Canadian Guidelines on Alcohol Use Disorder Among Older Adults

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Canadian Coalition for Seniors' Mental Health

Coalition Canadienne pour la Santé Mentale des Personnes Âgées

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Guideline Methodology and Introduction to Substance Use Disorder Guidelines documents can be found on our website at ccsmh.ca

Canadian Guidelines on Alcohol Use Disorder Among Older Adults

Scope

The Canadian Coalition for Seniors Mental Health (CCSMH) received a grant from the Substance Use and Addictions Program (SUAP) of Health Canada to create a set of four guidelines on the prevention, assessment, and management of **substance use disorders** among older adults for alcohol, benzodiazepines, cannabis, and opioids. The GRADE approach was utilized in the creation of these guidelines. The methodology can be found in a separate document at ccsmh.ca.

An introduction to these guidelines which highlights issues of relevance to all four can be found at ccsmh.ca.

These guidelines are not intended to provide a comprehensive guide on the use of these substances either by medical prescription or recreationally. The goal of this document is to provide useful guidance for clinicians on either preventing the development of **alcohol use disorder** or optimally assessing and treating older individuals who have developed such a disorder.

Although our guidelines are described in four separate documents, multiple substance use is common. Clinicians are encouraged to utilize all of the guidelines when relevant.

Definition of Key Terms

Diagnostic and Statistical Manual of Mental Disorders (DSM–5) Definition of Alcohol Use Disorder

A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of criteria below, occurring within a 12-month period (American Psychiatric Association, 2013). It is important to note that among older adults, some of these criteria may be modified by the aging process or their social roles (e.g., retirement from work), resulting in more subtle presentations (Kuerbis et al., 2014).

- Alcohol is often taken in large amounts or over a longer period than was intended.
- There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.
- A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects.
- Craving, or a strong desire or urge to use alcohol.
- Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school or home.
- Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol.
- Important social, occupational, or recreational activities are given up or reduced because of alcohol use.
- Recurrent alcohol use in situations in which it is physically hazardous.
- 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.
- Tolerance, as defined by either of the following:
  - A need for markedly increased amounts of alcohol to achieve intoxication or desired effect.
  - A markedly diminished effect with continued use of the same amount of alcohol.
- Withdrawal, as manifested by either of the following:
  - The characteristic withdrawal symptoms (i.e., autonomic hyperactivity, hand tremor, insomnia, nausea or vomiting, transient sensory hallucinations or illusions, psychomotor agitation, anxiety, and/or seizures).
  - Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms.

Diagnosis

- 1 symptom or less, no diagnosis
- 2–3 symptoms, mild Alcohol Use Disorder
- 4–5 symptoms, moderate Alcohol Use Disorder
- 6 or more symptoms, severe Alcohol Use Disorder

Remission

Following treatment, 3–12 months of abstinence is considered early remission.

More than 12 months is considered sustained remission.

Summary of Recommendations and Grades

We used the GRADE approach (Grading of Recommendations, Assessment, Development and Evaluation) as a method of grading the quality of evidence and the strength of recommendations. In following the GRADE process, the initial step was to grade the quality of available evidence supporting each recommendation. Subsequently, we identified the overall strength of the recommendation taking into account the quality of the evidence but also other factors such as the potential to do harm, the cost and feasibility.

We have also developed a separate category for recommendations which are not primarily based on empirical evidence; but have agreement that they represent best clinical practice. Examples would include: optimal assessment processes and those related to education and/or policy. These recommendations have been categorized as "C" for consensus. We did not use the GRADE process for these recommendations. Other guideline groups have used a similar approach e.g. British Association for Psychopharmacology Guidelines (Lingford-Hughes et al., 2012). While such recommendations lack empirical evidence, we believe they are also useful and important.

GRADE

QUALITY OF EVIDENCE	STRENGTH OF RECOMMENDATION
The quality of evidence for each recommendation is determined through an examination of the following factors: (1) Study design and the quality of the studies that were included, (2) the directness of the evidence (generalizability or applicability) and (3) the confidence that patients will benefit from the treatment.	The strength of each recommendation is determined through an examination of the following factors: (1) The balance between benefits and undesirable effects/ risks, (2) uncertainty or variability of patient values and preferences and (3) the resources associated with management options.

****High quality evidence doesn't necessarily imply strong recommendations, and strong recommendations can arise from low quality evidence.*

QUALITY OF EVIDENCE

HIGH	Further research is unlikely to change confidence in the estimate of effect
MODERATE	Further research is likely to have an important impact on the confidence in the estimate of effect and may change the estimate
LOW	Further research is very likely to have an important impact on the confidence in the estimate of effect and is likely to change the estimate

Note: *Meta analyses and Randomized Controlled Trials are considered high quality vs. Observational studies which are considered low quality*

STRENGTH OF RECOMMENDATION

STRONG	Strong recommendations indicate high confidence that desirable consequences of the proposed course of action outweigh the undesirable consequences or vice versa.
WEAK	Weak recommendations indicate that there is either a close balance between benefits and down sides (including adverse effects and burden of treatment), uncertainty regarding the magnitude of benefits and down sides, uncertainty or great variability in patients' values and preferences, or that the cost or burden of the proposed intervention may not be justified.

(Adapted from Guyatt et al, 2008)

RECOMMENDATION #1:

For women 65 years of age or older, no more than 1 standard drink per day with no more than 5 alcoholic drinks per week is recommended; for men 65 years of age or older, no more than 1–2 standard drinks per day, with no more than 7 per week in total is recommended. Non-drinking days are recommended every week. [**GRADE: Evidence: Moderate; Strength: Strong**]

a. Depending upon health (i.e., dementia; Parkinson's Disease; hemorrhagic stroke; epilepsy; cardiac dysrhythmias; hypertension; sleep apnea; COPD; liver disease; pancreatitis; GI and breast cancers; compromised balance or mobility), frailty, and medication use (i.e., benzodiazepines, opioids, gabapentinoids, sedating antidepressants) some adults should adhere to these recommended lower levels of alcohol consumption before they reach the age of 65. [**GRADE: Evidence: High; Strength: Strong**]

b. As the older adult ages, especially those with comorbidities (as above), alcohol should be further reduced to 1 drink or less per day, consumed on fewer occasions, and consideration should be given to abstaining from alcohol. [**GRADE: Evidence: Low; Strength: Strong**]

c. It is recommended that older adults do not drink when operating any kind of vehicle, tools or machinery; using medications or other drugs that interact with alcohol; engaging in sports or potentially dangerous physical activity; preparing for bed or having to arise at night; making important decisions; while responsible for the care of others; if living with serious physical or mental illness or a substance use disorder. [**GRADE: Evidence: Low; Strength: Strong**]

d. Older adults who choose to drink alcohol should be advised to slow their pace of consumption and lower their total alcohol intake at each sitting in order to decrease the risk of harm. Alcoholic drinks are best taken with food and not on an empty stomach and should be alternated with caffeine-free, non-alcoholic beverages. They should be completely avoided in potentially risky situations or activities. [**GRADE: Evidence: Low; Strength: Strong**]

RECOMMENDATION #2:

Increase awareness of the risk of alcohol use through labeling that indicates:

a. Standard drink content of the product;

b. National Low Risk Drinking Guidelines for both adults and older adults; and

c. A warning of alcohol related risks and harms. [**GRADE: Evidence: Low, Strength: Strong**]

RECOMMENDATION #3:

As a harm reduction strategy for chronic heavy drinkers, it is recommended that at least 50 mg of thiamine supplementation daily be used to prevent Wernicke-Korsakoff syndrome, progressive cognitive decline and increased frailty. [**GRADE: Evidence: Low; Strength: Strong**]

RECOMMENDATION # 4:

All patients (including older adults) should be screened for alcohol use at least annually (i.e., as part of his or her regular physical examination) and at transitions of care (e.g., admission to hospital). Screening should be conducted more frequently if consumption levels exceed the low-risk drinking guidelines, there are symptoms of an AUD, there is a family history of AUD, the patient currently experiences anxiety and/or depression, caregivers express concern, or the older adult is undergoing major life changes or transitions. [**GRADE: Evidence: Moderate; Strength: Strong**]

