidence pertaining to care principles, screening and risk assessment methods, and treatment and continuing care options for pregnant individuals with high risk alcohol use and AUD. This document emphasises the need for a non-judgmental, inclusive, trauma-informed, and culturally safe approach to care that accommodates patients' individual choices and circumstances. Within this framework, the present document recommends a holistic and integrated care plan with appropriate use of the full range of available treatment options and harm reduction services. A summary of the clinical recommendations outlined in this supplement is provided in Table 1.

## Table 1 Summary of Clinical Recommendations

| | |
|---|---|
| **Screening and Brief Intervention** | |
| **1** | Annual alcohol use screening for all patients of childbearing capacity should include education on Canada's Low-Risk Alcohol Drinking Guidelines and the risks of alcohol use during pregnancy. |
| **2** | Healthcare providers should screen pregnant and post-partum patients for alcohol use at the earliest opportunity. Screening should be repeated routinely throughout pregnancy and post-partum. |
| **3** | All pregnant and post-partum patients who screen positive for alcohol use should receive brief counselling intervention and advice for discontinuing alcohol use. |
| **4** | All pregnant and post-partum patients with AUD should be offered, or referred to, appropriate treatment interventions and support services. |
| **Withdrawal Management** | |
| **5** | Where possible, alcohol withdrawal management for pregnant patients should be conducted in inpatient settings where patients can receive symptom-triggered treatment with close monitoring of withdrawal symptoms.[a] |
| **6** | Clinicians should consider the use of the Prediction of Alcohol Withdrawal Severity Scale (PAWSS), in combination with best clinical judgement, to select the appropriate withdrawal management pharmacotherapy based on the risk of severe complications of withdrawal. |
| **7** | Pregnant patients who develop alcohol withdrawal symptoms should be offered pharmacotherapy for alcohol withdrawal management.<br>A. Either benzodiazepines or gabapentin may be offered to pregnant patients at low risk of severe complications of withdrawal (PAWSS<4).<br>B. Benzodiazepines are recommended for patients at high risk of severe complications of withdrawal (PAWSS>4). |
| **8** | All pregnant and post-partum patients who undergo withdrawal management should be connected to continuing AUD care. |
| **Continuing Care** | |
| **9** | All pregnant and post-partum patients with AUD should be offered, or referred to, psychosocial treatment interventions. |
| **10** | Healthcare providers should consider offering pharmacotherapy with naltrexone, acamprosate, or gabapentin to prevent relapse to alcohol use in pregnant patients with moderate to severe AUD.[b] |
| **Post-partum considerations** | |
| **11** | Healthcare providers should facilitate rooming in and encourage skin-to-skin contact to promote parent-neonate bonding and, in turn, improve maternal and neonatal outcomes. |
| **12** | Nursing parents should be strongly encouraged to discontinue alcohol use while lactating. Patients who continue using alcohol during this period should receive advice and support to reduce drinking and schedule feeding and alcohol use to ensure alcohol is eliminated from breastmilk by the time of feeding or storage of milk. |
| **13** | For patients who are stable on AUD pharmacotherapy (i.e., naltrexone, acamprosate, or gabapentin), decisions regarding breastfeeding[c] should be made on a case-by-case basis with the knowledge and involvement of the patient. The possible neonatal risks of these medications should be weighed against the well-established benefits of breastfeeding for mother and neonate. |

[a] *If inpatient withdrawal management is not an option due to patient preference, remote location, or scarcity of beds, outpatient treatment may be offered to pregnant patients who otherwise meet the criteria for this setting (e.g., PAWSS<4, family or community-based support, ability to attend medical visits, absence of other conditions requiring inpatient care). Patients with insufficient social supports to safely undergo outpatient withdrawal should be accommodated and treated through alternative strategies such as supplementary follow-up visits and connection to local pharmacist. For more information, see Appendix 3, Patient Criteria and Considerations for Outpatient Alcohol Withdrawal Management During Pregnancy.*

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

[c] *According to emerging literature, recognized gender-neutral alternatives for the term "breastfeeding" are "chestfeeding" or "nursing", which may be preferred by some patients who do not identify as women. See Section 3.1.3 for further discussion on accommodating the preferences of this population.*

# 1 Introduction

## 1.1 Background

Alcohol is a known teratogen, and its use during pregnancy is associated with a wide range of negative pregnancy outcomes collectively referred to as fetal alcohol spectrum disorder (FASD), as well as spontaneous abortion and stillbirth.[1,2] According to recent Canadian estimates, FASD affects approximately 4% of the Canadian population and includes fetal growth restriction, developmental delay, neurological abnormalities, and behavioral and cognitive issues throughout life.[1,2]

While a number of meta-analyses have demonstrated that the likelihood and severity of physiologic, cognitive, and behavioural sequalae of in utero alcohol exposure are dose-dependent, no consensus has emerged concerning the specific cut-off blood alcohol level below which alcohol use would be considered "low-risk" for the pregnant person and fetus.[1,3] Therefore, most jurisdictions, including Canada, strongly recommend abstinence from alcohol use during pregnancy.[4,5]

Despite this unequivocal recommendation, alcohol use during pregnancy is not uncommon. According to a 2019 report by the US Centers for Disease Control and Prevention, the overall estimates of alcohol consumption and binge drinking rates among pregnant women during 2015–2017 were 11.5% and 4% respectively, marking a slight increase since the 2011–2013 period (10.2% and 3.1%, respectively).[6] Data from the 2009 Canadian Maternity Experiences Survey indicated that 62.4% of survey respondents reported drinking alcohol during the three months prior to pregnancy, and 10.5% reported that they consumed alcohol during pregnancy.[5,7] These data are likely an underestimation of the true prevalence of alcohol use in pregnancy, as the experience of stigma and fear of judgement and child apprehension can lead to significant under-reporting of alcohol use in this population.[5,8] Nevertheless, available data suggest that the prevalence of alcohol use during pregnancy is comparable to, or higher than, that of many conditions routinely screened for and addressed during prenatal care, such as cystic fibrosis, gestational diabetes, post-partum depression, and preeclampsia.[9-11]

Increased frequency of healthcare service use in the prenatal period and elevated motivation for delivering a healthy baby present a unique opportunity for clinicians, particularly primary care providers, to screen pregnant patients for alcohol use and provide appropriate advice, care, and referrals to address high risk alcohol use and alcohol use disorder (AUD).[12,13] Yet, alcohol use among pregnant patients frequently goes unrecognized. The lack of clear clinical guidelines for screening, assessment, and management of alcohol use and AUD during pregnancy is a commonly cited barrier to seizing this opportunity for early detection and intervention.[3,5,9] In response to this discrepancy, a committee of experts was assembled to supplement the BCCSU, MOH, and MMHA Provincial Guideline for the Clinical Management of High Risk Drinking and Alcohol Use Disorder ("*Guideline*") with clinical recommendations based on a review of evidence for screening and brief intervention, withdrawal management, and continuing AUD care specifically pertaining to pregnant individuals. The following text provides a summary of research evidence from which the committee has derived the clinical recommendations and principles of care presented in this guideline supplement.

## 1.2 Objectives and scope of the guideline supplement

This guideline supplement primarily focuses on the identification, assessment, and clinical management of high-risk alcohol use and AUD in pregnant and post-partum individuals. To support transition from prenatal care to post-partum care for this population, the committee has also provided a review of available evidence on the implications of alcohol use, AUD, and AUD treatment on immediate post-partum care and breastfeeding.

This supplement is intended to serve as a companion document to the *Guideline* which provides a comprehensive review of the evidence on high risk-alcohol use and AUD treatment, clinical recommendations, and a general framework of care for the treatment of AUD; readers are encouraged to also refer to the *Guideline* for broadly applicable guidance in this area.

The objectives of this document are to address barriers to routine screening for the early identification of alcohol use and AUD among pregnant patients and to promote the uptake of evidence-based prevention, risk reduction, and treatment interventions appropriate for pregnant patients within primary care and other clinical settings.

Specifically, these guidelines aim to:

- Describe the principles of care and general considerations for screening, diagnosis, and management of high-risk drinking and AUD for pregnant and post-partum patients.
- Review specific strategies for alcohol use screening and brief intervention for pregnant patients.
- Recommend a clinical pathway for alcohol withdrawal management, whereby appropriate withdrawal risk and severity assessment facilitates tailored treatment selection and symptom-triggered approach that minimizes harm to the patient and fetus.
- Review and recommend pharmacotherapeutic and psychosocial alcohol withdrawal management options that are safe and suitable for the pregnant patient and the fetus.
- Review and recommend strategies for continuing AUD care with demonstrated maternal and fetal safety, including use of pharmacotherapy, psychosocial treatment interventions, and community-based treatment and support geared towards this population.
- Provide an overview of relevant care and safety considerations for patients with AUD and alcohol-exposed infants in the immediate post-partum period.
- Provide guidance on the potential impact of alcohol consumption and the safety considerations of alcohol withdrawal and AUD pharmacotherapy on lactation and breastfeeding.

### 1.3 Guideline development process

Between January 2017 and November 2018, the guideline committee for the pregnancy supplement to the *Provincial Guideline for the Clinical Management of High-Risk Drinking and Alcohol Use Disorder* conferred through email, teleconferences, and three face-to-face meetings. At the first committee meeting, the purpose, scope, and outline of the guideline were provisionally approved by committee consensus in accordance with the AGREE-II reporting checklist for development of clinical practice guidelines.

From May 2019 to January 2020, guidance committee members conferred over email and teleconference, and held two in-person meetings to review and approve evidence summaries prepared by the medical writer and draft guideline contents and recommendations.

#### 1.3.1 Development and approval of recommendations

The recommendations for the pregnancy supplement were developed in reference to the broadly applicable recommendations of the *Guideline*, which were developed using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) tool to develop and score recommendations. In view of limited volume

and low quality of evidence focused on pregnant patients, recommendations specific to pregnant and post-partum populations were developed through committee consensus after rigorous review and discussion of prepared evidence summaries. In addition to the safety and efficacy data pertaining to both pregnant and non-pregnant populations, a range of factors, such as clinician, patient, and policy makers' values and preferences, costs, risk-benefit ratios, and feasibility were considered in the process of recommendation development.

The draft supplement and recommendations were compiled and circulated to the full committee to provide feedback on contents and recommendations. The committee was given four weeks to submit written feedback on the draft supplement. Feedback was collated and incorporated into a revised draft which was then circulated to the committee for additional feedback. Further feedback was collated and incorporated into a second revised draft for external review

### 1.3.2 External review

The draft guideline supplement was circulated for review and comment to relevant experts and stakeholders as identified by the committee. Feedback from the external reviewers was reviewed and incorporated into the final draft of the supplement and external reviewers approved this draft. The final draft was then circulated to the committee for final approval.

## 2 Principles of Care

As outlined in detail in the *Guideline*, healthcare providers are encouraged to observe a set of overarching principles of care that inform a collaborative, equitable, and effective therapeutic relationship with patients and, where appropriate, families affected by high-risk alcohol use and AUD. These principles enable clinicians and care teams to meet the healthcare needs of patients within a patient-centred framework and along an integrated continuum of addiction care. This section highlights a number of care principles and practices with particular practical relevance to the care of pregnant and post-partum individuals who use alcohol. Table 2 provides a summary of the key care principles described in this section.

### 2.1 Respect for the autonomy, agency, and individuality of patients

As with all patients, pregnant individuals who use alcohol should be empowered to take an active role in decisions concerning their own health and well-being; this includes making informed decisions concerning the fetus. While patients should be provided with clinical recommendations to improve pregnancy outcomes, clinicians' concern for the health of the fetus should not override the patient's individual preferences and values.[4] Securing the patient's informed consent prior to implementing clinical decisions, and non-judgemental and informative dialogue are among the key aspects of respectful and effective care.

#### 2.1.1 Privacy and consent

Assuring patients of the confidentiality of the information they disclose helps establish a trusting and open therapeutic relationship. Care providers should inform patients of the relevant aspects of their duty to report and emphasize that there is no legal obligation to report substance use and risks to the fetus during the course of pregnancy to Child Protection Services (see the Child Protection section). This is an important detail to include in the initial discussion as, according to numerous studies, the fear of intervention by child welfare services and losing custody of a child is a major barrier to seeking treatment for pregnant people who use substances.[14,15]

Respect for the privacy of patients extends to the involvement of family members or other support resources in their care. While a patient's family and social circle can have a key role in supporting the patient's care, healthcare providers should avoid assuming that involving a family member is always in the best interest of every patient.