RECOMMENDATION #5:

Older adults should be asked about alcohol use in all care settings including: hospitals, rehabilitation facilities, home health care, community services, assisted living and long-term care facilities, and specialized programs. [**GRADE: Evidence: High; Strength: Strong**]

RECOMMENDATION #6:

Ensure that screening for AUD in older adults is age appropriate and employs active listening, is supportive, accounts for memory impairment or cognitive decline, is non-threatening, non-judgmental, and non-stigmatizing, and recognizes that DSM–5 criteria will under-identify due to potentially reduced occupational or social obligations. [**GRADE: Evidence: Moderate; Strength: Strong**]

RECOMMENDATION #7:

Request consent to discuss the patient's alcohol use and its impact with family, friends, and other caregivers. [**GRADE: Evidence: Low; Strength: Strong**]

RECOMMENDATION #8:

Older adults who screen positive for an AUD should be assessed by an appropriately trained health care provider. [**GRADE: Evidence: Moderate; Strength: Strong**]

RECOMMENDATION #9:

A comprehensive assessment is indicated for all older adults who have an AUD, have signs of harmful use, or who present with acute intoxication. The assessment should include: the use of a standardized alcohol use questionnaire to determine quantity and frequency of alcohol use and potential harms; a comprehensive assessment of medication and other substance use; determination of the presence of another substance use disorder; evaluation of physical, mental, and cognitive capacity, nutrition, chronic pain, social conditions, family/social supports, and overall functioning; collateral history.

The assessment should be performed regardless of physical, mental, or cognitive co-morbidities with modifications as deemed appropriate. [**GRADE: Evidence: Moderate; Strength: Strong**]

RECOMMENDATION #10:

Assess older adults with AUD for cognitive impairment using a validated tool every 12 months or as indicated. In cases of cognitive impairment, repeat the cognitive evaluation at 6 and 12 months after a reduction or discontinuation of alcohol, to assess for evidence of improvement. The treatment plan should specify the timeline and procedure for ongoing evaluation of clinical outcomes and treatment effectiveness. [**GRADE: Evidence: Moderate; Strength: Strong**]

RECOMMENDATION #11:

The least intrusive or invasive treatment options, such as behavioural interventions, should be explored initially with older adults who present with a mild AUD. These initial approaches can function either as a pre-treatment strategy or as treatment itself.
[**GRADE: Evidence: High; Strength: Strong**]

RECOMMENDATION #12:

Routinely offer alcohol behavioural intervention and case management with pharmacological treatment (e.g., anti-craving medication) as it may improve the efficacy of primary care treatment.
[**GRADE: Evidence: Moderate; Strength: Strong**]

RECOMMENDATION #13:

Naltrexone and acamprosate pharmacotherapy can be used to treat AUD in older adults, as indicated, with attention to contraindications and side effects. Naltrexone may be used for both alcohol reduction and abstinence, while acamprosate is used to support abstinence. In general, start at low doses and titrate slowly, with attention to open communication with the patient. Initiation may be done in the home, hospital, during withdrawal management, or in long-term care with subsequent transition to an appropriate placement.
[**GRADE: Evidence: High; Strength: Strong**]

RECOMMENDATION #14:

All older adults with AUD, and their caregivers and support persons, should be offered psychosocial treatment and support, as indicated, as part of a treatment plan. [**GRADE: Evidence: Moderate; Strength: Strong**]

RECOMMENDATION #15:

Use the Prediction of Alcohol Withdrawal Severity Scale (PAWSS) to screen for those requiring medical withdrawal management (prior delirium, seizures, or protracted withdrawal). Patients who are in poor general health, acutely suicidal, have dementia, are medically unstable, or who need constant one-on-one monitoring should receive 24-hour medical, psychiatric, and/or nursing inpatient care in medically-managed and monitored intensive treatment or hospital settings.
[**GRADE: Evidence: High; Strength: Strong**]

RECOMMENDATION #16:

In the management of alcohol withdrawal in older adults, it is best to use the Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar) symptom score with protocols using a shorter-acting benzodiazepine such as lorazepam. One should also pay close attention to comorbidities to avoid complications.
[**GRADE: Evidence: High; Strength: Strong**]

RECOMMENDATION #17:

As a harm reduction strategy for older adults in controlled environments, where medical withdrawal is not available or deemed appropriate, it is recommended that a managed alcohol taper be considered. Individualize the taper by 1 standard drink every 3 days (aggressive tapering), weekly (moderate tapering), or every 2–3 weeks (mild tapering) with CIWA-Ar monitoring to keep the withdrawal symptom score < 10. The approach should be individualized, incremental, and with an indeterminate timeline.
[**Consensus**]

RECOMMENDATION #18:

To prevent the development of Wernicke's encephalopathy during withdrawal, at least 200 mg of parenteral thiamine (IM or IV) should be administered daily for 3–5 days. [**GRADE: Evidence: Low; Strength: Strong**]

RECOMMENDATION #19:

Health care practitioners, older adults, and their families should advocate for adequate access and funding for treatment for AUD, specifically access to pharmacotherapy (naltrexone and acamprosate) and psychosocial therapies. [**Consensus**]

RECOMMENDATION #20:

Treatment response for AUD should be monitored though laboratory measures such as gamma-glutamyl transferase (GGT) and Mean Cell Volume (MCT). [**GRADE: Evidence: Moderate; Strength: Strong**]

RECOMMENDATION #21:

The severity and management of concurrent physical and mental health conditions (including co-occurring psychiatric disorders, suicide risk, and cognitive disorders), as well as significant social transitions in the individual or family, should continue to be reviewed and monitored regardless of continuance, reduction, or cessation of alcohol use. [**GRADE: Evidence: Moderate; Strength: Strong**]

RECOMMENDATION #22:

Peri-operative elective surgical management should include medically supported withdrawal or alcohol use taper pre-operatively, with post-operative treatment and consideration of anti-craving medication. [**GRADE: Evidence: Low; Strength: Strong**]

Canadian Guidelines on Alcohol Use Disorder Among Older Adults

Rationale

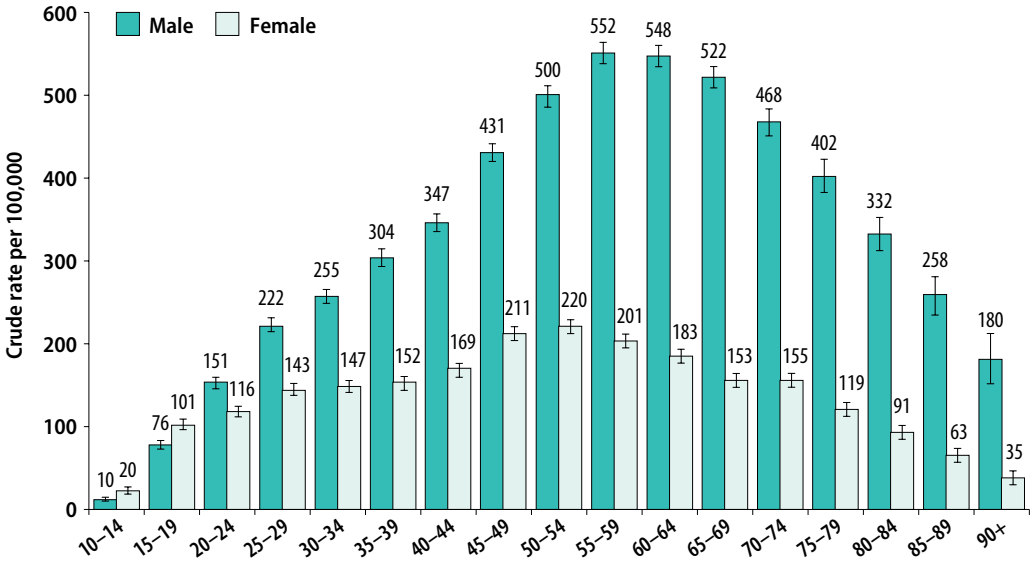
Despite increasing rates of illicit and prescription drug misuse among adults aged 65 years and older, alcohol remains the most commonly used and misused substance in this age group (Kuerbis et al., 2014). Alcohol Use Disorder (AUD) and risky alcohol consumption is common among older adults, with reported problem drinking rates ranging from 1–22% (Woodruff et al., 2009). Older women may be at particular risk for alcohol-related problems (Blow & Barry, 2002). A recent study found that a greater proportion of older adults (aged 55–70 years) drank heavily in comparison to younger adults, although AUD, as defined by the DSM–5, was less prevalent among older adults (Kuerbis et al., 2014).

It can be difficult to identify AUD in older adults, as some of the signs and symptoms of problematic use are similar to age-related health conditions such as poor mobility, cognitive problems, and high rates of multiple comorbidities such as falls and fractures, which may occur as a result of alcohol use (Johnston & McGovern, 2004; Chen & Yoon, 2017; Bjarko et al., 2019). The progression of other chronic illnesses in older adults may also mask AUD. Increased rigor with respect to screening is required along with a broader interpretation of DSM–5 diagnostic criteria to identify older adults living with AUD. Special attention should also be paid to criteria such as failure in social roles and/or reduced or problematic social interactions, as these may not be as apparent in retired or isolated older adults.

Drinking more than 100 g per week of alcohol is known to be associated with a higher risk for all-cause mortality as well as other adverse health events such as stroke, heart failure, coronary artery disease (excluding myocardial infraction), fatal hypertensive disease, and fatal aortic aneurysm (Wood et al., 2018). Excessive alcohol consumption among older adults may increase the risk of several health conditions including hypertension, hemorrhagic stroke, diabetes mellitus, infections, alcoholic liver disease, and gastrointestinal conditions including gastritis, gastric ulcers, and gastric bleeding (Taylor et al., 2010); Mukamal et al., 2006; Baliunas et al., 2009; Diaz et al., 2002; Wakabayashi et al., 2010). There is clear evidence of a dose-dependent pattern of alcohol use increasing the risk of cancer in many organs, including the oropharynx, larynx, esophagus, liver, colon and rectum, and breast (Bagnardi et al., 2001). Excessive alcohol consumption in older adults may also be associated with an increased risk of cognitive decline and dementia (Andersen et al., 2015). AUD is a risk factor for suicide in older adults; concomitant AUD may increase the likelihood for isolation poor health and depression (Canadian Coalition for Seniors' Mental Health, 2006; Heisel & Links, 2005).

Older adults are often on multiple medications to manage chronic diseases and alcohol use introduces the risk for harmful interactions between alcohol and drugs. Furthermore, older adults generally metabolize alcohol at a slower rate than younger adults (Vestal et al., 1977; Tupler et al., 1995; Meier & Seitz, 2008; Andersen et al., 2015) leading to a risk of heightened effects from alcohol among older adults even at relatively low levels of consumption.

Figure 1 **Crude rates for Hospitalizations Entirely Caused by Alcohol per 100,000 population age 10+, by age group and sex, 2015-2016**



Sources
Hospitality Morbidity Database, Discharge Abstract Database, National Ambulatory Care Reporting System and Ontario Mental Health Reporting System, 2015-2016, Canadian Institute for Health Information; population estimates, 2015, Statistics Canada

Prevention of Alcohol Use Disorder in Older Adults

Any use of alcohol confers a certain amount of risk due to a number of circumstances including variable individual vulnerability, the drinking environment, physical activity, acute harm, and potential harm from chronic use. A recent meta-analysis established lower risk of morbidity at 100 g of ethanol or less per week (Wood et al., 2018). Alcohol abstinence is the most definitive method of preventing the onset of an AUD. For older adults who do choose to drink, the best advice is to limit intake to well below the national Low-Risk Alcohol Drinking Guidelines, with further reduction if one's individual risk is increased by a personal or family history of an AUD, the concurrent presence of physical or mental health problems, or a tendency to drink to cope with life's challenges. As aging progresses, or if negative consequences evolve, alcohol intake should be further reduced. Many older adults drink very sparingly, on special occasions only, if at all.

RECOMMENDATION #1:

For women 65 years of age or older, no more than 1 standard drink per day with no more than 5 alcoholic drinks per week is recommended; for men 65 years of age or older, no more than 1–2 standard drinks per day, with no more than 7 per week in total is recommended. Non-drinking days are recommended every week.
[GRADE: Evidence: Moderate; Strength: Strong]

a. Depending upon health (i.e., dementia; Parkinson's disease; hemorrhagic stroke; epilepsy; cardiac dysrhythmias; hypertension; sleep apnea; COPD; liver disease; pancreatitis; GI and breast cancers; compromised balance or mobility), frailty, and medication use (i.e., benzodiazepines, opioids, gabapentinoids, sedating antidepressants) some adults should adhere to these recommended lower levels of alcohol consumption before they reach the age of 65.
[**GRADE: Evidence: High; Strength: Strong**]

b. As the older adult ages, especially those with comorbidities (as above), alcohol should be further reduced to 1 drink or less per day, consumed on fewer occasions, and consideration should be given to abstaining from alcohol. [**GRADE: Evidence: Low; Strength: Strong**]

c. It is recommended that older adults do not drink when operating any kind of vehicle, tools or machinery; using medications or other drugs that interact with alcohol; engaging in sports or potentially dangerous physical activity; preparing for bed or having to arise at night; making important decisions; while responsible for the care of others; if living with serious physical or mental illness or a substance use disorder.
[**GRADE: Evidence: Low; Strength: Strong**]

d. Older adults who choose to drink alcohol should be advised to slow their pace of consumption and lower their total alcohol intake at each sitting in order to decrease the risk of harm. Alcoholic drinks are best taken with food and not on an empty stomach and should be alternated with caffeine-free, non-alcoholic beverages. They should be completely avoided in potentially risky situations or activities. [**GRADE: Evidence: Low; Strength: Strong**]

Standard Drinks

It is important to accurately estimate the quantity and frequency of alcohol use in order to correlate consumption with the low-risk drinking guidelines. Reference is often made to determining how many standard drinks a person has consumed, but there is no international definition of a standard drink. Several countries such as Australia, New Zealand, and the United Kingdom (UK) have lower standard drink limits compared to Canada. In Canada a standard drink is 17.05 ml or 13.45 g of pure ethanol. This is equivalent to a 12-ounce (341ml) bottle of regular 5% beer, five ounces (142 ml) of 12% table wine, or 1.5 ounces (43 ml) of 40% (80 proof) liquor.

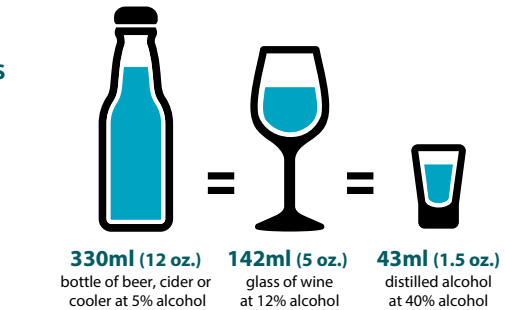


Figure 2

Physiological Changes and Psychosocial Vulnerability Leading to Increased Risk of Alcohol Use

Older adults are more sensitive to the effects of alcohol as they age due to changes in their life circumstances, physiology, cognitive capacity, health status, and their increased likelihood to use multiple medications (Kuerbis et al., 2014).

Circumstantial changes such as marriage breakdown, bereavement, retirement or job loss, financial pressures, domestic violence, health conditions, or social isolation may lead to increased alcohol use. Older adults may drink to forget, mask problems, promote socialization, or cope with loneliness, boredom, or depression (Health Canada, 2002). Although these challenges are not unique to older adults, they may become both cumulative and irreversible in later life.