#### 2.1.2 Information sharing and education

Continuous education and sharing of relevant information with patients are the cornerstones of collaborative and empowering care. Lack of knowledge about available treatment options and their implications for the health of the patient and the fetus may act as a barrier to accessing substance use care and engaging in treatment.[16] Thus, it is imperative that clinicians discuss the risks and benefits of available clinical care options for the patient and fetus, and provide referrals to educational and support resources that enhance patients' self-efficacy and independence in improving their health.[16]

For example, clinicians should combine alcohol screening for pregnant patients and patients of childbearing capacity with a conversation regarding the risks of alcohol use during pregnancy and post-partum using the recommendations of Canada's Low Risk Alcohol Drinking Guidelines for this population.[5]

### 2.1.2 Gender-inclusive and non-judgemental language

While the majority of pregnant people identify as women, some pregnant people, including those who are transgender, transsexual, nonbinary, genderqueer, gender neutral, agender, Two-Spirit, and gender nonconforming (also collectively referred to as "trans" individuals) do not identify as women. Historically, clinical interventions for alcohol use during pregnancy have been designed and evaluated with insufficient awareness or understanding of the diversity of pregnant patients in terms of gender and reproductive intentions.[17] A 2018 commentary on gender-inclusive alcohol interventions for pregnant people argues that the assumption that all pregnant people are women creates gaps in services for people who are both trans and pregnant.[17]

For many pregnant patients, the prospect of parenthood is an important source of motivation for positive change. However, care approaches and discourses that do not take into account gender diversity among pregnant people may render alcohol use interventions inapplicable, inaccessible, ineffective, and potentially harmful for pregnant patients who do not identify as women or do not intend to assume the role of mother (e.g., surrogates, patients who choose adoption, expecting parents who do not identify as "mothers"). It should be noted that normative pressures are cited as risk factors for problematic substance use among trans individuals, as they may lead to feelings of guilt, isolation, and inadequacy that, in turn, increase the risk for excessive alcohol consumption and reluctance to access care.[17,18]

Clinicians should respect the identities of patients by using appropriate terminology and pronouns according to each individual's identity and preference.[19] In cases where clinicians require clarity, it is appropriate to ask the patient regarding pronouns and terminology that corresponds with their identity. Where possible and appropriate, care providers should also accommodate the gender identities and reproductive intentions of their patients in care plans and offer to connect patients with support resources. These measures have a significant role in ensuring the engagement and retention of trans patients in care.

## 2.2 Awareness of social determinants of health

Healthcare providers should view and address alcohol use and AUD during pregnancy within the broader context of social determinants of health. Social determinants of health are defined as *"the economic and social conditions that shape the health of individuals, communities, and jurisdictions as a whole."*[20] The distribution of resources and opportunities that a society makes available to its members (e.g., food, income, housing, education, and healthcare) is affected by a range of factors including socioeconomic class; gender; sexual orientation; race and ethnicity; refugee, migrant or immigrant status; and disability status.[21,22] The intersection of multiple factors (e.g., gender, race, sexual orientation) informs each individual's social identity and, access to resources, and, in turn, health outcomes.[23] People who belong to marginalized groups experience the most significant barriers to accessing resources, and, thus, have the poorest health outcomes.[21]

Cited determinants of high-risk drinking and AUD include negative childhood experiences;[24] lower socioeconomic status;[25] living in poorer neighbourhoods;[26] and being a member of a racial, ethnic, gender, or sexual orientation minority.[27] In addition, race, history of physical abuse, general health status, and, to a lesser extent, education have been identified as some of the social determinants of alcohol use during pregnancy.[28] Lack of awareness of the complexity of socioeconomic factors contributing to alcohol use among pregnant individuals may lead to further marginalization of this population, and may impede access to adequate care.

In addition to having a basic understanding of how the unequal distribution of opportunity and resources in the Canadian society impacts the health of individuals, clinicians and care teams should endeavour to identify and remove barriers to accessing care. Clinicians should also aim to address disparities that may exist in the social

determinants of health by offering to connect patients to resources that help meet their social and survival needs (e.g., housing, food/nutrition, child care, financial assistance).

### 2.3 Trauma- and violence-informed care

Alcohol use disorder has been associated with a high lifetime prevalence of trauma including physical and sexual abuse, and pregnancy is a period of particular vulnerability for individuals who have experienced trauma.[29,30] It is also noteworthy that pregnant individuals are at an increased risk of intimate partner violence, particularly in the case of unplanned pregnancies.[31,32] Clinicians involved in the care of pregnant patients with AUD should be familiar with the principles of trauma-informed practice (e.g., trauma awareness; safety and trustworthiness; choice, collaboration and connection; strengths-based approaches and skill building). The provincial Trauma-informed Practice (TIP) Guide may be a useful resource when working with this patient population.[33] Healthcare providers serving this population should also be equipped to identify and respond to gender-based violence; to this end, the Provincial Health Services Authority (PHSA) offers a brief online course series entitled "Gender-Based Violence: We All Can Help Improving the Health Sector's Response", which may serve as a helpful resource.

### 2.4 Integrated medical management

Care for pregnant individuals with AUD should reach beyond a strictly substance-focused approach in order to improve long-term outcomes for the patient and fetus. As the standard of care for the management of any complex or chronic medical condition, thorough medical management should be provided to pregnant patients with AUD. In this context, medical management is defined as informal medically-focused counselling that includes, but is not limited to, conducting health and mental wellness checks; offering non-judgmental support and advice; assessing motivation and exploring ideas for change; developing a holistic treatment plan; promoting alternative strategies for managing stress; and providing appropriate referrals to health and social services with the consent and input of the patient. Clinicians should also ascertain patients' housing, food/nutrition, and security needs and make necessary referrals to address them, with the consent and input of the patient.[29,30]

### 2.5 Harm reduction during pregnancy and post-partum

Harm reduction is commonly defined as policies, programs, and practices aimed at minimizing the negative impact of substance use on the individual and the society without necessarily stopping or reducing substance use.[34,35] In essence, a harm reduction-oriented approach seeks to meet patients "where they are at" and supports any step or behaviour that enhances the health and safety of patients and their communities. This fundamental framework of care requires particular attention in the context of pregnancy, given that recommended AUD interventions for pregnant patients are mainly aimed at abstinence.

While recognizing that discontinuing alcohol use is the only means of fully eliminating alcohol-related risks to the patient and the fetus, this supplement strongly emphasises that the provision of comprehensive and continued care should never be contingent on a pregnant patient's willingness to discontinue alcohol use. Clinicians providing care for pregnant or lactating individuals who continue drinking alcohol should adopt appropriate harm reduction strategies such as promoting safer alcohol use (e.g., reduced drinking, refraining from drinking and driving, discontinuing non-beverage alcohol use) and providing referrals to resources that address social determinants of health (e.g., housing, nutrition, legal services, financial assistance, child care).[35,36] Harm reduction measures have been shown to contribute to reduced drinking, improved nutrition, and improved overall health outcomes for the patient and fetus.[35,36]

For additional information on evidence-based harm reduction strategies geared towards pregnant patients who use substances, see *Harm Reduction and Pregnancy: Community-based Approaches to Prenatal Substance Use in Western Canada*.

### Table 2 Summary of Principles of Care

| | |
|---|---|
| **1** | Clinicians should foster a respectful and collaborative therapeutic relationship with pregnant and post-partum patients who use alcohol, whereby patients are empowered to make informed decisions concerning their own health. To this end, clinical assessment and intervention should be preceded by the provision of relevant information and obtaining the patient's consent and input. In all communication, clinicians should use non-judgemental language that is respectful to the patient's individual identity and values. |
| **2** | Alcohol use and AUD during pregnancy and post-partum periods should be viewed within the broader context of the social determinants of health. Clinicians should aim to identify and address social and economic disparities that affect patients' health by connecting them to resources that help meet their social and survival needs (e.g., housing, food/nutrition, child care, financial assistance). |
| **3** | Clinicians should incorporate the principles of trauma- and violence-informed care in the care and clinical management of pregnant and post-partum patients who use alcohol and those with AUD. |
| **4** | Alcohol use and AUD in pregnant patients should be managed within the framework of comprehensive medical care and support, including routine and ongoing medical, mental health, and psychosocial assessments. |
| **5** | Provision of comprehensive and continued care should never be contingent on a pregnant patient's willingness to discontinue alcohol use. Clinicians providing care for pregnant individuals who continue drinking alcohol should adopt appropriate harm reduction strategies. |

# 3 Screening and Brief Intervention

## 3.1 Considerations for alcohol screening during pregnancy

Regular substance use screening is widely recommended for patients who are or may become pregnant, in order to identify risk and prevent or minimize harm to the patient and the fetus.[4,5,11] Substance use screening should be included in the first prenatal assessment, or at the first available opportunity, and conducted routinely throughout pregnancy and post-partum and when clinically relevant and necessary.[37]

Research has suggested that patient self-reports are a reasonably reliable measure of alcohol use during pregnancy; however, clinicians should be sensitive to factors that may deter patients from providing accurate responses to screening questions, such as stigma and fear of child apprehension.[38,39,40] To address these concerns, it is crucial to establish comfort and trust by securing the patient's informed consent prior to screening, and to assure them of confidentiality and other rights in accordance with the standards of medical practice.[41,42] It is also helpful to mention that all patients are periodically asked about substance use as a standard of primary care provision. Some guidelines recommend that care providers ask pregnant individuals about alcohol consumption at every visit as patients are more likely to disclose alcohol use after a therapeutic relationship has been established.[41] Additionally continuous documentation of alcohol use patterns in pregnant patients with AUD is instrumental to the early identification and management of FASD.[5]

## 3.2 Initiating a dialogue about alcohol use and pregnancy

Screening and assessment for all patients of childbearing capacity should be combined with education about Canada's *Low-Risk Alcohol Drinking Guidelines*[3], which recommends abstinence from alcohol use during pregnancy and outlines low-risk drinking limits for adults. In addition to raising awareness of these guidelines, introducing the topic of alcohol use in a general and conversational manner can also help build rapport and facilitate a natural transition to questions regarding personal alcohol use. For example, alcohol screening can be initiated by asking: *"Have you heard about Canada's Low-Risk Alcohol Drinking Guidelines? I talk to all my patients about these guidelines. They contain important information about safer alcohol use that everyone should know. It also offers recommendations for people who are or may become pregnant."*

Where appropriate, clinicians should also discuss effective contraceptive methods and how to access them with patients of childbearing capacity. This is in consideration of the persistently high prevalence of unplanned pregnancies in Canada.[8,43] Contraceptive counselling services and supplies should also be offered to patients who are currently pregnant in order to reduce the likelihood of a subsequent unplanned pregnancy as short intervals between pregnancies may disrupt ongoing treatment and amplify potential risks to recovery and long-term health.[44,45]

## 3.3 A simplified screening method to address time constraints

Despite the well-established utility of regular alcohol screening for early detection of alcohol use and AUD, and the secondary prevention or minimization of harm to the patient and fetus, many pregnant patients are not screened for alcohol use.[5,11] Time constraints are frequently cited as a key barrier to adequate screening; primary care clinicians often report being overwhelmed by the number of conditions for which they are required to screen pregnant patients. The duration of the average primary care visit is often insufficient to accommodate a thorough screening process which ideally involves an introductory conversation about the maternal and fetal risks of alcohol use.[5,11]

To counteract this barrier, a simplified and stepped alcohol screening process is recommended for pregnant patients, involving a *single alcohol screening question (SASQ)* to identify alcohol use in pregnant individuals. Patients who screen positive should be offered brief intervention and further assessment with validated screening and/or a diagnostic interview using the DSM-5 criteria for AUD.[5] See Appendix 1 for an instructive overview of alcohol use screening for pregnant patients.

A recommended screening method in the general population, the SASQ is typically constructed in reference to low-risk drinking limits in order to determine if, and how frequently, the patient's alcohol consumption has exceeded these limits. For example, an adult patient would screen negative for high-risk alcohol use if their response to the following question was "zero" or "never":

*"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?"*

In the context of pregnancy, the SASQ may be modified to identify any alcohol use in accordance with the *Low-Risk Alcohol Drinking Guideline* recommendation for this population:

*"Do you sometimes drink beer, wine, or other alcoholic drinks?"*[46] An affirmative response indicates the need for brief intervention and further assessment.

Studies have found that the sensitivity of the SASQ ranges from 60-90%,[47-50] and systematic reviews involving non-pregnant patient populations have validated this option for clinical settings where time and patient interactions are limited, notwithstanding its slightly lower sensitivity than structured screening instruments for the detection of high-risk drinking behaviours.[51,52] Although the SASQ has not been explicitly validated for screening pregnant patients, it has been recommended as the first step in alcohol use screening in this population by the Society of Obstetricians and Gynaecologists of Canada[5] and the U.S. Preventive Health Services Task Force on account of its brevity and sufficient sensitivity and specificity.[53] Another advantage of the SASQ is that it can be integrated into an informative conversation without disrupting the flow of the appointment.

### 3.4 Additional validated screening tools for pregnant patients

Studies involving pregnant participants support the effectiveness of a range of screening tools validated for the general population, such as the AUDIT, AUDIT-C, CAGE, and CRAFFT methods.[4,46] Additionally there are a number of screening tools specifically developed for detecting high-risk drinking and AUD among pregnant patients, including the T-ACE, and TWEAK tools. This guideline supplement presents AUDIT, AUDIT-C, TWEAK, and T-ACE, commonly recommended screening tools which have been validated for use during pregnancy. (See Appendix 1)

Table 3 provides a comparative overview of pregnancy-validated tools in terms of selectivity, specificity, time and expertise required, and other factors informing usefulness. Refer to the *Guideline* for screening tools not presented in this document.