Age-related changes in alcohol metabolism may result in higher peak serum concentrations of alcohol (Moore et al., 2007). Older adults show increased levels of blood alcohol compared to younger adults when consuming equivalent amounts. Vestal et al estimated that blood alcohol concentrations in response to the same amount of alcohol increased by 33% between 21 to 81 years of age (Vestal et al., 1977). This difference is due to body composition changes with a decrease in lean body mass and volume of distribution (Vestal et al., 1977). In addition, as alcohol remains mainly in body water, which is reduced in older age, blood alcohol concentrations are increased in an older body. Gastric mucosa atrophy, which is seen with aging, decreases gastric alcohol metabolism in older men (Pozzato et al., 1995). The clinical implications of this are uncertain given the confounding factors of age-related delayed gastric emptying and the possibility of increased first-pass metabolism (Moore et al., 2007; Ammon et al., 1996; Ferreira & Weems, 2008; Meier & Seitz, 2008). Alcohol metabolism by the liver does not seem to be significantly altered in spite of decreased hepatic blood flow and liver mass (Moore et al., 2007; Ammon et al., 1996).

Increased Age-Related Vulnerability to the Effects of Alcohol

Older adults may be more vulnerable to the effects of alcohol due to co-existing cognitive decline including dementia (Kim et al., 2012; Ilomaki et al., 2015) and decreased strength, balance, and agility that may increase the risk of alcohol-related falls. The weight of these effects is difficult to estimate due to the diversity of the older population. Nevertheless, for older adults, we recommend a reduction of 17% consumption over and above that of the Canadian Low-Risk Drinking Guidelines, in addition to a 33% reduction to account for changes in alcohol metabolism. This would result in an overall 50% reduction in the current Low-Risk Drinking Guidelines for healthy older adults, in order to maintain a comparable level of risk to younger adults.

Based on these age-related vulnerabilities, the Low-Risk Drinking Guidelines for older adults should be lower than those for the general population of adults. For healthy women 65 or older no more than 1 standard drink per day should be consumed, with no more than 5 per week in total. For healthy men 65 or older no more than 1–2 standard drinks per day should be consumed, with no more than 7 per week in total. Non-drinking days are recommended every week to avoid habit formation or a pattern of alcohol coping.

The onset of heightened vulnerability to the effects of alcohol is variable. Some adults become increasingly vulnerable to alcohol earlier in life. Depending upon one's general health and medication use, some adults should reduce consumption earlier than age 65. As general health declines and frailty increases however, alcohol consumption should be further reduced to 1 drink or less per day, or none at all, for both men and women.

Harm Reduction Practices for Alcohol Use in Later Life

Some older patients with AUD are aging with other significant physical and mental health comorbidities. Given the relapsing nature of severe, chronic, treatment-resistant AUD and its impact on physical and mental health, implementation of harm reduction strategies, such as a Managed Alcohol Program, may be part of the continuum of a comprehensive assessment, goal setting, and management plan. Emerging research identifies that harm reduction strategies can be successfully implemented with marginalized and hard-to-serve populations (Collins et al., 2015; Stockwell et al., 2018).

The key features of harm reduction are very relevant to older adults. Humanism, pragmatism, individualism, autonomy, and incrementalism (Hawk et al., 2017) all align with person-centred assessment and care of older adults. A comprehensive approach to the care of older adults with AUD features person-centred care, holistic assessment, and goal setting. Small and incremental goals are key features of care planning (American Geriatrics Society, 2012).

Many older adults may be able to reduce alcohol use with harm reduction strategies. Integrating harm reduction with a comprehensive geriatric assessment approach may support older adults' engagement in their recovery (Han, 2018). Evaluation of harm reduction

strategies may need to focus on health outcomes such as reduced fall frequency rather than merely the reduction in substance consumption. Harm reduction strategies are well placed within the continuum of care for older adults with AUD or at-risk drinking. Not only will these strategies help reduce alcohol use, they may reduce the medical and mental health sequelae of AUD as well.

Various approaches can be taken in order to reduce harm in those who choose to drink alcohol. Alcoholic drinks should be sipped and not gulped. They can be diluted with non-alcoholic fluids and alternated with caffeine-free, non-alcoholic drinks. In general, one should not drink alcohol in risky situations or while performing risky activities (Butt et al., 2011).

RECOMMENDATION #2:

Increase awareness of the risk of alcohol use through labeling that indicates:

a. Standard drink content of the product;

b. National Low Risk Drinking Guidelines for both adults and older adults; and

c. A warning of alcohol related risks and harms.

[GRADE: Evidence: Low, Strength: Strong]

Communicating the concepts of standard drinks and low-risk drinking to the consumer is challenging (Stockwell et al., 2018). In addition, many consumers are not aware of the potentially harmful effects of alcohol. Labels on alcoholic products with information that conveys standard drink content, the Low-Risk Drinking Guidelines, and alcohol-related risks and harms would present this information at the point of consumption. Standard drink labels are intended to inform and guide drinkers in their alcohol consumption. This information could be particularly helpful for older adults. Some beneficial best practices have been identified in Australia and New Zealand which involve labelling alcoholic products with the number of standard drinks contained in that product (Food Standards Australia – New Zealand, 2014).

The effectiveness of standard drink labelling has also been demonstrated in the UK. In one study, while approximately 74% of older adults could not correctly identify recommended drinking limits, over 80% were confident that they could track the units of alcohol consumed when presented with labelled alcohol products (Holley-Moore & Beach, 2016). *Figure 3* is an example of how alcohol awareness information is formatted on many UK drink labels.

Canada currently labels the alcohol content of beverages by alcohol volume. However, the alcohol content may not give a clear indication of how many standard drinks are present in the product, nor are the guidelines for low-risk consumption indicated on Canadian labels. The Canadian Centre for Substance Use and Addiction (CCSA) highlights the benefits of standard drink labelling and has suggested its implementation in Canada (CCSA, 2015). Benefits of standard drink labelling include awareness of the number of standard drinks in the beverage container, education on Low-Risk Drinking Guidelines, usefulness in screening, brief intervention and referral to treatment, and informing recommendations for other alcohol harm reduction strategies (National Alcohol Strategy Advisory Committee, 2015). All of these benefits are important to consider for older adults.

Adapted from: Science and Technology Committee, House of Commons (2012). Alcohol guidelines. *Eleventh Report of Sessions 2010-2012*. Volume I. Retrieved from: https://publications.parliament.uk/pa/cm201012/cmselect/cmsctech/1536/1536.pdf

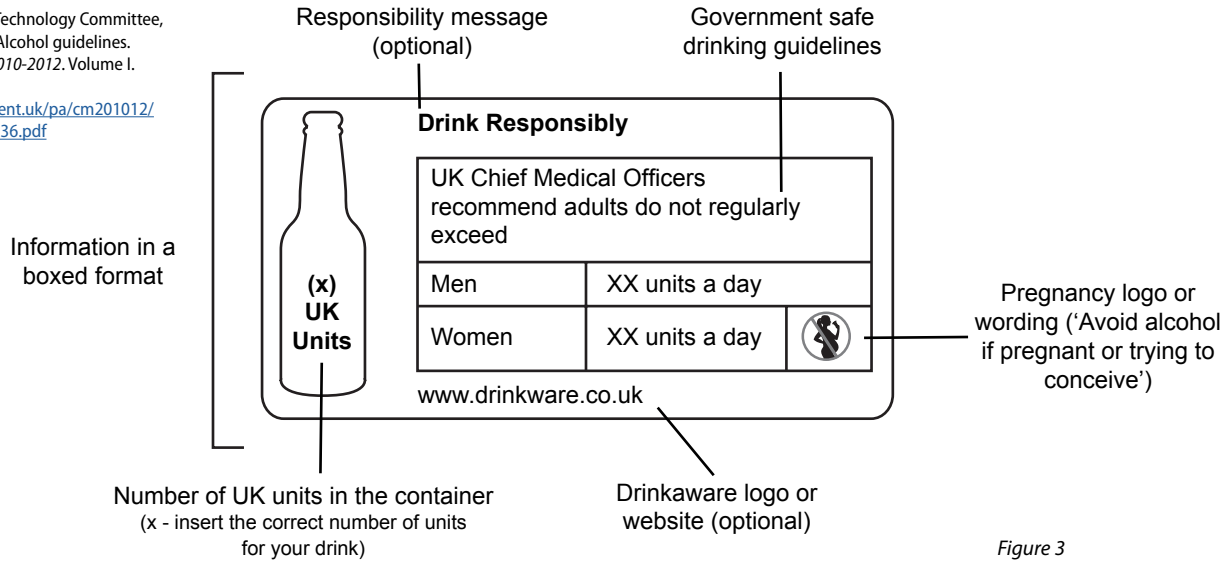


Figure 3

RECOMMENDATION #3:

As a harm reduction strategy for chronic heavy drinkers, it is recommended that at least 50 mg of thiamine supplementation daily be used to prevent Wernicke-Korsakoff syndrome, progressive cognitive decline and increased frailty. [GRADE: Evidence: Low; Strength: Strong]

People who have an AUD or heavy alcohol consumption may be at risk of developing thiamine (B1) deficiency and Wernicke's encephalopathy. Parenteral thiamine is recommended for older adults with heavy alcohol use who are admitted to hospital or requiring detox (See Recommendation #18). Despite limited published evidence, there is a clinical consensus to provide oral thiamine to current at-risk drinkers. These include older adults who are diagnosed with a moderate to severe AUD; are malnourished (i.e., low body mass index, recent significant weight loss, anorexia, nausea, and vomiting); or, who have decompensated liver disease. Higher doses (i.e., 100 mg or more) of oral thiamine are recommended as oral absorption is unreliable. In acute situations, thiamine should be administered for at least 5 days until dietary sources are deemed adequate or provided prophylactically until the AUD can be more definitively treated (National Institute for Health and Care Excellence, 2011).

Screening for Alcohol Use Disorder in Older Adults

Alcohol, tobacco, and drug consumption should be reviewed and discussed on an annual basis by primary care providers. This type of discussion needs to be normalized and approached in a simple, neutral, straight-forward manner. If the use, quantity, frequency, context, or consequences of alcohol are of concern, a validated screening test should be used. The more comfortable the primary care provider is in engaging in the conversation the more likely they are to find meaningful information related to the patient's health.

RECOMMENDATION #4:

All patients (including older adults) should be screened for alcohol use at least annually (i.e., as part of his or her regular physical examination) and at transitions of care (i.e., admission to hospital). Screening should be conducted more frequently if consumption levels exceed the low-risk drinking guidelines, there are symptoms of an AUD, there is a family history of AUD, the patient currently experiences anxiety and/or depression, caregivers express concern, or the older adult is undergoing major life changes or transitions. [GRADE: Evidence: Moderate; Strength: Strong]

Best practice guidelines recommend that all adults 18 years of age and over be screened yearly by their primary care clinicians to assess levels of alcohol consumption (Oleski et al., 2010; Mitchell et al., 2012; Moyer, 2013; Spithoff & Kahan, 2015). If consumption levels exceed low-risk drinking guidelines, they should be assessed for an AUD using a validated screening tool (Hearne et al., 2002; Mitchell et al., 2012). The primary care setting is ideal for regular screening in older adults, given that they are likely to see a medical practitioner several times per year (Substance Abuse and Mental Health Services Administration (SAMHSA), 1998). In addition to routine annual screening, screening should take place if certain physical symptoms are present (listed below), caregivers express concern about their loved one's alcohol use, or significant life changes or transitions occur (SAMHSA), 1998), as these circumstances are sometimes associated with problematic alcohol use.

Physical Symptom Screening Triggers (Substance Abuse and Mental Health Services Administration (SAMHSA), 1998)

- Sleep complaints; observable changes in sleeping patterns; unusual fatigue, malaise, or daytime drowsiness; apparent sedation (e.g., a formerly punctual older adult begins oversleeping and is not ready when the senior centre van arrives for pickup)
- Cognitive impairment, memory or concentration disturbances, disorientation, or confusion (e.g., family members have difficulty following an older adult's conversation, the older adult is no longer able to participate in their weekly bridge game or track the plot on daily soap operas)
- Seizures, malnutrition, muscle wasting
- Liver function abnormalities
- Persistent irritability (without obvious cause) and altered mood, depression, or anxiety
- Unexplained complaints about chronic pain or other somatic conditions
- Incontinence, urinary retention, difficulty urinating
- Poor hygiene and self-neglect
- Unusual restlessness and agitation
- Complaints of blurred vision or dry mouth
- Unexplained nausea and vomiting or gastrointestinal distress
- Changes in eating habits
- Slurred speech
- Tremor, poor motor co-ordination, shuffling gait
- Frequent falls and unexplained bruising

RECOMMENDATION #5:

Older adults should be asked about alcohol use in all care settings including: hospitals, rehabilitation facilities, home health care, community services, assisted living and long-term care facilities, and specialized programs.
[GRADE: Evidence: High; Strength: Strong]

Researchers have suggested that health care providers beyond primary care should be involved in alcohol screening for older adults. Hospital-based and home health care providers with access to isolated and homebound older adults are ideally positioned to administer nonthreatening screening for alcohol misuse and at-risk drinking (Raschko, 1990; Adams et al., 1992; SAMHSA, 1998; 2010; Schonfeld et al., 2015). Further, it has been suggested that the identification of substance use problems no longer remain solely with health care providers; anyone who sees older adults on a regular basis are also in a good position to detect behavioural changes that might indicate a potential problem (Raschko, 1990). This includes friends and family of older adults and volunteers and staff of senior centres, recreational, and outreach programs. This screening can also occur at cultural or religious venues, due to potential disparities in health care access (Mulia et al., 2011).

RECOMMENDATION #6:

Ensure that screening for AUD in older adults is age appropriate and employs active listening, is supportive, accounts for memory impairment or cognitive decline, is non-threatening, non-judgmental, and non-stigmatizing, and recognizes that DSM–5 criteria will under-identify due to potentially reduced occupational or social obligations.
[GRADE: Evidence: Moderate; Strength: Strong]

The potentially best approach to screening for alcohol-related problems among older adults is to be non-threatening and non-judgemental, as older adults are more likely to be acutely sensitive to the stigma associated with mental illness and addictions (American Psychological Association (APA), 1998; SAMHSA, 1998). The APA further suggests that clinicians be wary of eliciting shame or embarrassment in the process of psychological interventions (APA, 1998). Of note, older age, non-black race, and higher scores on screening measures have been associated with a higher reported personal discomfort with alcohol-related discussion and a decreased likelihood of honesty about reported alcohol use (Broyles et al., 2012).

SCREENING TOOL	GERIATRIC SPECIFIC	TIME TO ADMINISTER (IN MINUTES)	PROS	CONS
Alcohol Use Disorders Identification Test (AUDIT)	No	5-10	• Assesses hazardous and harmful alcohol use • Provides information about quantity and frequency of use • Assesses for negative alcohol-related consequences	• Requires intact memory and mental calculation • Does not consider age-specific risks or differential presentation • Is face-valid, therefore easy to deny
CAGE	No	1-2	• Brief • Easy to administer from memory • Easy to score	• Originally designed for use with adults and ineffective for older adults • Only assesses for AUD • Is face-valid and fairly confrontational, therefore easy to deny or elicit defensiveness
Shortened Michigan Alcoholism Test – Geriatric version (SMAST-G)	Yes	2-5	• First geriatric-specific screening tool • Assesses for potential reasons for, and associated problems with, alcohol use	• Only assesses for AUD • Is face-valid, therefore easy to deny • Some questions require insight or self-awareness of a problem
Comorbidity Alcohol Risk Evaluation Tool (CARET)	Yes	2-5	• Provides information about quantity and frequency of use • Incorporates questions about medical conditions, medication use, and functional status	• Requires intact memory and mental calculation • Not readily available to clinicians; must contact author • Computer-scored
Senior Alcohol Misuse Indicator (SAMI)	Yes	2-5	• Geriatric specific screening tool that is non-confrontational and preserves therapeutic alliance • Designed for geriatric outreach clinicians • Gentle, non-judgmental language with open-ended questions	• Challenging to score • Few studies beyond the initial validation studies by the author

Table 1. Screening tools used with the older adult population

It is also recommended that questions concerning alcohol use be linked to a medical condition or to the older adult's physical health to make the discussion more comfortable. Older adults are used to discussing physical concerns with their health care providers. Components of active listening are encouraged to elicit more truthful clinical information. This can include observing nonverbal behaviour, listening to and understanding the senior's verbal communication, listening to content in the context of the older adult's life, and attending to things the older adult says that may have to be challenged, as well as using a non-confrontational and supportive interview style, such as motivational interviewing, (SAMHSA, 1998).