## Table 3 Comparative specifications of alcohol screening tools validated for pregnancy[4,54]

| Tool | Outcome | Selectivity (%) | Specificity (%) | Time (provider/ self-administered) | Comments |
|---|---|---|---|---|---|
| **SASQ** | High risk drinking | 84 | 78 | <1 min<br><br>(Provider-administered) | Designed for use in a busy primary care setting<br>Slightly less effective in detecting high-risk drinking and AUD than more complex screening tools (Once continued alcohol use is detected, SASQ can be followed by another tool to reduce likelihood that cases will be missed.)<br>Logical flow from providing general education on Low-Risk Alcohol Drinking Guidelines to using low-risk limits as SASQ<br>Well suited for a general primary care population, where most patients will not screen positive |
| | AUD | 88 | 67 | | |
| **AUDIT** | Hazardous drinking | 97 | 78 | 3-4 mins<br><br>(Provider-administered) | Well-studied; has been validated in multiple settings and patient populations<br>Less sensitive in female patients<br>Uses different standard drink sizes and daily drink limits than Low-Risk Alcohol Drinking Guidelines[d]<br>Requires provider scoring (or an electronic health record (EHR) system or other tool to compute scores) |
| | Hazardous drinking | 95 | 85 | | |

| | | | | | |
|---|---|---|---|---|---|
| **AUDIT-C** | Hazardous drinking | 86 | 78 | 1-2 min<br><br>(Self- or provider-administered) | Well studied; has been validated in multiple settings and patient populations<br>Uses different criteria and standard drink sizes than Canada's Low-Risk Alcohol Drinking Guidelines<br>Requires provider scoring (or an EHR system or other tool to compute scores) |
| **T-ACE** | High risk use | 91 | 81 | 1-2 min<br><br>(Self- or provider-administered) | Available online<br>Developed and validated specifically for pregnant patents<br>Excellent inter-rater reliability<br>Is not suitable for ascertaining patterns of use<br>There is a debate about whether cut off scores are suitable for pregnant patients<br>Validity of both tools varies across different ethnic populations |
| **TWEAK** | High risk use | 79 | 91 | 1-2 min<br><br>(Self- or provider-administered) | Developed and validated specifically for pregnant patients<br>Excellent inter-rater reliability<br>Is not suitable for ascertaining patterns of use<br>There is a debate about whether cut off scores are suitable for pregnant patients<br>Validity of both tools varies across different ethnic populations |

[d] *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.*[3,144]

### 3.5 Diagnosis of AUD

Pregnant patients who screen positive for alcohol use during pregnancy should undergo further assessment to confirm or exclude AUD. As with the non-pregnant population, this assessment may be conducted through a structured interview using the DSM-5 criteria for the diagnosis and severity of AUD. Confirmation or exclusion of an AUD largely determines subsequent steps in the treatment pathway. Appendix 1 presents the diagnostic criteria for AUD.

While all pregnant individuals who screen positive for alcohol use should receive brief counselling intervention and routine follow-ups (see next section, Brief intervention), brief intervention alone is not effective for individuals with AUD.[4,55] Patients who are diagnosed with an AUD should be offered evidence-based treatment for AUD. (See Withdrawal Management and Continuing Care Sections for an overview of evidence-based interventions)

### 3.6 Brief intervention

Brief intervention is a time-limited single-session counselling dialogue that typically follows a positive screen for alcohol use during pregnancy. The aim of this intervention is to assess, strengthen, and mobilize patients' motivation for change in order to help them reduce or discontinue alcohol use. There are a number of different approaches and models for delivering brief intervention for alcohol use in primary care settings, but most are variations of motivational interviewing (MI), a psychosocial intervention which empowers patients to make positive behavioural changes.[5,56] Key components of brief intervention are exploring and discussing motivations for or against reducing alcohol use, identifying barriers and facilitators to change and available treatment and supports, assisting the patient to set goals, and providing non-judgmental encouragement and support. Brief intervention also serves as an opportunity to offer referrals to community-based resources or supports. An advantage of brief intervention is that it can be easily implemented by a range of health care providers including physicians, nurse practitioners, nurses and other allied health professionals who may not have specialized training in addiction medicine.

As with the non-pregnant population, brief intervention is widely recommended for pregnant patients and supported by a number of clinical trials. A 2009 systematic review (n=4 studies; 715 participants) of randomized controlled trials (RCTs) examining the effectiveness of psychosocial treatment interventions found that brief psychosocial or educational interventions may motivate pregnant patients to reduce or discontinue alcohol use, although the authors found the data insufficient for performing a meta-analysis.[57] A number of individual studies have reported significant results in favor of BIs in this population. For example, in a randomized study comparing brief intervention (n=162) to assessment only, O'Conner and Whaley (2007) reported that pregnant individuals in the brief intervention treatment group were 5 times more likely than participants in the control group to report that they abstained from alcohol use throughout pregnancy. The infant mortality rate in the brief intervention group was 3 times lower than the rate in the control group, and newborns from the brief intervention group had greater birth length and weight than control subjects.[58]

A practical example of brief intervention that has been well studied in primary care and used for various specific populations is the 5As (Ask, Advise, Assess, Assist, and Arrange) model for behavioural change.[59] Ease of recall, brevity, and adaptability are practice-relevant strengths of this approach. This model is presented in Table 4. Appendix 2 provides general instructions for conducting brief intervention with a trauma-informed approach.

It should be noted that, while guidelines endorse a range of validated brief intervention methods, research has shown that simply asking patients in a detailed manner about the extent of their alcohol use, discussing potential risks, and offering brief non-judgmental advice may help raise awareness about their actual levels of alcohol consumption and modify behavior.[53,60]

### Table 4 The 5A's Model for Delivering Alcohol Use Brief Intervention[61,62] (modified for pregnancy)

| | |
|---|---|
| **Ask** | Screen pregnant patients in a conversational and non-judgmental manner with awareness of the stigma affecting this population. Acknowledge the patient's existing knowledge about the risks of alcohol use during pregnancy and any changes they have already made to mitigate this risk. |
| **Advise** | In a clear and personalized manner, inform patients of the risks of alcohol use during pregnancy and post-partum and advise them to discontinue alcohol use during this period. |
| **Assess** | Assess and record patients' readiness to discontinue or reduce alcohol use at this time.<br>At this stage, it is advised to conduct a diagnostic interview to confirm/exclude AUD, as brief intervention alone is not effective for individuals with AUD. |
| **Assist** | Work with the patient to develop a treatment plan that accommodates their level of readiness and motivation. Offer supportive counselling and advice, provide a menu of options for treatment and referrals to community resources. |
| **Arrange** | Schedule follow-up contact, preferably within a week of the intended "change date". |

# 4 Withdrawal Management

## 4.1 Overview

Alcohol withdrawal occurs with the sudden cessation or significant reduction of alcohol use after a period of chronic heavy alcohol consumption. These symptoms are believed to result from the hyperactivity of glutamate, the main excitatory neurotransmitter of the central nervous system (CNS), upon the sudden reduction in the blood alcohol level.[3,63,64] In normal conditions, the brain maintains a balance between the effects of GABA, a major inhibitory neurotransmitter, and glutamate. Alcohol disrupts this balance by increasing the inhibitory effect of GABA and suppressing the excitatory effects of glutamate. Chronic alcohol consumption causes the CNS to compensate for the inhibitory effects of alcohol by upregulating glutamate transmission in order to restore neurochemical equilibrium. When suddenly unopposed by the inhibitory effects of alcohol, the upregulated excitatory system results in overall CNS hyperactivity, which manifests as a range of withdrawal symptoms in up to 50% of individuals with long-term alcohol dependence.[3,63,64]

Common alcohol withdrawal symptoms include tachycardia, pyrexia, tremor, nausea, vomiting, and sweating, which may also be accompanied by psychological distress in the form of anxiety, agitation, and sleep disturbance or insomnia. 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.[65] Additionally, a small percentage of symptomatic patients may experience severe complications of withdrawal consisting of tonic-clonic seizures and delirium tremens which are life-threatening if left untreated.[66-68]

The data available on the specific effects of acute withdrawal on the pregnant patient are sparse; however, some have extrapolated that pregnant individuals may be particularly vulnerable to the withdrawal symptoms listed above due to their well-documented increased susceptibility to physiological and environmental stress.[3,69-72] Acute maternal alcohol withdrawal may, in turn, lead to a host of adverse effects on the fetus including fetal distress, placental abruption, preterm labour, and fetal demise.[3]

In view of the added risks of alcohol withdrawal during pregnancy, it is recommended that, where possible, pregnant patients with AUD undergo withdrawal management in inpatient settings where patients can receive symptom-triggered treatment with close monitoring of withdrawal symptoms and fetal health.[3,4,9] It should also be noted that available studies on withdrawal management for this specific population have been conducted in inpatient settings. However, if inpatient withdrawal management is not an option due to patient preference or lack of timely access to available beds, outpatient treatment with close monitoring may be offered to pregnant patients who otherwise meet the criteria for this setting (e.g., low risk of severe complications of withdrawal, family or community-based support, ability to attend medical visits, absence of other conditions requiring inpatient care). For instructions on outpatient withdrawal management information, see Appendix 3, Patient Criteria and Considerations for Outpatient Alcohol Withdrawal Management.

It should be emphasised that withdrawal management alone does not constitute treatment for AUD. Studies report high post-withdrawal relapse rates and suggest that sustained abstinence and reductions in alcohol use are unlikely without provision of continuing AUD care.[73,74] Patients should be connected to continuing care following the completion of withdrawal management. See the Continuing Care section in this supplement for an overview of evidence-based treatment interventions. This section provides a review of the efficacy and safety of clinical withdrawal assessment and management options with a focus on fetal and neonatal outcomes.

Refer to Chapter 3 of the *Guideline* for a comprehensive review of all common withdrawal management treatment options for the general population of patients with AUD.

## 4.2 Assessment

### 4.2.1 The Prediction of Alcohol Withdrawal Severity Scale (PAWSS)

The Prediction of Alcohol Withdrawal Severity Scale (PAWSS) is a validated score-based tool for estimating the risk of developing severe complications of withdrawal (i.e., seizures and delirium tremens), which facilitates the selection of appropriate withdrawal management interventions.[75] The PAWSS incorporates the evidence-based risk factors of developing severe complications of withdrawal 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.[75] While this tool has not yet been validated specifically for use in pregnant patients, its accuracy and usefulness in inpatient settings was validated in a 2018 systematic review of 14 studies (n=71,295) evaluating single and composite measures of severe withdrawal risk.[76] The authors 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 have the highest sensitivity (93%, [95% CI, 77%-99%) and specificity (99%, [95% CI, 98%-99%]) in assessing the risk of severe complications of withdrawal.[76]

Recommended preliminary assessment for alcohol withdrawal in non-pregnant populations involves the administration of the PAWSS tool in order to select the appropriate treatment setting based on their risk of developing severe complications of withdrawal.[75,76] Given the recommendation that all pregnant patients requiring withdrawal management undergo treatment in an inpatient setting, assessment for the purpose of selecting the treatment setting may not be indicated in this population unless strong patient preference or scarcity of beds prompts risk assessment for outpatient treatment. However, the PAWSS is also a useful means of selecting the appropriate withdrawal management pharmacotherapy, as non-benzodiazepine withdrawal management medications may not be appropriate for individuals at high risk of experiencing severe complications of alcohol withdrawal.[9] As such, this supplement recommends that clinicians consider the use of this tool to help select between gabapentin and benzodiazepines for withdrawal management in pregnant patients.

For more information see Pharmacotherapies for withdrawal management. If clinicians elect to administer the PAWSS tool to inform medication selection, its result should be combined with additional clinical assessment and observation.9 The PAWSS tool and corresponding instructions will be produced in Appendix 3.B.

### 4.2.2 Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar)

The CIWA-Ar is considered the gold standard for assessing withdrawal symptom severity in a range of clinical care settings for the general patient population, with demonstrated inter-rater reliability and validity.[77] This tool is commonly used to determine and adjust symptom-triggered dosing schedules. Studies have shown that using the CIWA-Ar in this context minimizes both under- and over-medicating patients while mitigating the risk of severe symptoms.[78,79]

The CIWA-Ar involves the 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. A score <15 indicates mild withdrawal symptoms while scores ≥15 and ≥20 are indicative of moderate and severe withdrawal symptoms respectively.[77] Due to the wide recognition of the CIWA-Ar scale, the terms "mild", "moderate", and "severe" withdrawal used in this supplement are defined according to these numerical scores.

Although the CIWA-Ar has not been validated for pregnant patients, its use is common for alcohol withdrawal symptom assessment during pregnancy and has been described in a case report.[80] The authors reported the utility of this tool in devising a symptom-triggered withdrawal management regimen and minimizing the exposure of the patient and fetus to potentially harmful medications.80 Clinicians using this tool for withdrawal symptom severity assessment should be mindful that some of the CIWA-Ar criteria (e.g., nausea and headache) overlap with common symptoms of pregnancy. Thus, CIWA-Ar results should be interpreted with clinical judgment and in communication with the patient to distinguish between pregnancy and withdrawal symptoms.80 The CIWA-Ar tool and corresponding instructions are presented in Appendix 3.B.]

### 4.3 Management of negligible to mild withdrawal symptoms

In consideration of the significant risks of acute withdrawal to the patient and fetus, all pregnant patients diagnosed with AUD should be offered medication for withdrawal management. However, patients with mild AUD may experience negligible withdrawal symptoms and may prefer to receive supportive therapy and continuing care without pharmacological detoxification.

There is a lack of consistent guidance regarding the non-pharmacological management of mild withdrawal symptoms among non-pregnant and pregnant patients alike. Many practice guidelines pertaining to the general population recommend provision of supportive care alone until withdrawal symptoms subside (e.g., supportive environment; close monitoring with the involvement family where possible; adequate nutrition and hydration; encouragement and positive reinforcement; referrals to psychosocial treatment interventions and community-based support resources).[8,81] If not contraindicated, over-the-counter pain relievers, anti-emetics, and antidiarrheal medications approved for use during pregnancy and lactation may also be prescribed for management of mild symptoms. This is based on early studies involving non-pregnant populations that found supportive care was sufficient for approximately 75% of patients with no psychiatric or medical comorbidities.[82,83]

Clinical experience suggests that pregnant patients are more likely than other populations to opt for non-pharmacological treatment options due to heightened motivation to minimize possible risks of pharmacotherapy to the fetus.[84,85] While patient preference and motivation are among the predictors of treatment success and key factors in treatment selection, patients should be clearly informed of the risks of maternal withdrawal symptoms, and offered frequent monitoring and reassessment.

### 4.4 Pharmacotherapies for withdrawal management

Common pharmacotherapies for alcohol withdrawal in non-pregnant patients consist of benzodiazepines; anticonvulsants including carbamazepine, gabapentin, and valproic acid; and alpha-2 adrenergic agonists. There is a dearth of research and evidence-based guidance pertaining to pharmacotherapeutic withdrawal management in pregnant individuals. This is partly due to the ethical concerns restricting clinical investigation in this population, particularly given the suggested risk of teratogenicity associated with a number of common withdrawal management medications in animal studies.[9] A 2009 Cochrane review of pharmacotherapies found no randomized or quasi-randomized studies of pharmacologic interventions for pregnant participants enrolled in alcohol treatment programs and concluded that considerably more research was needed to assess the safety of available treatments in this population.[86]

As reviewed below, the limited research on the safety of pharmacological options for withdrawal management during pregnancy has been focused almost exclusively on benzodiazepines. However, in response to emerging evidence in support of gabapentin for this indication, this supplement also provides a brief overview of the safety

and efficacy of this medication. Considered as an aggregate, the literature summarised in this section suggests that the harms of acute alcohol withdrawal surpass the potential risks associated with its pharmacological treatment with these agents. See Table 4 below for a comparative overview of the clinically relevant characteristics of benzodiazepines and gabapentin. Appendix 3.C provides general prescribing information and sample dosing protocols for the medications reviewed in this section.

Refer to the *Guideline* for a comprehensive review of evidence concerning all evidence-based pharmacotherapies for alcohol withdrawal in the general population.

### 4.4.1 Benzodiazepines

Benzodiazepines have the most substantial history and supportive evidence in alcohol withdrawal management for pregnant and non-pregnant populations.[4,87] Numerous systematic reviews have established the superior efficacy of this class of medications in suppressing alcohol withdrawal symptoms and preventing withdrawal seizures and delirium tremens.[4,88-90]

Early case-control studies on the use of benzodiazepines in pregnancy suggested that these medications may be associated with increased risk of fetal malformations.[3,80] However, a number of more recent cohort studies found no increased risk of congenital malformations, cardiac defects, or neurobehavioural problems among children born to people who used benzodiazepines during pregnancy in comparison to the general population.[3,91,92] A 2011 systematic review and meta-analysis including nine case-control and cohort studies also examined the correlation between maternal benzodiazepine use and major fetal malformation.[93] The authors also concluded that, in sum, benzodiazepines did not appear to increase teratogenic risk (OR, 1.07 [95% CI 0.91 to 1.25]), although the case-control studies demonstrated an increased risk of cleft lip.[93]

Currently, the use of benzodiazepines during pregnancy holds a category D designation by the US Food and Drug Administration (FDA), which denotes evidence of risk to human fetuses with prolonged use.[9] This categorization is attributed to evidence suggesting an increased risk of cleft lip.9 However, it is important to note that the duration of alcohol withdrawal management is typically 5–7 days, which does not constitute prolonged use. Additionally, the majority of studies concerning the fetal safety of benzodiazepine treatment in pregnancy do not account for the purpose, duration, and dose of maternal benzodiazepine use.[3] One case-control study examining the fetal outcomes of short-term (generally 3 weeks) diazepam treatment during pregnancy found that short-term exposure to this medication presented no detectable teratogenic risk to the fetus.[94]

Additional considerations for benzodiazepine use during the final trimester of pregnancy include "floppy infant syndrome" and neonatal benzodiazepine withdrawal. Floppy infant syndrome is characterized by a constellation of treatable symptoms such as mild sedation, hypotonia, reluctance to suck, apneic spells, and cyanosis that can persist for hours to months after birth.3 Neonatal benzodiazepine withdrawal symptoms may include hypertonia, hyperreflexia, restlessness, irritability, abnormal sleep patterns, inconsolable crying, tremors or jerking of the extremities, bradycardia, cyanosis, suckling difficulties, apnea, diarrhea, and vomiting.[3,95] While there is no conclusive data regarding the specific type of benzodiazepine that would prevent the development of these symptoms, some reports suggest that short acting benzodiazepines (e.g., lorazepam) may be preferable in the third trimester for minimizing the duration and severity of neonatal benzodiazepine withdrawal.[80,95]

Overall, considering the well-established risks of untreated withdrawal, the literature suggests that potential benefits of benzodiazepine use for the treatment of acute alcohol withdrawal outweigh its risks, particularly in the case of severe AUD where the prevention of seizures and delirium tremens is a key consideration. In

reference to these findings, the 2014 World Health Organization guidelines recommend management with a benzodiazepine, titrated to the severity of withdrawal.[4]

### 4.4.2 Gabapentin

The effectiveness of gabapentin for alcohol withdrawal management in non-pregnant patients at low risk of developing seizures and delirium tremens is demonstrated by a growing evidence base. To date, results from two RCTs (n=126) indicate that gabapentin (at total doses of 1200mg/day) is as effective as benzodiazepines for the outpatient management of mild to moderate alcohol withdrawal symptoms, and may yield additional benefits in terms of improved daytime alertness, sleep quality, anxiety, and mood.[96,97]

With respect to safety for use during pregnancy, gabapentin is listed as a category C drug by the FDA; there is no evidence suggesting that this medication is teratogenic in humans, though some dose-dependent adverse effects to the fetus have been observed in animal studies.[9,98] Recent evidence suggests that the use of this medication for withdrawal management during pregnancy is safe.[9,45]

Clinicians should be mindful that this medication is not suitable for preventing severe complications of withdrawal (i.e., seizures and delirium tremens). Therefore, it is recommended to assess the patient's risk of severe complications of withdrawal using the PAWSS tool prior to selecting between benzodiazepines and gabapentin.

### 4.4.3 Caution regarding other agents

Alternative options for the management of alcohol withdrawal in the non-pregnant population include other anticonvulsants (i.e., carbamazepine, valproic acid) and alpha-adrenergic agonists including clonidine (See Guideline Chapter 4). However, due to the lack of sufficient supporting evidence, and reported risk of teratogenicity, these agents should not be considered for pregnant patients unless acute withdrawal constitutes a life-threatening emergency and the use of recommended options is contraindicated.[9]

## Table 5 Comparative Features of Pharmacotherapy Options for Management of Alcohol Withdrawal during pregnancy

| | Benzodiazepines[99] | Gabapentin[100] |
|---|---|---|
| Safety for use during pregnancy[9] | FDA category D:<br>• Evidence of cleft lip and "floppy infant syndrome" in human studies<br>• Potential benefits may outweigh risks | FDA category C:<br>• No adequate human studies<br>• Possible risk extrapolated from animal models include preterm birth, low birth weight, and neonatal withdrawal symptoms<br>• Potential benefits may outweigh risks |
| Efficacy | Superior efficacy for suppression of withdrawal symptoms compared to placebo and other active treatments.[90]<br>Superior efficacy for prevention of seizures compared to placebo and active treatments.[88-90] | Emerging data (2 RCTs) showing equal efficacy to benzodiazepines in suppressing mild to moderate withdrawal.<br>May be superior for treatment of insomnia and anxiety symptoms.[96,97]<br>Insufficient evidence for prevention of seizures or delirium tremens. |
| Contraindications | 1. Severe respiratory insufficiency<br>2. Hepatic disease<br>3. Sleep apnea<br>4. Myasthenia gravis<br>5. Narrow angle glaucoma | Hypersensitivity to gabapentin |
| Cautions | 1. Lactose intolerance<br>2. Renal impairment<br>3. Breastfeeding* | Renal impairment |
| Side effects | Common side effects are drowsiness, dizziness.<br>Less common side effects include changes in skin colour, nausea, headache, blurred vision, tremors, hypotension, GI disturbances. Memory loss may also occur. | Higher doses may cause ataxia, slurred speech and drowsiness.<br>Favourable side effect profile in comparison to other anticonvulsants. |
| Safety for breastfeeding | Sedation and poor weight gain in infants have been rarely reported. Short acting agents (e.g., lorazepam, oxazepam) may be preferable. Overall, deemed compatible with breastfeeding by WHO and ACGC.[4,101] | Small number of case reports reported no adverse neonatal effects. Infants should be monitored for drowsiness, adequate weight gain, and developmental milestones, especially in younger, exclusively breastfed infants.[102] |
| Other considerations | Potential for non-medical use, diversion, and dependence.<br>Potential for drug-drug interactions leading to excess sedation, impaired psychomotor and cognitive functioning. | Potential for non-medical use, diversion, and dependence.<br>Toxicity profile parallels that of alcohol.<br>Easy to transition from withdrawal management to long-term relapse prevention. |

** Note: This information is directly adapted from the product monographs of these medications. The fact that benzodiazepines are excreted into human milk was cited as a reason for caution during breastfeeding. See Section 8.2.2 for a summary of evidence supporting the compatibility of these medications with breastfeeding.*

# 5 Continuing Care

## 5.1 Pharmacotherapy

There are no clinical trials evaluating the possible options for the pharmacological management of AUD during pregnancy. The meagre existing literature on this topic is extrapolated from animal studies and evidence pertaining to non-pregnant populations. A recent practice guideline by the American Psychiatric Association recommends against pharmacotherapeutic interventions for AUD during pregnancy, except for the management of alcohol withdrawal.[9,45] This is due to the risk of teratogenicity associated with many evidence-based AUD medications. In line with available guidelines, all patients with AUD should be offered evidence-based psychosocial treatment interventions and supports for AUD. However, the risks of pharmacotherapy to the fetus should be weighed against risk of relapse to alcohol use in the case of pregnant patients with moderate to severe AUD.

Naltrexone and acamprosate are considered first-line AUD treatment agents for non-pregnant patients. This section provides an overview of the safety and efficacy of these treatments for pregnant individuals in reference to available literature. Gabapentin is also reviewed as a potential alternative option for this population. Overall, it is suggested that the benefits of preventing relapse outweigh the risk of possible effects of these agents on the fetus.[9] See Table 5 below for a comparative summary of the characteristics of these medications. Sample dosing protocols and PharmaCare coverage information are provided in Appendix 4. Additionally, please refer to the *Guideline* for a comprehensive review of all evidence-based AUD pharmacotherapies for the general population.