In selecting a validated screening tool, it is important to consider whether the tool is sensitive to the changes in older adults, the stigma related to mental health and addictions, does not rely on intact memory, and does not overly rely on the DSM–5 criteria for an AUD (Graham, 1986; Han & Moore, 2018). *Table 1* lists screening tools used with the older adult population, with commentary on their specific design for older adults, the time it takes to administer the tool, and a description of each tool's pros and cons. In general, screening tools developed specifically for use with older adults perform better than screening tools developed for the general population.

RECOMMENDATION #7:

Request consent to discuss the patient's alcohol use and its impact with family, friends, and other caregivers.
[GRADE: Evidence: Low; Strength: Strong]

According to the Substance Abuse and Mental Health Services Administration (1998), impaired cognition can interfere with screening, making it difficult to obtain complete and accurate answers from a respondent. Although it is important to respect an older adult's autonomy, collateral information from family members, friends, or other formal and informal caregivers may be necessary in situations where the practitioner has reason to believe that a truthful response is unlikely (SAMHSA, 1998). If possible, ask the older adult for permission to connect with other individuals to obtain corroborating information about their health and screen collateral informants in private, using a non-confrontational approach. It is important to consider that family members may not know, or be unwilling to respond honestly to questions about their loved one's alcohol use. Sometimes collateral screening may unearth a family member's strong emotions toward the older adult for past or current alcohol-related behaviour. It is important to be alert to this possibility, to be prepared to work with the family member regarding the family dynamic and to be ready to refer them to community services if necessary (SAMHSA, 1998). A list of available resources, both local and online, should be readily available to assist patients and their families.

RECOMMENDATION #8:

Older adults who screen positive for an AUD should be assessed by an appropriately trained health care provider.
[GRADE: Evidence: Moderate; Strength: Strong]

It has been recommended that primary care physicians conduct a thorough assessment of patients with positive screen results to determine if the patient is an at-risk drinker or has an AUD (Spithoff & Kahan, 2015). More specialized assessments may be required in complex, concurrent care situations.

Assessment of Alcohol Use Disorder in Older Adults

An assessment logically follows when a person has screened positive for an AUD. Once more details are obtained an individualized treatment plan can be recommended, negotiated, and implemented, depending upon available resources. The assessment will inform not only the treatment process but also the services required following treatment to ensure success.

RECOMMENDATION #9:

A comprehensive assessment is indicated for all older adults who have an AUD, have signs of harmful use, or who present with acute intoxication. The assessment should include: the use of a standardized alcohol use questionnaire to determine quantity and frequency of alcohol use and potential harms; a comprehensive assessment of medication and other substance use; determination of the presence of another substance use disorder; evaluation of physical, mental, and cognitive capacity, nutrition, chronic pain, social conditions, family/social supports, and overall functioning; collateral history. The assessment should be performed regardless of physical, mental, or cognitive co-morbidities with modifications as deemed appropriate.
[GRADE: Evidence: Moderate; Strength: Strong]

Once screening has been completed, those with an AUD or those with at-risk drinking should be offered a more comprehensive assessment. Further quantification of current alcohol use should be done in conjunction with the comprehensive assessment. Given the concurrent risk of medical and health impacts from both acute and chronic alcohol misuse, many physical, cognitive, and mental health domains may be impacted. This may lead to reduced social conditions, functioning, and cognitive capacity. Depending on service delivery models, access to resources, and the older adults' point of entry into the health care system, the process of the comprehensive assessment may be implemented by either a primary care or specialty care service. Often health care providers with differing scopes of practice and expertise may need to collaborate to provide a comprehensive assessment that is sensitive to the needs of the older adult. The comprehensive assessment can be a mechanism to initiate

a person-centred care plan focusing on the individual's goals and brief intervention strategies. Utilization of motivational enhancements (interviewing and goal setting) can be part of the assessment process for the older adult. A crucial part of the comprehensive assessment process is the inclusion of the caregiver's or care partner's collateral history. Once individual domains within the comprehensive assessment are identified for further assessment or management, then subsequent intervention may require collaboration among health care providers for implementation of integrated care.

RECOMMENDATION #10:

Assess older adults with AUD for cognitive impairment using a validated tool every 12 months or as indicated. In cases of cognitive impairment, repeat the cognitive evaluation at 6 and 12 months after a reduction or discontinuation of alcohol, to assess for evidence of improvement. The treatment plan should specify the timeline and procedure for ongoing evaluation of clinical outcomes and treatment effectiveness.
[GRADE: Evidence: Moderate; Strength: Strong]

Given the substantial impact AUD has on the potential to accelerate frailty and cognitive impairment, and subsequent impact on cognitive capacity, opportunities to assess cognitive functioning should be sought on a routine schedule. A validated tool such as the Montreal Cognitive Assessment (MOCA) should be used. At a minimum, annual assessment should occur for those with AUD or at-risk alcohol use, however increased frequency of asessments can be triggered when there are changes in alcohol use patterns (increase, reduction, or discontinuation). Also, acute medical illnesses, delirium, or a pattern of functional decline should trigger a reassessment of cognition and function. Ideally the cognitive assessment or screen should be done in conjunction with a comprehensive assessment, so that other factors impacting change in cognition can be addressed.

Treatment of Alcohol Use Disorder Among Older Adults

Alcohol Use Disorder falls on a spectrum of mild, moderate, and severe. It can also be complicated by concurrent mental health, physical, or social issues, especially in older adults. A range of treatment approaches and venues is therefore required to best match the patient with the necessary services. The treatment process will also inform the plan for follow-up or aftercare, to assist with the adoption of the necessary lifestyle and care changes.

RECOMMENDATION #11:

The least intrusive or invasive treatment options, such as behavioural interventions, should be explored initially with older adults who present with a mild AUD. These initial approaches can function either as a pre-treatment strategy or as treatment itself. [GRADE: Evidence: High; Strength: Strong]

AUD in older adults presents as a spectrum disorder (American Psychiatric Association, 2013). Some will present with chronic, severe disease while others may experience late onset AUD as a result of more recent, difficult life changes. Mild AUD may respond to lower levels of intervention with appropriate counselling and support, such as the practice of Screening, Brief Intervention, and Referral for Treatment (SBIRT), which is patient-centered, provides pertinent education, and is grounded in motivational interviewing (Babor et al., 2007).

There is significant evidence supporting the use of brief interventions (e.g., motivational enhancement and brief advice) among older adults (Fleming et al., 1999; Gordon et al., 2003; Fink et al., 2005; Schonfeld et al., 2010; Moore et al., 2011; Schonfeld et al., 2015). SBIRT initiatives effectively reduce problem drinking among older adults who might otherwise go unnoticed by substance use services (Schonfeld et al., 2010). Brief interventions with older adults have been found to be more effective than more intensive standard care in primary care settings. Brief interventions reduce harmful drinking, increase days of abstinence (Fleming et al., 1999; Gordon et al., 2003; Fink et al., 2005; Moore et al., 2011; Ettner et al., 2014), and have been found to be effective in community settings in addition to primary care settings (Schonfeld et al., 2010; 2015).

If a moderate to severe AUD emerges with more collateral information, or if a mild AUD progresses despite earlier low-level intervention, the relationship and rapport that has been established between the patient and healthcare provider can create an opportunity for more assertive treatment with pharmacotherapy.