### 5.1.1 Naltrexone

Naltrexone is a mu-opioid receptor antagonist shown to block euphoria associated with alcohol consumption.[103] 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.[103] This blunting effect on neural reward pathways is consistent with research findings that naltrexone is particularly effective in preventing a return to heavy or ongoing drinking.[104] Naltrexone has a well-established evidence base for safety and efficacy in the treatment of AUD among non-pregnant populations.[105] Notably, a 2010 meta-analysis including 50 RCTs (n=7793 participants) reported that 17% fewer participants treated with naltrexone engaged in heavy drinking, and had 4% fewer drinking days per month when compared to the placebo group.[104] Participants treated with naltrexone also showed a greater reduction in heavy drinking days (- 3.25%) and the amount of alcohol consumed (-10.83g) compared to the placebo group.[104]

The FDA has classified naltrexone as a category C medication for use during pregnancy, meaning that there are no adequate human studies on the effects of naltrexone on the fetus, while animal studies have demonstrated mild adverse effects on the fetus.[3,9] Animal studies on in utero exposure to naltrexone have found that this medication crossed the placenta and was associated with reduced sensitivity of the offspring to morphine, and possibly with early fetal loss and increased birth weight.[9] However, limited evidence pertaining to the use of naltrexone for the treatment of opioid use disorder has demonstrated no adverse effects on pregnancy outcomes, although the long-term developmental effects of in utero exposure to this medication are not known.[106,107]

### 5.1.2 Acamprosate

Acamprosate is believed to restore the balance between glutamate-mediated excitation and GABA-mediated inhibition of neural activity, and reduce general neuronal hyperexcitability.[103] Together, these modify responses

to alcohol-related cognitive cues.[103] Acamprosate has been used for the treatment of AUD for several decades in Europe prior to its approval in North America, and has an established evidence base for safety and efficacy in non-pregnant populations.[109-113] A 2010 meta-analysis including 24 RCTs (n=6915) reported that acamprosate reduced the risk of return to any drinking by 14% and increased the cumulative duration of abstinence by 11 days compared to placebo.111 In addition, the authors found that the treatment effects of acamprosate persisted at 3–12 months after treatment discontinuation.[111]

Acamprosate is classified as a category C medication. Until recently, human data on the impact of in utero exposure to acamprosate was limited to one observational personal communication reporting one case of cleft lip among 18 pregnancies, while animal studies show dose-related defects in offspring including retinal dysplasia, iris malformation, hydronephrosis, and increased rate of stillbirth.[9,114] However, more comprehensive supportive evidence was presented by a 2019 population-based retroactive cohort study from New South Wales, Australia, comparing maternal and neonatal health outcomes of acamprosate-exposed pregnancies (n=54) to those of untreated alcohol-exposed (alcohol comparison group; n=162) and non-exposed (community comparison group; n=162) pregnancies.[115] Authors reported that rates of hospital admissions during pregnancy and 42 days post-partum in acamprosate-treated individuals were not significantly different from the community comparison group (adjusted rate ratio [RR] = 0.85, 95% CI = 0.65–1.11), but were significantly lower compared with the alcohol comparison group (adjusted RR = 1.26, 95% CI = 1.00–1.60).115 Acamprosate-exposed neonates were not significantly different from the alcohol comparison group or the community comparison group in terms of birth weight, proportion of small-for-gestational-age neonates, or incidence of congenital abnormalities (including FASD).[115] It should also be noted that this study only included individuals who were exposed to acamprosate for more than 30 days during pregnancy in the case group, so that the results would be applicable to patients receiving pharmacotherapy for continuing AUD care. Available data suggests that the benefits associated with the use of this medication during pregnancy may outweigh the risks of continued alcohol consumption during this period.[9,114,115]

### 5.1.3 Gabapentin

Emerging evidence for the efficacy of gabapentin in preventing relapse in non-pregnant populations is derived primarily from three placebo-controlled clinical trials. Two RCTs comparing 7-day gabapentin treatment to placebo 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.[116,117] Most recently, a 12-week trial of 150 participants in an outpatient setting demonstrated that gabapentin significantly improved rates of cumulative abstinence (estimated number needed to treat [NNT] of 8) and heavy drinking (estimated NNT of 5), with no difference in adverse events compared to placebo.[118]

A distinctive advantage of gabapentin is that it has been found effective for outpatient withdrawal management in patients at low risk of developing severe complications of withdrawal (PAWSS<4), and patients who complete withdrawal using this medication may have the option to continue its use beyond the acute withdrawal period as part of a long-term treatment strategy without the risk of disruption to care.[119]

In terms of safety for use during pregnancy, gabapentin is a category C medication which indicates evidence of risk to the fetus in animal studies. Available animal models reveal a higher risk of embryotoxicity during organogenesis, but this is purported to occur at supratherapeutic doses that would not typically be seen in humans.[120] In a limited 2013 prospective cohort study with pregnant participants, no fetal malformations were observed, but the authors reported a possible association with preterm birth and low birth weight.[121]

Clinicians considering gabapentin for pregnant patients should be mindful of the risk of non-medical use and dependence associated with this medication.[122-125] It is also important to note that concurrent use of alcohol, opioids, or other CNS depressants with higher doses of gabapentin increases the risk of respiratory depression, profound sedation, syncope, and death.[100] While available evidence suggests that these risks are significantly lower than those associated with untreated AUD,[126-129] clinicians should arrange frequent follow-ups and monitor patients for non-medical use, dependence, diversion, and concurrent alcohol or opioid use. Particular attention is advisable in the case of patients who are prescribed multiple medications for concurrent conditions.[123]

Gabapentin withdrawal has also been reported in a number of infants born to patients who used gabapentin; this condition is treatable, though it may require admission to the neonatal intensive care unit.[9,130]

### 5.1.4 Caution regarding other agents

The use of other AUD medications, such as topiramate and disulfiram, during pregnancy is not recommended. A preliminary report on 203 prospectively followed pregnancies exposed to topiramate found a high rate of major congenital malformations among neonates.131 Similarly, sparse evidence associates maternal disulfiram use with fetal limb reduction.[132]

There is no evidence-based guidance regarding patients who are stable on one of these medications prior to becoming pregnant. In these cases, clinicians should carefully consider the risks and benefits of transitioning patients to alternative treatment options in communication with an addiction specialist and the patient.[45] Where possible, transitioning the patient to safer pharmacotherapies (i.e., naltrexone, acamprosate, or gabapentin) or psychosocial treatment interventions and supports may be appropriate. Additionally, patients of childbearing capacity who are prescribed one of these medications should be informed of possible risks in the event of pregnancy and advised of the importance of contraception in the course of treatment.

## Table 6 Comparison of Pharmacotherapies for AUD during pregnancy

| | Naltrexone[133] | Acamprosate[134] | Gabapentin |
|---|---|---|---|
| **Safety for use during pregnancy** | FDA category C:<br>• No adequate human studies<br>• Evidence of risk in animal studies: reduced opioid sensitivity in offspring<br>• Potential benefits may outweigh risks<br>• Robust evidence base for safety in general population | FDA category C:<br>• No adequate human studies<br>• Possible risk extrapolated from animal models include preterm birth, low birth weight, and neonatal withdrawal symptoms<br>• Potential benefits may outweigh risks<br>• Robust evidence base for safety in general population | FDA category C:<br>• No adequate human studies<br>• Possible risk extrapolated from animal models include preterm birth, low birth weight, and neonatal withdrawal symptoms<br>• Potential benefits may outweigh risks |
| **Efficacy** | Established evidence base efficacy in reducing relapse rates and alcohol consumption compared to placebo.[105] | Established evidence base for efficacy reducing relapse rates compared to placebo.[111] | Emerging evidence (3 placebo-controlled RCTs) showing efficacy in reducing alcohol cravings, heavy drinking, abstinence rates. |
| **Contraindications** | 1. History of sensitivity to naltrexone<br>2. Current opioid use (analgesia, opioid agonist treatment, or non-medical use)<br>3. Acute opioid withdrawal<br>4. Acute hepatitis or liver failure | 1. History of hypersensitivity to acamprosate<br>2. Severe renal impairment (creatinine clearance 30mL/min)<br>3. Breastfeeding* | Hypersensitivity to gabapentin |
| **Relevant cautions** | 1. Renal impairment<br>2. Hepatic impairment<br>3. Concomitant use of other potentially hepatotoxic drugs<br>4. Pediatric patients (<18 years)*<br>5. Pregnancy and breastfeeding* | 1. Moderate renal impairment (creatinine clearance of 30-50mL/min)<br>2. Pregnancy* | Renal impairment |
| **Side Effects** | Nausea, headache, and dizziness are the most commonly reported side effects. 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. | Higher doses may cause ataxia, slurred speech, or drowsiness.<br>Favourable side effect profile in comparison to other anticonvulsants. |

| | | | |
|---|---|---|---|
| **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. | Safe to start while patients are using alcohol, but may be more effective if started following completion of withdrawal management. | Higher than therapeutic dose and use concurrent with alcohol increases the risk of respiratory depression, profound sedation, syncope, and death. |
| **Breastfeeding** | Minimally excreted into breast milk. Limited case studies show no adverse neonatal effects.[135,136]<br>Not a barrier to breastfeeding. | No adequate human studies.<br>Deemed "probably safe" in pharmacokinetic investigations.[45,137] | Small number of case reports reported no adverse neonatal effects.<br>Infants should be monitored for drowsiness, adequate weight gain, and developmental milestones, especially in younger, exclusively breastfed infants.[102] |

** This information is directly adapted from the product monographs of these medications, where lack of sufficient data pertaining to pregnancy and lactation was cited as cause for caution. Section 8.2.3 for a review of available information on the safety of AUD pharmacotherapy for breastfeeding.*

## 5.2 Psychosocial treatment interventions

Validated psychosocial treatment interventions for AUD in pregnancy do not differ from those offered to the general population. There is modest RCT evidence supporting the effectiveness of cognitive behavioural therapy (CBT), motivational interviewing (MI), and contingency management during pregnancy.[3] A 2009 Cochrane review of psychological and educational interventions for reducing alcohol use in pregnancy (4 RCTs, n=715) concluded that there was insufficient data on the effectiveness of these interventions for reducing alcohol consumption or supporting abstinence.[57] However, the authors cited inconsistent results, small sample sizes, high risk of bias, and heterogeneity in intervention types and outcomes assessed across trials as confounding factors hindering evidence synthesis. The authors also acknowledged that the existing literature supports the usefulness of these psychosocial interventions in increasing abstinence from alcohol use and reducing alcohol consumption among pregnant individuals.[57] Accordingly, most clinical practice guidelines recommend that all pregnant individuals with AUD be offered psychosocial treatment interventions to support abstinence or reduced alcohol consumption.[138]

It is important to note that MI, CBT, and CM are well-studied in the context of substance use disorders among the general populations, and have a significant track record of use in a wide range of settings and patient populations.[139,140] For a comprehensive review of evidence on the efficacy of these interventions, see the corresponding sections of the *Guideline*. See Appendix 5 for an instructive overview of MI.

## 6 Considerations for Bed-Based Treatment Facilities

Although the evidence supporting the efficacy of bed-based treatment facilities[e] for substance use disorder is relatively limited, guidelines pertaining to pregnant individuals cite residential settings as potentially beneficial for patients who require more intensive medical care and support to improve health and pregnancy outcomes.[120,141] These facilities may also be appropriate for patients with comorbidities and complex medical and psychosocial needs, as well as those who have unstable housing and social circumstances. Decisions regarding the selection of this treatment setting should be made in collaboration with, and with the consent of, the patient.

The following factors should be considered when selecting a treatment facility for pregnant patients:

- Capacity to provide pharmacological treatment for AUD as directed by the patient's prescriber
- Capacity to provide wraparound medical and psychosocial support for concurrent conditions as well as AUD
- Access to comprehensive specialist pregnancy and prenatal care
- If applicable, access to post-partum and neonatal care, as well as onsite accommodation or visitation provision for patient's child(ren) and family.[142] Keeping parents and children together should be among primary considerations when selecting a treatment setting for this population.

Effective discharge planning is also crucial to ensure positive long-term bed-based treatment outcomes.[143,144] The treatment facility should communicate with outpatient care providers and relevant community-based services to ensure the continuation of care and support after discharge. It may be necessary to intensify support and monitoring during transition between settings as patients are particularly vulnerable to relapse to alcohol use in these periods. Every effort should be made to ensure patient's access to safe and stable housing prior to discharge.[142]

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]

[e] *Also referred to as "residential treatment" or "inpatient treatment" facilities in the literature.*

# 7 Post-partum Considerations

## 7.1 Rooming-in and skin-to-skin contact

Rooming-in and skin-to-skin contact during the immediate post-partum period is associated with healthy parent-infant bonding leading to improved long-term developmental outcomes, higher likelihood of breastfeeding, improved access to integrated care and initial childcare education in a family-centered setting, and reduction of maternal and neonatal distress and alcohol withdrawal symptoms.[4,145,146] Skin-to-skin contact and gentle rocking of the infant in a quiet environment are also widely recommended interventions for management of neonatal withdrawal symptoms.[4,136] Thus, in line with standards of care pertaining to the general populations, healthcare facilities providing obstetric care should have a rooming-in protocol in place whereby the monitoring and treatment of patients with AUD and their infants can take place without interrupting nursing and parent-infant contact.

## 7.2 Breastfeeding

Breastfeeding[f] is consistently recommended in guidelines pertaining to neonatal care, including care for infants born to parents in treatment for substance use disorders.[4] This is in view of a robust evidence base demonstrating that breastfeeding is the ideal means of supporting the healthy growth and development of a child while promoting parent-infant bonding and reducing maternal stress.[4] In the case of nursing parents who use alcohol or are receiving pharmacotherapy for AUD, the risks and benefits of breastfeeding should be considered on an individual basis. This section provides a brief overview of the pharmacokinetics of alcohol and AUD pharmacotherapies (i.e., naltrexone, acamprosate, and gabapentin) during lactation and discusses neonatal and developmental safety concerns associated with the maternal use of these agents while breastfeeding.

### 7.2.1 Alcohol and lactation

Available research on the effects of maternal alcohol use during lactation on the neonate is limited and contradictory. While there is some evidence suggesting that occasional drinking while breastfeeding does not have significant adverse effects on nursing infants, there is insufficient investigation and lack of consensus regarding the long-term consequences of heavy maternal alcohol use during breastfeeding. Alcohol is transferred into breast milk; the alcohol concentration in breast milk is known to resemble that in maternal blood, and the amount of alcohol transferred to nursing infants during feeding is approximately 5 to 6% of the weight-adjusted dose consumed by the nursing parent.[147,148] Thus, some studies have suggested that, even in the case of binge drinking, the infants may not be subjected to clinically relevant amounts of alcohol[148,149] while others associate heavy maternal alcohol use during lactation with decreased rate of infant growth and psychomotor development.[149,150] A systematic review of 11 studies (n=36) investigating alcohol's effect on nursing neonates found that infants breastfed by mothers who had consumed alcohol prior to feeding temporarily ingested 20% less milk, arguably as a result of reduced milk ejection reflex.[148] Temporary sedation and changes in sleeping patterns in the neonate have also been documented.[4,148]

In view of these effects and the lack of conclusive evidence on the possibility of long-term developmental risk, most guidelines strongly recommend that breastfeeding mothers refrain from consuming alcohol during lactation.[4,147] However, many guidelines also emphasise that alcohol use is not necessarily a contraindication to

[f] *According to emerging literature, recognized gender-neutral alternatives for the term "breastfeeding" are "chestfeeding" or "nursing", which may be preferred by some patients who do not identify as women.*

breastfeeding. For example, the World Health Organization lists alcohol use among maternal conditions during which breastfeeding may still continue based on a case-by-case analysis of benefits and risks.[151]

Breastfeeding patients who continue consuming alcohol should be strongly advised to reduce drinking and provided with education to schedule breastfeeding and alcohol use to ensure alcohol is eliminated from breastmilk at the time of feeding or storage of breastmilk. In the case of moderate drinking (i.e., 1–2 standard drinks in a day), guidelines generally recommend waiting 2–2.5 hours after drinking to store breastmilk or breastfeed.[4] However, the time required for the elimination of alcohol is dependent on the amount of alcohol consumed; alcohol appears to be eliminated from breastmilk more slowly in the case of daily heavy alcohol use (i.e., more than two standard drinks per day), and there is a decrease in the length of time that mothers can breastfeed their infants, resulting in significant risk.[152] Therefore, the risk of breastfeeding may outweigh its benefits in the case of chronic heavy maternal alcohol use.

See Appendix 6 for a sample patient information handout of alcohol use and safer nursing practices.

### 7.2.2 Alcohol withdrawal pharmacotherapy and lactation

**Benzodiazepines:** All major classes of benzodiazepines are known to be excreted into human milk in varying but generally low concentrations.[95] Limited evidence characterises possible adverse effects of neonatal exposure to benzodiazepines through human milk as lethargy, sedation, and reduced sucking ability which may lead to poor weight gain.95,153-155 However, available literature suggests that these adverse effects are rare and mild.[150-152] For example, in a 2012 retrospective cohort study (n=124) examining the neonatal impact of maternal benzodiazepine use during lactation, adverse outcomes—namely sedation—were observed in two (1.6%) infants, both of whom were breastfed by participants who used benzodiazepines in conjunction with other CNS depressants.[154]

Similarly, a 2014 review of 16 studies on the impact of neonatal benzodiazepine exposure found rare reports of sedation, predominantly associated with longer-acting benzodiazepines (e.g., diazepam, clonazepam).[155] The authors emphasize the absence of serious negative effects among infants exposed to relatively short acting drugs and suggest that lorazepam and oxazepam may be among preferable agents for breastfeeding patients.

There findings are in line with guidelines by the WHO and the American College of Obstetricians and Gynecologists which deem benzodiazepines compatible with breastfeeding unless the infant's ability to metabolize the medication is impaired.[4,101]

**Gabapentin:** The safety of gabapentin for breastfeeding has been investigated by a small number of case reports involving a range of doses and durations of treatment, and no significant adverse effects were reported.[102,156] Limited information indicates that maternal doses of gabapentin up to 2.1g daily produce relatively low levels in infant serum.[102] Accordingly, an expert consensus guideline indicates that gabapentin is an acceptable medication during lactation.[102] However, the authors advise to monitor the infant for drowsiness, adequate weight gain, and developmental milestones, especially in younger, exclusively breastfed infants.[102]

### 7.2.3 AUD pharmacotherapy and lactation

There are no controlled studies and limited human data on the safety of maternal use of naltrexone, acamprosate, and gabapentin during breastfeeding. On account of this lack of evidence, careful assessment of benefits and risks, fully informed patient consent, and close monitoring of the infant is advised when considering these medications for nursing parents.

**Naltrexone:** Limited data indicate that naltrexone is minimally excreted into human milk. A case study cited by the Drugs and Lactation Database involves two 1.5-month-old infants breastfed by individuals who were receiving 50mg of oral naltrexone daily during pregnancy and lactation.[135,136] The authors reported no naltrexone-related adverse effects in the infants. Accordingly, while the Health Canada-approved product monograph for naltrexone recommends caution with regards to the use of this medication by nursing parents,[133] the benefits of breastfeeding may outweigh potential risks of neonatal exposure to naltrexone.

**Acamprosate:** Acamprosate's effect on human breastmilk has not been studied. In animal studies, this medication was excreted in the milk of lactating rats. In reference to this lack of evidence, the product monograph of acamprosate lists pregnancy and breastfeeding among contraindications to the use of this medication.[134] However, available guidance on the neonatal risks of pharmacotherapies during lactation suggests that the use of this medication during breastfeeding is "probably safe" for neonates.[45,137]

**Gabapentin:** Please Section 7.2.2, Alcohol withdrawal pharmacotherapy and lactation for a summary of evidence supporting the compatibility of gabapentin with breastfeeding.

## 8 Child Protection

*The prenatal period:*

Clinicians in Canada do not have a legal obligation to report prenatal substance use or substance use during the course of pregnancy. Any antenatal referrals or reports should be made with the informed consent of the patient.

Integrated care programs and collaborative long-term support planning in the course of pregnancy may foster family stability and enable new parents to play an active role in their child's care with the help of resources available in her family and community.[157,158] The involvement of expecting parents, supportive family members, public health and community-based resources, and services provided by the BC Ministry of Children and Family Development (MCFD) prior to childbirth can help improve pregnancy outcomes. However, the involvement of these services should be considered on a case-by-case basis with the collaboration and consent of the pregnant patient.

*The neonate (and other children in the custody of patient):*

Maternal substance use alone is not grounds for the apprehension of an infant or referral to MCFD. However, the health care team is legally obligated under Section 14 of the *Child and Family and Community Service Act (CFCSA)* to report child protection concerns to the MCFD. Prior to making a report, clinicians should refer to *Section 13 of the CFCSA* for a comprehensive outline of circumstances under which notifying MCFD is warranted. The decision to report should be made on a case-by-case basis in consultation with the full health care team. It should be noted that the apprehension of infants is associated with a range of negative long-term social and health outcomes for the mother and child.[159-161] If a child is temporarily apprehended during the immediate post-partum period, mothers should be offered appropriate supports to ensure that the outcomes they experience after the loss of their child do not become barriers to reunification.[159]

# Appendices

## Preface

The following appendices have been provided to support clinical practice and were developed through discussion and consensus of 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

In line with available guidelines, this document emphasises the key role of universal and regular substance use screening in health promotion, and specifically recommends screening pregnant patients for alcohol use in the first prenatal assessment (or at the first available opportunity) and re-screening routinely throughout pregnancy and post-partum and as clinically relevant. This appendix provides an instructive overview of the screening process in three steps: Step 1– Starting the Conversation using the Low-Risk Alcohol Drinking Guidelines, 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 (LRADG) handout can help guide conversations toward alcohol use screening. Clinicians may use the LRADG handouts to provide patients with general information regarding the risks of alcohol use to the patient and fetus while clarifying concepts that would enhance the accuracy of alcohol screening, such as what is meant by "alcoholic beverages" and standard drink sizes.

**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
- 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, would you mind if I ask you some questions about your alcohol use?"*

## Step 2 Screening for High-Risk Alcohol Use

In consideration of the time constraints reported by clinicians providing prenatal care, this guideline has recommended a simplified and stepped screening method using a *single alcohol screening question (SASQ)* to identify alcohol use in pregnant individuals. In addition to a brief sample script for this abbreviated screening process, this appendix presents alternative screening methods validated for pregnant patients. Clinicians are encouraged to select a screening approach based on their clinical experience and judgement.

### SASQ sample script

"*Do you sometimes drink beer, wine, or other alcoholic beverages?*"

**No:**
Screening is complete.

- Offer encouragement.
- Review the LRADG, emphasising that abstinence is recommended during pregnancy.
- If patient reports not drinking, ask about their alcohol use history:
  - Offer encouragement to patients with a personal or family history of AUD who have stopped drinking since they have become pregnant; ask if they have encountered challenges in the process, and offer encouragement and support as needed.
- Rescreen annually frequently depending on personal and family history.

**Yes:**
Positive result for high-risk drinking.

- Ask about the patient's average weekly alcohol consumption in standard drinks over the past three months to assess risk and determine whether a diagnostic test is needed (record amounts for follow-up sessions):
  - 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 deemed useful, clinicians may choose to use an additional pregnancy-validated screening tool (e.g., AUDIT, AUDIT-C, T-ACE, TWEAK) to assess risk prior conducting the diagnostic test (See below for a review of additional screening tools).
- If patient's self-reported drinking is above low-risk limits for non-pregnant female adults, or if their responses are vague or inconsistent with the clinician's observations, proceed to diagnosis and assessment for AUD (Step 3).
- All patients screening positive for alcohol use should receive brief intervention (Appendix 2).

## Additional screening tools

### AUDIT and AUDIT-C

The Alcohol Use Disorders Identification Test (AUDIT) was developed by the World Health Organization (WHO) to assist in the early identification of "hazardous"[g] or "harmful"[h] alcohol consumption. The AUDIT is a well-studied and commonly used alcohol screening tool which has been validated for a wide range of settings and populations, including pregnant individuals. This tool consists of 10 questions that may enable the administrator to obtain relatively comprehensive information about a patient's alcohol consumption patterns at present and over the past year.5 Each question is assigned a score between 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 is associated with "problem drinking," while 13 or more indicates alcohol dependence. This AUDIT questionnaire takes approximately 3–4 minutes to complete and score.

The condensed AUDIT-Consumption (AUDIT-C) tool, which consists of three questions focusing on frequency and quantity of alcohol use, uses sex-specific cut-off points: in adult patients who were assigned female at birth, a score of 3 or higher indicates hazardous or harmful drinking. This condensed questionnaire takes approximately one minute to complete and score.

The WHO and the US Preventive Health Services Task Force recommend use of the AUDIT or AUDIT-C for detection of hazardous or harmful drinking in all adult primary care patient populations.[61,162,163] Similarly, a recent article examining the potential of adequate alcohol screening and harmonized data collection for the prevention of FASD has found that the AUDIT-C contains the required elements for clinicians to ascertain pregnant patients' pattern of alcohol use in a relatively compact format.164 However, provider-level barriers, including lack of experience and time constraints (which are of particular concern in the context of pregnancy), have been cited as barriers to more widespread uptake and use of these tools in primary care.[11,48,165-167] As an alternative, self-administered print and electronic versions of these questionnaires 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.[168]

Another potential limitation of the AUDIT and AUDIT-C is that the low-risk limits and standard drink sizes used in these instruments are slightly different from those indicated in Canada's Low-Risk Alcohol Drinking Guidelines. The US Centers for Disease Control and Prevention have made adaptations in the standard drink size and cut-off points for use in the United States of America; a similar adjustment in accordance to the LRADG would significantly enhance the utility of AUDIT-C as a validated compact tool for alcohol screening during pregnancy.[164]

The AUDIT and AUDIT-C questionnaires are provided in Boxes 1 and 2 below.

[g] *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.*

[h] *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).*

## Box 1 The Alcohol Use Disorders Identification Test (AUDIT)[169]

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 2 The AUDIT-Consumption (AUDIT-C) Tool [170]

| | |
|---|---|
| **1. How often do you have a drink containing alcohol?**<br>(0) Never<br>(1) Monthly or less<br>(2) 2 to 4 times a month<br>(3) 2 to 3 times a week<br>(4) 4 or more times a week | |
| **2. How many units of alcohol do you drink on a typical day when you are drinking?**<br>(0) 1 or 2<br>(1) 3 or 4<br>(2) 5 or 6<br>(3) 7, 8, or 9<br>(4) 10 or more | |
| **3. How often do you have six or more drinks on one occasion?**<br>(0) Never<br>(1) Less than monthly<br>(2) Monthly<br>(3) Weekly<br>(4) Daily or almost daily | |
| **Interpretation:** In male patients, a score of 4 or more is considered positive for hazardous drinking.<br>In female patients, a score of 3 or more is considered positive for hazardous drinking.<br>If score is positive, proceed to diagnosis and assessment for AUD. | Total score: |

## T-ACE

The Tolerance, Annoyed, Cut down, Eye opener (T-ACE) is the first screening tool validated for pregnant patients, and is currently recommended by the American College of Obstetrics and Gynecology and the National Institute of Alcohol Abuse and Alcoholism.[60] This tool is regularly used as a part of primary care for this population due to its brevity, clarity, and ease of administration.[60] The T-ACE was developed through a substantial simplification of the 25-question Michigan Alcohol Screening Test (MAST) into a 4-item questionnaire which has a similar structure to the CAGE tool.[171] The T-ACE takes approximately one minute to conduct and score. The T-ACE questionnaire is provided in Box 3.