RECOMMENDATION #12:

Routinely offer alcohol behavioural intervention and case management with pharmacological treatment (e.g., anti-craving medication) as it may improve the efficacy of primary care treatment. [GRADE: Evidence: Moderate; Strength: Strong]

In a sample of alcohol-dependent veterans, Oslin et al (2014) found participants who received pharmacotherapy and psychosocial support by telephone or in-person within a primary care clinic to be more engaged in treatment and to have fewer drinking days compared to participants in standard, specialty, outpatient addiction treatment programs (Oslin et al., 2014).

Behavioural intervention should not preclude the use of pharmacotherapy, when indicated. The inclusion of complementary treatment options, both behavioural and pharmacological, in the primary care setting closer to an older adult's home increases access and efficacy.

RECOMMENDATION #13:

Naltrexone and acamprosate pharmacotherapy can be used to treat AUD in older adults, as indicated, with attention to contraindications and side effects. Naltrexone may be used for both alcohol reduction and abstinence, while acamprosate is used to support abstinence. In general, start at low doses and titrate slowly, with attention to open communication with the patient. Initiation may be done in the home, hospital, during withdrawal management, or in long-term care with subsequent transition to an appropriate placement. [GRADE: Evidence: High; Strength: Strong]

Naltrexone and acamprosate pharmacotherapies can be used for the treatment of AUD in older adults, as individually indicated. Contraindications include advanced liver disease for naltrexone and renal disease for acamprosate. Cochrane Systematic Reviews have established the efficacy of both medications (Rosner et al., 2010; Rosner et al., 2010) in the context of a paucity of therapeutic alternatives. Given their very different mechanisms of action, appropriate clinical selection is required. Naltrexone may be started when individuals are still drinking to reduce the pleasure or reinforcement they experience. Reduction, even to the point of abstinence, is possible. Acamprosate however, is best initiated when several days of abstinence have been achieved, with the goal of maintaining abstinence. To reduce side effects and potential drug interactions, it is advised to start low and slowly titrate the dose.

Pharmacotherapy for an older adult with AUD requires good communication between the clinician and the patient in regard to the disorder, the role of medication, and the importance of non-pharmaceutical management. Pharmacotherapy with appropriate follow-up can be initiated in any clinical setting including the community, hospital, long-term care, or following a supervised medical withdrawal program.

Evidence with regards to off-label use of gabapentin and topiramate was also reviewed (Johnson et al., 2007; Blodgett et al., 2014; Mason et al., 2014; Nunes, 2014; Kranzler & Soyka, 2018) but limited benefit from these anticonvulsants was found in comparison with the first-line therapies naltrexone and acamprosate (Pani et al., 2014). In addition, cognitive impairment, sedation, drug interactions, and the potential for misuse of gabapentin discouraged their recommendation for older adults (Mersfelder & Nichols, 2015; Health Canada, 2016; Bonnet & Scherbaum, 2017; Lyndon et al., 2017).

RECOMMENDATION #14:

All older adults with AUD, and their caregivers and support persons, should be offered psychosocial treatment and support, as indicated, as part of a treatment plan. [GRADE: Evidence: Moderate; Strength: Strong]

Older adults who have an AUD, or are at risk of AUD, often have multiple risk factors related to comorbidities, mental health conditions, or social changes such as social isolation (Royal College of Psychiatrists, 2015; CCSA, 2018). Historical trauma and grief are additional common risk factors. Psychosocial interventions that focus on the interplay of the older adult's life course and comorbid conditions may be beneficial and reduce drinking. When considering the continuum of screening, identification, comprehensive assessment and intervention there has been a positive response to brief interventions when linked to screening and identification, regardless of age (Fleming et al., 1999). Such research supports the concept that older adults may benefit from psychosocial interventions whether included in mixed age groups or age-specific groups. Overall, older adults can achieve improved recovery and wellness through either mixed-age or age-specific psychosocial

interventions, although for many other social, epidemiological, medical, and life course reasons age-specific approaches may be preferred (Moy et al., 2011; A. Kuerbis & Sacco, 2013).

Interventions such as motivation enhancements, Alcoholics Anonymous or SMART recovery, cognitive behavourial therapy, supportive therapy, education models, and integrated care approaches have had demonstrated benefit for older adults with a Substance Use Disorder (Lemke & Moos, 2003; Morin et al., 2004). Access is enhanced if online programs can be used. Given the anticipated increase in the older adult cohort and the many complex mental health and medical comorbidities that occur with aging, primary care, specialty medical, and mental health care providers alike should become familiar with the continuum of screening, identification, and intervention options. Depending on the severity of AUD and co-occurring conditions, integrated care options may be required (Oslin et al., 2006; Caputo et al., 2012). Generally accepted techniques that enhance older adults' coping strategies include structured but flexible programs, a focus on self-esteem enhancement, individual and group options, and inclusion of a trusted family or friend (CCSA, 2018). In addition, addiction service delivery needs to improve access for older adults, including outreach, through service development and innovation, including home visits for the housebound (Advisory Panel on Substance Misuse, 2017).

Evidence suggests that the quality of the relationship between the patient and care provider is an important determinant of success. Integration with primary care through a family physician or other primary care team members improves both access and continuity of care. Counselling does not need to be complicated. Feedback on any progress, encouragement, and separation of the drinking from the patient's personal identity are important approaches. Practical advice to avoid triggers such as drinking partners or establishments can be provided, as well as redirection to healthier pursuits with family or friends. Daily walks can help in addition to other approaches to address loneliness, boredom, anxiety, depression, or trauma. In a strong relational context patients can also be gently challenged if they are denying their drinking or its impact. Recovery is a process, not an event, and benefits from long-term, supportive relationships with care providers. Seamless, comprehensive care is needed for all people struggling with a Substance Use Disorder.

RECOMMENDATION #15:

Use the Prediction of Alcohol Withdrawal Severity Scale (PAWSS) to screen for those requiring medical withdrawal management (prior delirium, seizures, or protracted withdrawal). Patients who are in poor general health, acutely suicidal, have dementia, are medically unstable, or who need constant one-on-one monitoring should receive 24-hour medical, psychiatric, and/or nursing inpatient care in medically-managed and monitored intensive treatment or hospital settings.
[GRADE: Evidence: High; Strength: Strong]

There is a range of medical withdrawal management services available including home-based, non-medical facilities, and hospitals with medical monitoring (Mee-Lee et al., 2013). Prior history of delirium tremens, seizures, or a complicated withdrawal is a predictor of subsequent withdrawal-related complications. Older adults with multiple co-occurring conditions are at additional risk of increased morbidity and mortality. In addition to the American Society of Addiction Medicine Criteria, a validated screening tool such as the Prediction of Alcohol Withdrawal Severity Scale (Maldonado et al., 2014; 2015) is recommended to ensure older adults receive the level of withdrawal care required to prevent complications.

RECOMMENDATION #16:

In the management of alcohol withdrawal in older adults, it is best to use the Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar) symptom score with protocols using a shorter-acting benzodiazepine such as lorazepam. One should also pay close attention to comorbidities to avoid complications.
[GRADE: Evidence: High; Strength: Strong]

Regardless of service location, benzodiazepines are considered the preferred pharmacological therapy to manage the symptoms of alcohol withdrawal, including seizure and delirium, for all age groups (Mayo-Smith, 1997; Holbrook et al., 1999; Kraemer et al., 1999; Lingford-Hughes et al., 2004; Oslin & Zajani, 2016). For older adults, the use of short-acting benzodiazepines (e.g., lorazepam or oxazepam) are recommended. Benzodiazepines with a longer half-life (e.g., chlordiazepoxide and diazepam) pose a risk for over-sedation (Mayo-Smith, 1997; Le Roux et al., 2016). While research on dosing schedules for older adults is limited, older patients in a symptom-triggered protocol had a decreased duration of use and dose compared to the fixed schedule group, as well as a lower incidence of severe withdrawal complications and use of adjunctive medications (Kraemer et al., 1999; Taheri et al., 2014).

Patients with certain co-morbidities, such as use of high-dose opioids for chronic pain, or severe liver or respiratory disease, are at higher risk for benzodiazepine-related complications such as aspiration pneumonia, encephalopathy, and opioid overdose.