### Box 3 The T-ACE Tool

| T-ACE | Questions | Points |
|---|---|---|
| **Tolerance** | How many drinks does it take to make you feel the first effect (before pregnancy)? | 3 or more = 2 points |
| **Annoyed** | Have people ever annoyed you by criticizing you about your drinking? | Yes = 1 point |
| **Cut down** | Do you sometimes feel the need to cut down your drinking? | Yes = 1 point |
| **Eye Opener** | Do you sometimes take a drink in the morning when you first get up? | Yes = 1 point |

Patients who score 2 or higher on the T-ACE should be referred for further assessment for alcohol use disorder.

### TWEAK

Tolerance, Worry, Eye-opener, Amnesia, Cut down (TWEAK) is a 5-question screening tool developed specifically for pregnant patients. As a slight variation of the T-ACE, TWEAK combines features from CAGE and MAST. This method is suitable for use in primary care settings and takes less than 2 minutes to administer and score. The result is calculated on a 7-point scale, and a score of 2 or higher indicates high risk drinking.[5,54] The TWEAK questionnaire is provided in Box 4.

### Box 4 The TWEAK tool[54]

| TWEAK | Questions | Points |
|---|---|---|
| **Tolerance** | How many drinks can you hold? | 5 or more drinks before falling asleep = 2 points<br>3 or more drinks to feel the effects of alcohol = 2 points |
| **Worried** | Have close friends or relatives worried or complained about your drinking in the past year? | Yes = 2 points |
| **Eye Opener** | Do you sometimes take a drink in the morning when you first get up? | Yes = 1 point |
| **Amnesia (stands for blackouts)** | Has a friend or family member ever told you about things you said or did while you were drinking that you could not remember? | Yes = 1 point |
| **Eye Opener** | Do you sometimes feel the need to cut down on your drinking? | Yes = 1 point |

### Step 3 Assessment and Diagnosis of an Alcohol Use Disorder

Any continued alcohol use in the course of pregnancy constitutes high-risk drinking and indicates the need for further assessment, and, if appropriate, a structured interview using the DSM-5 criteria to confirm the diagnosis and severity of AUD (see Box 5 below).

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

Brief intervention alone is not an effective intervention for individuals with an AUD.172 Patients who are diagnosed with an AUD should be offered treatment and care options for withdrawal management and continuing care. Baseline assessment and other withdrawal management considerations, including sample dosing schedules, are outlined in Appendix 3. Appendix 4 offers an instructive overview of continuing AUD pharmacotherapies while Appendix 5 outlines the key principles and considerations for motivational interviewing, a recommended evidence-based psychosocial intervention for AUD.

## Box 5 DSM-5 Diagnostic Criteria for Alcohol Use Disorder[173]

| | 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. | Sample Clinical Interview Questions[174]<br>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:<br>a) A need for markedly increased amounts of alcohol to achieve intoxication or desired effect<br>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:<br>a) The characteristic withdrawal syndrome for alcohol<br>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 alcohol use during pregnancy

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.[61,175] Guidance for adapting the 5As approach as a brief alcohol intervention is provided below.[176-180]

### Box 6 Script and instructions for trauma-informed brief intervention delivery

<table>
<tr><th>Brief Intervention Component</th><th>Trauma-Informed Care Considerations</th></tr>
<tr><td>1. Ask<br>• Screen patient for alcohol use. See Appendix 1 for detailed guidance on screening<br>• Express appreciation for answering sensitive screening questions<br>2. Advise<br>• Clearly describe the screening result and its implications on the health of the patient and fetus<br>• Provide direct personalized recommendations<br>• Where possible, relay relevant health risks in reference to patient's concerns, including risks to the fetus:<br>“You are drinking more than is medically safe, and this is putting your health (and the health of the fetus) at risk….”<br>“I recommend that you cut down or stop drinking.”<br>3. Assess<br>• Engage patient in a brief conversation to assess and encourage motivation, ability to reduce or discontinue their alcohol use at this time<br>• Enquire about, and validate, any initial steps the patient has already taken to reduce or discontinue their alcohol use at this time<br>• Sample questions:<br>“Are you willing to consider making changes in your drinking?”<br>“How do you feel about my recommendation? Do you have any questions?”<br>“What do you think? Would that work for you? Does that make sense?”<br>“What are you already doing or planning about reducing or stopping alcohol use during your pregnancy? How might I support you?”<br>4. Assist</td><td rowspan="2">Be mindful of the impact our behaviors can have on people with a history of trauma:<br>• Utilize universal precautions for creating a calm and welcoming environment. This includes minimizing noise, decreasing clutter, maintaining a comfortable temperature<br>• Be aware of internal emotions and thoughts and focus on those that bolster support for the patient<br>• Be aware of your tone of voice and physical space as you introduce yourself and your role and explain the collaborative process planned (Practical note: ensure that you do not physically block the patent's pathway to the door)<br>• Respond and communicate respectfully (e.g., ask what name they would like to be called, their gender, their partner's gender, and what pronouns they prefer. Validate patient's gender identity, sexual orientation, and preferences for how they wish to be addressed)<br>• Listen intently to understand responses and their context<br>• Commit to setting aside your own judgements and thoughts about screening results<br>• Maintain awareness of your language and tone of voice when responding.</td></tr>
<tr><td>If patient expresses readiness to change:<br>• Express your support and offer encouragement<br>• Collaboratively set goals that are meaningful to the patient. Goals do not have to be limited to reducing or stopping alcohol use<br>• In line with the patient's goals, provide a menu of options, including pharmacotherapy, psychosocial interventions, recovery-oriented and community-based supports</td><td><table><tr><th>Say This:</th><th>Not This:</th></tr><tr><td>Alcohol poisoning</td><td>Overdose</td></tr><tr><td>Person with AUD</td><td>Addict</td></tr><tr><td>Unhealthy alcohol use</td><td>Alcohol misuse</td></tr></table>Remember to use terminology and gender pronouns that reflect the patient's preference.</td></tr>
</table>

| | |
|---|---|
| If patient does not express readiness to change:<br>• Restate your concern about patient's health<br>• Ask about any barriers to change the patient may be experiencing, and invite the patient to consider how these could be navigated<br>• Encourage the patient to take time to reflect on the conversation<br>• Reaffirm your willingness to support when patient is ready<br>• Offer educational material and referrals to relevant healthcare and community resources<br>• Follow-up. Repeat screening and brief intervention regularly | • Be sensitive about the patient's reproductive intentions. It is important not to assume that the patient intends to carry the fetus to term or become a parent. Accommodate the patient's reproductive intention (e.g., terminating pregnancy, placing infant for adoption) in your advice process<br>• Client-driven readiness assessment and change negotiation is most effective<br>• Identify positive health assets and strengths that can contribute to better health and pregnancy outcomes<br>• Utilize strengths-oriented open-ended questions: "How have you been successful in the past?" "What coping skills have you learned from your life experiences?"<br>• Promote resilience through language choices (I have, I am, I can); model and practice with your patient<br>• Identifying strengths rather than deficits will enhance change talk; use this approach when discussing how to achieve a higher number if that's their goal<br>• Recognize that anything the patient is willing to do to address the issue is a step in the right direction<br>• Connect the patient to others who may be able to meet any needs that are outside your scope of practice<br>• Reinforce that you are here to help and that this is an ongoing discussion. Ideally, you want patients to always feel comfortable to discuss these issues with you during visits<br>• Document the agreed upon plan so you can engage in informed follow-up during the next appointment |
| 4. Arrange | |
| If patient has met, or made progress towards, planned intervention goal:<br>• Congratulate, reinforce, and support continued change<br>• Coordinate care with referral partners if the patient has accessed additional support. Communicate with external/community agencies on patient's progress<br>• 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<br>• With the patient's consent, assist with identifying new goals according to patient's intentions, and schedule follow-up appointments<br>If patient has been unable to meet planned intervention goal:<br>• Acknowledge that change is difficult<br>• Encourage the patient to consider possible connections between their drinking and other health/social problems they may be experiencing. This exercise may reveal opportunities for change<br>• If the following measures are not already being taken, consider:<br>  • Referring patient to external or community-based resources (e.g., peer support groups)<br>  • Recommending the involvement of family (if appropriate)<br>  • Offering pharmacotherapy to patients with AUD<br>  • Reassessing or adjusting current treatment plan<br>• Continue to assess and address any co-occurring medical conditions and mental health symptoms (e.g., insomnia, depression, anxiety)<br>  • Note: Pharmacological management of depression and anxiety is less effective if the patient continues to use alcohol<br>Schedule follow up appointments. | |

Adapted from: LaFave et al. NH S.BI.RT Implementation Playbook for Perinatal Providers. Available at: https://sbirtnh.org/wp-content/uploads/2019/02/perinatal-playbookFINALdig-2.pdf.

### Additional resources

Centers for Disease Control and Prevention. Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use: A Step-by-Step Guide for Primary Care Practices. 2014. Available at: https://www.cdc.gov/ncbddd/fasd/documents/alcoholsbiimplementationguide.pdf.

The College of Family Physicians of Canada. Alcohol Screening, Brief Intervention, and Referral: A Clinical Guide. Available at: http://www.sbir-diba.ca/docs/default-document-library/2012-screening-brief-intervention-and-referral-clinical-guide-en.

Gonzalez S, Grubb J, Kowalchuck A, et al. Addressing Alcohol Use Practice Manual: An Alcohol Screening and Brief Intervention Program. Available at: https://www.aafp.org/dam/AAFP/documents/patient_care/alcohol/alcohol-manual.pdf.

Nathoo, T., Poole, N., Wolfson, L., Schmidt, R., Hemsing, N., and Gelb, K. Doorways to Conversation: Brief Intervention on Substance Use with Girls and Women. 2018. Available at: http://bccewh.bc.ca/wp-content/uploads/2018/06/Doorways_ENGLISH_July-18-2018_online-version.pdf.

National Institute on Alcohol Abuse and Alcoholism (NIAAA). Helping Patients Who Drink Too Much: A Clinician's Guide. NIH Publication No. 05-3769. 2005. Available at: http://pubs.niaaa.nih.gov/publications/Practitioner/CliniciansGuide2005/clinicians_guide.htm. (Note: not accessible using Chrome web browser, but can be viewed with Safari, Explorer, etc.)

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.

## Appendix 3 Patient criteria and considerations for outpatient alcohol withdrawal management during pregnancy

### A. Criteria for outpatient withdrawal management during pregnancy

In order to minimize the risk of adverse obstetric effects associated with alcohol withdrawal symptoms and withdrawal management interventions, it is recommended that pregnant patients with AUD undergo withdrawal management in inpatient settings where possible, so that patients can receive symptom-triggered treatment with close monitoring of withdrawal symptoms and fetal health.[3,4,9] It should also be noted that available studies on withdrawal management for this specific population have been conducted in inpatient settings. However, if inpatient withdrawal management is not an option due to patient preference or lack of timely access to available beds, outpatient treatment with close monitoring may be offered to pregnant patients who otherwise meet the criteria for this setting.

### Box 7 Patient Criteria for Outpatient Alcohol Withdrawal Management [181,182]

- 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)
  - Chronic or complex pain disorders
  - Co-occurring severe substance use disorders (excluding tobacco)
  - Pregnancy complications
- Ability to attend daily medical visits for first 3-5 days, and alternating day visits thereafter
  - For patients and 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

**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, scarcity of beds, or rural and remote location, patients with insufficient social supports should be accommodated and treated through alternative strategies such as supplementary follow-up visits and 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.

## Box 8 Prediction of Alcohol Withdrawal Severity Scale (PAWSS)[75]

| | |
|---|---|
| **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**?<br>**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?<br>(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)*<br>**OR** *Have you consumed any alcohol in the past 24 hours? |
| **10** | Is there any evidence of increased autonomic activity?<br>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 for pregnant patients or outpatient care settings. While this guideline endorses the usefulness of the PAWSS for risk assessment in all settings and populations, it emphasizes that *this tool should be used in conjunction with best clinical judgment based on a comprehensive assessment of a patient's medical history and 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,[183] it is very unlikely that a patient who has not consumed alcohol in the past 24 hours would have a BAL greater than 200mg/dL. While any alcohol consumption in the past 24 hours is a conservative measure of BAL>200mg/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 and an accurate proxy measure of BAL.[184,185]

**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.75 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.[75] 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.[186] To prevent patients from mistaking other experiences, such as tremor, for a seizure, clinicians should define what is meant by a withdrawal seizure and differentiate this experience from other withdrawal symptoms. Additionally, ppatients with AUD are at increased risk of idiopathic epilepsy or seizure for other reasons,[187,188] so the PAWSS administrator should clearly define withdrawal seizures as seizures that occur within 1-2 days of discontinuation or significant reduction of 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%.[189] Symptoms of delirium tremens include profound disorientation, confusion, and agitation accompanied by severe autonomic hyperactivity.[189] 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 9 Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar)[77]

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

**Box 9** (Continued)

| | |
|---|---|
| **Anxiety**<br>Ask *"Do you feel nervous?"*<br>Observation.<br>0 no anxiety, at ease<br>1 mild anxious<br>2<br>3<br>4 moderately anxious, or guarded, so anxiety is inferred<br>5<br>6<br>7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions | **Headache, Fullness in Head**<br>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.<br>0 not present<br>1 very mild<br>2 mild<br>3 moderate<br>4 moderately severe<br>5 severe<br>6 very severe<br>7 extremely severe |
| **Agitation**<br>Observation.<br>0 normal activity<br>1 somewhat more than normal activity<br>2<br>3<br>4 moderately fidgety and restless<br>5<br>6<br>7 paces back and forth during most of the interview, or constantly thrashes about | **Orientation and Clouding of Sensorium**<br>Ask *"What day is this? Where are you? Who am I?"*<br>0 oriented and can do serial additions<br>1 cannot do serial additions or is uncertain about date<br>2 disoriented for date by no more than 2 calendar days<br>3 disoriented for date by more than 2 calendar days<br>4 disoriented for place/or person |
| The CIWA-Ar is not copyrighted and may be reproduced freely.<br>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 _____<br>Rater's Initials _____<br>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.[190,191]
- 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.[192]

## C. Prescribing guidance for withdrawal management pharmacotherapy

**Baseline assessment and preparation**

- Confirm DSM-5 diagnosis of AUD
- Conduct physical and mental health assessment to determine appropriate setting and pathway for withdrawal management. See Box 7 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)193
    - 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 may be ordered to assess general health, alcohol-related comorbidities, and other conditions that could impact pharmacotherapy selection:

- CBC, serum electrolytes, glucose, liver function and renal function panels
- HCG test for patients of childbearing capacity
- 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 guideline endorses the use of benzodiazepines, which is well-studied and endorsed for withdrawal management in this population, or gabapentin, which may be an appropriate alternative for pregnant patients at low risk of developing severe complications of withdrawal (PAWSS <4). To facilitate medication selection for patients who meet the criteria for outpatient withdrawal management, this appendix provides information on the contraindications and cautions pertaining to each alcohol withdrawal medication along with sample dosing protocols. Both medications are eligible for full coverage through PharmaCare drug benefits Plan C, Plan W, and Fair PharmaCare. Neither is covered by Plan G for treatment of alcohol withdrawal.

Prescribers and allied healthcare providers are encouraged to connect with an addiction medicine specialist for advice and guidance on complex cases. The Rapid Access to Consultative Expertise (RACE) line connects physicians and nurse practitioners with a perinatal addiction specialist. The 24/7 Addiction Medicine Clinician Support Line provides telephone consultation to physicians, nurse practitioners, nurses, and pharmacists who are involved in addiction and substance use care and treatment in BC, and is available 24 hours a day, 7 days a week, 52 weeks a year to provide rapid response for time sensitive clinical inquiries. The contact information of these provincial consultation resources are as follows:

RACE - Shared Care Telephone Advice Line - Vancouver, British Columbia

Vancouver area: 604-696-2131

Toll Free: 1-877-696-2131.

Hours of operation: Monday to Friday, 0800-1700

24/7 Addiction Medicine Clinician Support Line

778-945-7619

### Benzodiazepines[194]

*Common Contraindications:*

- Severe respiratory insufficiency
- Hepatic disease
- Sleep apnea
- Myasthenia gravis
- Narrow angle glaucoma

*Cautions:*

- Lactose intolerance: Lactose is a non-medicinal ingredient in benzodiazepine medications
- Renal impairment: If treatment is necessary in patients with impaired renal function, it is recommended to initiate benzodiazepines at a very low dose and monitor renal function closely
- Breastfeeding: Benzodiazepines pass into breast milk. It should be noted that the risks of continued heavy alcohol use during lactation surpass those associated with benzodiazepines. (See Section 8.2.2 for further discussion)
- Chronic respiratory diseases: Cautious dosing is recommended due to the risk of respiratory depression

*Safety considerations:*

- Benzodiazepines potentiate 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
    - 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
- Prescribers should review benzodiazepines' drug-drug interactions when considering this class of medications for alcohol withdrawal management

*Side Effects:*

- 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

*Sample Dosing Protocol:*

5-day schedule with Diazepam (Valium®)[195]

| Schedule | Day 1 | Day 2 | Day 3 | Day 4 |
|---|---|---|---|---|
| Rigid | 10mg QID | 10mg TID | 10mg BID | 10mg at bedtime |
| Flexible[a] | 10mg every 4 to 6 hours as needed based on symptoms[b] | 10mg every 6 to 8 hours as needed | 10mg every 6 to 8 hours as needed | 10mg at bedtime as needed |

[a] *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.*

[b] *Symptoms: Pulse rate >100 beats per minute, diastolic BP > 90 mmHg, or signs of withdrawal.*

### Gabapentin[196]

*Common Contraindications:*

- Hypersensitivity to gabapentin

*Cautions:*

- 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.

*Safety considerations:*

- Patients with compromised respiratory function, respiratory or neurological disease, renal impairment and the elderly are at higher risk of experiencing severe adverse CNS effects including sedation, somnolence, loss of consciousness as well as serious respiratory depression.
- Gabapentin is eliminated primarily by renal excretion; dosage adjustment may be required in elderly patients and patients with renal impairment.
- 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 the use of 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.
- Prescribers should review gabapentin's drug-drug interactions when considering this medication for alcohol withdrawal management.

*Side Effects:*

- The most common side effects are ataxia, slurred speech, and drowsiness.

*Sample Dosing Protocol[197]:*

- Start with 300mg TID + additional 300mg PRN + 600mg to 1200mg HS
- Titrate quickly to 600mg TID + 600mg to 1200mg HS as tolerated (i.e., even after first dose) + additional 300mg TID PRN if symptoms persist + 600mg to1200mg HS PRN
- On resolution of acute withdrawal symptoms, taper to 600mg TID + 600mg to 900mg HS
- Taper to zero over next 3–5 days, decreasing dose by 600mg daily
- **Do not exceed daily dose of 3600mg**

*Notes:*

- This protocol applies to immediate-release (IR) tablets.

## Appendix 4 AUD pharmacotherapy

This appendix provides an overview of practical considerations and dosing instructions to support medication selection and administration for AUD treatment during pregnancy and lactation. In reference to available evidence reviewed in this document and published guidelines pertaining to non-pregnant populations, the medications listed below include naltrexone and acamprosate, which are considered first-line options, and gabapentin which is regarded as an alternative treatment.

As comparative safety and efficacy of AUD pharmacotherapies have not been comprehensively established for pregnant patients, the decision to prescribe these medications for this patient population should be informed by a careful assessment of risks, benefits, drug-drug interactions, and contraindications.

Prescribers and allied healthcare providers are encouraged to connect with an addiction medicine specialist for advice and guidance on complex cases. The Rapid Access to Consultative Expertise (RACE) line connects physicians and nurse practitioners with a perinatal addiction specialist. The 24/7 Addiction Medicine Clinician Support Line provides telephone consultation to physicians, nurse practitioners, nurses, and pharmacists who are involved in addiction and substance use care and treatment in BC, and is available 24 hours a day, 7 days a week, 52 weeks a year to provide rapid response for time sensitive clinical inquiries. The contact information of these provincial consultation resources are as follows::

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Contraindications, cautions, and side effects listed below have been abstracted from mainly 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 AUD care. Data should be interpreted with this caution.

## Box 10 Comparison of pharmacotherapies for AUD during pregnancy

| | Naltrexone[133] | Acamprosate[134] | Gabapentin[100] |
|---|---|---|---|
| **Contraindications** | 1. History of sensitivity to naltrexone<br>2. Current opioid use or opioid use disorder (analgesia, opioid agonist treatment, or non-medical use)<br>3. Acute opioid withdrawal<br>4. Acute hepatitis or liver failure | 1. History of hypersensitivity to acamprosate<br>2. Severe renal impairment (creatinine clearance ≤ 30 mL/min)<br>3. Breastfeeding* | 1. Hypersensitivity to gabapentin |
| **Cautions** | 1. Renal impairment<br>2. Hepatic impairment<br>3. Concomitant use of other potentially hepatotoxic drugs<br>4. Pregnancy and breastfeeding*<br>5. Pediatric patients (<18 years)* | 1. Moderate renal impairment (creatinine clearance of 30-50mL/min)<br>2. Pregnancy* | 1. Renal impairment |
| **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. | Higher doses may cause ataxia, slurred speech and/or drowsiness.<br>Favourable side effect profile in comparison to other anticonvulsants. |
| **Coverage in BC** | 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. | Eligible for full coverage through PharmaCare drug benefits Plan C, Plan W, and Fair PharmaCare. |
| **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. | Safe to start while patients are using alcohol, but may be more effective if started following completion of withdrawal management, | Higher than therapeutic dose and concurrent use with alcohol increases the risk of respiratory depression, profound sedation, syncope, and death. |
| **Breastfeeding** | • Minimally excreted into breast milk. Limited case studies show no adverse neonatal effects.[135,136]<br>• Not a barrier to breastfeeding. | • No adequate human studies.<br>• Deemed "probably safe" in pharmacokinetic investigations. [45,137] | • Small number of case reports reported no adverse neonatal effects.<br>• Infants should be monitored for drowsiness, adequate weight gain, and developmental milestones, especially in younger, exclusively breastfed infants. [102] |
| **Sample dosing**** | • Start at 12.5 mg once daily.<br>• Titrate up as tolerated to 50 mg once daily over 2 weeks. | • Two 333 mg tablets three times per day. | • Start 100mg to 300mg TID. If symptoms persist, TID doses can be increased up to a suggested maximum daily dose of1800mg. |

** This information is directly adapted from the product monographs of these medications, where lack of sufficient data pertaining to these populations was cited as cause for caution. See Section 6 above for a review of safety evidence in this population.*

*** Intended as a general reference. Individual assessment and consultation with a specialist are imperative.*

## 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[198,199]

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, clinicians can empower patients to define and pursue well-being in their own way.

- **Partnership:** The MI counsellor[i] 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[199]

The following actions are components of active listening in MI. These strategies 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.

**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?"*

[i] *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[199,200]

Active listening may enable the patient to recognize and voice their own desire and potential for change. 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.

### Methods for Evoking Change Talk[200]:

- 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[199]

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

**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[199]

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

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.

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.

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[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.*

## Appendix 6 Information handout for new parents on alcohol and safer breastfeeding[J]

Breastfeeding is the ideal means of supporting the healthy growth and development of a child while promoting parent-infant bonding and reducing maternal stress.[4] This fact sheet provides important information for

patients about eliminating or reducing the negative effects of alcohol while continuing to support nursing.

**Key Facts**

- Breastfeeding is beneficial for you and your baby.
- Unless your doctor advises against breastfeeding, breast milk is the only food your baby needs for the first six months of life.
- If you drink alcoholic beverages, alcohol passes freely from your blood stream into breast milk.
- It is safest to avoid alcohol for the first three months of your baby's life. This gives your baby's liver time to develop.[148,201]
- When your baby is older than three months, follow Canada's Low Risk Alcohol Drinking Guidelines if you choose to drink alcohol.
- Breastfeed just before you drink alcohol.
- Do not breastfeed for at least 2 hours per drink after a drinking occasion.
- Anyone affected by alcohol should not sleep with the baby.

**1. Why is it safest to avoid drinking alcohol for the first three months of your baby's life?**

- Alcohol passes from your blood stream into your breast milk.
- Alcohol has a greater effect on babies younger than three months of age because their livers are less developed.
- Higher amounts of alcohol (more than one drink) can have negative effects on your baby: it can reduce milk production, interfere with your baby's sleep patterns, and affect your baby's early development.
- Young babies breastfeed often and without any pattern. This makes it difficult to time your drinking to be sure there is no alcohol in your breast milk when your baby wants to feed.

**2. How long does alcohol stay in breast milk?**

- Alcohol shows up in breast milk.
- It takes two hours on average for an average body to get rid of the alcohol from one drink. It takes four hours for two drinks, six hours for three drinks, and so on.

[i] *Adapted from: The Government of Nova Scotia. The Fact Sheet About Alcohol and Breastfeeding. Available at: https://novascotia.ca/dhw/addictions/documents/Alcohol_Breastfeeding.pdf.*

3. **What should you do if you plan to drink?**

    - Keep the number of drinks below the Low Risk Drinking Guidelines (no more than two drinks in a day, no more that 10 drinks per week)
    - Breastfeed your baby immediately before you drink. This allows time for the alcohol you drink to leave your breast milk before the next feeding (alternatively you may pump and store your milk before drinking)
    - Eat and hydrate before and while drinking alcohol
    - After a drinking session, wait at least 2 hours per drink before nursing. While you wait, you may "pump and dump" your breast milk to ensure your comfort (remember that pumping and dumping does not reduce the Keep the number of drinks below the Low Risk Drinking Guidelines (no more than two drinks in a day, no more that 10 drinks per week)

4. **What should you do if you drink more than planned?**

    - Get someone unaffected by alcohol to take care of the baby.
    - Anyone affected by alcohol should not sleep with the baby.

Talk to your healthcare provider if you need more information or support.

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