Research also recommends the use of thiamine, magnesium, multivitamins, and supportive care if indicated (Mayo-Smith, 1997; Kraemer et al., 1999; Lingford-Hughes et al., 2004; Naegle, 2012; DiBartolo & Jarosinski, 2017).

RECOMMENDATION #17:

As a harm reduction strategy for older adults in controlled environments, where medical withdrawal is not available or deemed appropriate, it is recommended that a managed alcohol taper be considered. Individualize the taper by 1 standard drink every 3 days (aggressive tapering), weekly (moderate tapering), or every 2–3 weeks (mild tapering) with CIWA-Ar monitoring to keep the withdrawal symptom score < 10. The approach should be individualized, incremental, and with an indeterminate timeline. [Consensus]

If a medical withdrawal program is not available or is deemed inappropriate, a transition from home to a controlled living environment presents an opportunity for a more gradual, individualized taper through a controlled reduction in alcohol intake to avoid precipitous withdrawal. A clinical consensus recommends the trial of an alcohol taper with the use of CIWA-Ar to monitor withdrawal symptoms and maintain a low, single-digit score.

A baseline of daily alcohol consumption, in standard drinks, that avoids both acute intoxication and withdrawal symptoms is required. Alcohol should be provided in a measured amount, spread out over the day. The alcohol taper may range from more aggressive at 1 standard drink every 3 days, to a more moderate taper at 1 standard drink per week, or mild tapering at one standard drink every 2–3 weeks, as tolerated. Tolerance of the taper is determined by individual neuroadaptation to the reduced alcohol and is difficult to predict. It therefore requires a slow, individualized approach.

The end point may vary with the care facility's willingness to provide any alcohol on an ongoing basis to its residents, balanced with the risk of harm due to concurrent medication use or co-occurring health conditions. A discussion with the client or their proxy, exploring potential risks and benefits, is required for informed consent.

This recommendation requires further research on indications, environment, and tapering protocols. No evidence could be found to support this recommendation beyond unpublished clinical reports. Wernicke's encephalopathy use stable alcohol dosing as a harm reduction approach to engage, house, and care for people with a severe, chronic AUD. This may or may not involve a taper over time (Podymow et al., 2006; Pauly et al., 2018)

RECOMMENDATION #18:

To prevent the development of Wernicke's encephalopathy during withdrawal, at least 200 mg of parenteral thiamine (IM or IV) should be administered daily for 3–5 days. [GRADE: Evidence: Low; Strength: Strong]

Wernicke-Korsakoff syndrome (WKS) is a brain disorder caused by thiamine or vitamin B1 deficiency. It is characterized by the onset of ophthalmoplegia, ataxia, and confusion. Patients can go on to develop permanent memory impairment and WKS can result in fatality. Excessive alcohol use in combination with dietary thiamine deficiency or reduced absorption are the primary causes of WKS. Thiamine supplementation as treatment for WKS is well supported (Phillips et al., 1952; Victor & Collin, 1989; Wood & Currie, 1995; Cook et al., 1998; National Clinical Guideline Centre for Acute and Chronic Conditions (NCGCACC), 2017).

Recommendations about dosage and duration of thiamine treatment are extrapolations from basic science and clinical reports (Thomson & Marshall, 2006; Lingford-Hughes et al., 2012; NCGCACC, 2017), however a recent systematic review determined that there is insufficient evidence for recommendations of the dose, frequency, route, and duration of thiamine treatment (Day et al., 2013). One randomized controlled trial found significant improvement with doses of 200 mg intramuscularly daily compared to a lower dose (Ambrose et al., 2001). Due to decreased absorption of thiamine in patients with AUD, parenteral administration is recommended (Cook et al., 1998). This is an area that requires further study.

RECOMMENDATION #19:

Health care practitioners, older adults, and their families should advocate for adequate access and funding for treatment for AUD, specifically access to pharmacotherapy (naltrexone and acamprosate) and psychosocial therapies. [Consensus]

Clinical Practice Guidelines are of limited utility if access is not available for people in need. Psychosocial therapies are often severely limited, if available at all, in many Canadian communities. Similarly, the majority of Canadian provinces do not provide coverage for naltrexone and acamprosate for AUD through their provincial drug plans. Advocacy is required by health care providers, patients, and their families to ensure appropriate care is indeed available within an evidence-based system of care.

RECOMMENDATION #20:

Treatment response for AUD should be monitored though laboratory measures such as gamma-glutamyl transferase (GGT) and Mean Cell Volume (MCT).
[GRADE: Evidence: Moderate; Strength: Strong]

Heavy alcohol use causes elevation in liver enzymes, due to liver toxicity, and changes in red blood cells (Rosman, 1992; Sharpe, 2001). GGT and MCV are biochemical markers that can be used to monitor the return to normal levels following treatment (Rosman, 1992; Sharpe, 2001). They are not sensitive indicators of abstinence, but merely a reflection of the presence of heavy alcohol use and its physiological impact. Falling or normal levels can be shared with patients to demonstrate the health benefits of reduced alcohol use or abstinence.

RECOMMENDATION #21:

The severity and management of concurrent physical and mental health conditions (including co-occurring psychiatric disorders, suicide risk, and cognitive disorders), as well as significant social transitions in the individual or family, should continue to be reviewed and monitored regardless of continuance, reduction, or cessation of alcohol use. [GRADE: Evidence: Moderate; Strength: Strong]

As patterns of alcohol use change, the impact on physical and mental health requires regularly scheduled reassessment and review in order to update and provide more current interventions and management options. Other conditions, previously attributed to alcohol use, may be unmasked. For example, unintentional self-harm may occur during acute intoxication, but when alcohol use is reduced concurrent depressive symptoms may become evident requiring assessment of suicide risk and antidepressant treatment. Alternatively, level of function may improve resulting in changes to living circumstances and supports. Individual and/or family transitions can also impact treatment success. A comprehensive approach to reassessment, review, and management ensures identification and more appropriate treatment of all concurrently impacted domains.

RECOMMENDATION #22:

Peri-operative elective surgical management should include medically supported withdrawal or alcohol use taper pre-operatively, with post-operative treatment and consideration of anti-craving medication.
[GRADE: Evidence: Low; Strength: Strong]

Many people who struggle with an AUD may not disclose this pre-operatively. Diagnosis is often made during the post-operative period with the advent of acute withdrawal complicating the patient's recovery, prolonging their stay, and possibly requiring ICU admission (Tonnesen et al., 2015). Two Cochrane Reviews have shown reduced complications and length-of-stays with pre-operative alcohol cessation (Oppedal et al., 2012; Egholm et al., 2018) This intervention requires organized screening, assessment, appropriate withdrawal, and treatment with pharmacotherapy, as well as psychosocial counselling to assist with maintenance of abstinence. For those unable or unwilling to achieve abstinence or low-risk alcohol use, clear communication with the treatment team is advised to prepare for potential complications.

Future Directions

Older adults need and deserve a continuum of care for Alcohol Use Disorder that matches the severity, life circumstance, concurrent mental and physical health issues, and social transitions which they are experiencing. This seamless transition should extend from age-specific prevention of AUD to screening, assessment, treatment, and support through to recovery. These clinical recommendations are enhanced in a strong relational context of open communication, trust, empathy, and support. The clinician is a partner in the individual's recovery journey providing support, encouragement, and correction, as needed. Recovery is a process, not an event. More can and should be offered to support older adults.

The recommendations in these guidelines were developed through an examination of existing literature and evidence. There is a dearth of literature pertaining to a number of important issues relating to AUD, especially with respect to research in older adults. These gaps reflect opportunities for further study.

Some of the areas that require further research to support improved health care for older adults with AUD include:

- Approaches to create and improve a seamless continuum of care for AUD for older adults that extends from screening to recovery.
- Efficacy of oral thiamine supplementation to prevent Wernicke-Korsakoff syndrome in ongoing chronic, heavy drinkers and clinical practice guidelines on thiamine dosages and routes of administration in alcohol withdrawal.
- Approaches to AUD counselling and supports specific to older adults.
- Efficacy and best practice approaches for managed alcohol tapering as opposed to medical withdrawal.
- Role of alcohol in falls in older adults.

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