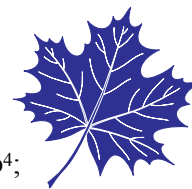


# Canadian Guidelines on Alcohol Use Disorder Among Older Adults



Peter R. Butt, BA, MD, CCFP(AM), FCFP<sup>1,2</sup>, Marilyn White-Campbell, BA, Dip GRT<sup>3</sup>, Sarah Canham, PhD<sup>4</sup>; Ann Dowsett Johnston, Eunice O. Indome, PhD Struc Eng, MPH<sup>5</sup>, Bonnie Purcell, PhD, C Psych<sup>6,7</sup>, Jennifer Tung, PharmD, ACPR, BCGP<sup>8</sup>, Lisa Van Bussel, MD, FRCPC<sup>7,9</sup> (for the Canadian Coalition for Seniors' Mental Health)

<sup>1</sup>Department of Family Medicine, University of Saskatchewan, Saskatoon, SK; <sup>2</sup>Saskatchewan Health Authority; <sup>3</sup>Baycrest Health Sciences, North York, ON; <sup>4</sup>College of Social Work, University of Utah, Salt Lake City, UT, USA; <sup>5</sup>School of Public Health and Health Systems, University of Waterloo, Waterloo, ON; <sup>6</sup>London Health Sciences Centre, London, On; <sup>7</sup>Department of Psychology, Western University, London, ON; <sup>8</sup>Grand River Hospital, Kitchener, ON; <sup>9</sup>Parkwood Institute, London, ON

<https://doi.org/10.5770/cgj.23.425>

## ABSTRACT

### Background

Alcohol use disorder (AUD) is an increasingly common, under-recognized, and under-treated health concern in older adults. Its prevalence is expected to reach unprecedented levels as the Canadian population ages. In response, Health Canada commissioned the Canadian Coalition of Seniors' Mental Health to create guidelines for the prevention, screening, assessment, and treatment of AUD in older adults.

### Methods

A systematic review of English language literature from 2008–2018 regarding AUD in adults was conducted. Previously published guidelines were evaluated using AGREE II, and key guidelines updated using ADAPTE method by drawing on current literature. Recommendations were created and assessed using the GRADE method.

### Results

Twenty-two recommendations were created. Prevention recommendations: Best advice for older adults who choose to drink is to limit intake to well below the national Low-Risk Alcohol Drinking Guidelines. Screening recommendations: Alcohol 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. Assessment recommendations: Positive screens for AUD should be followed by a comprehensive assessment. Once more details are obtained an individualized treatment plan can be recommended, negotiated, and implemented. Treatment recommendations:

AUD 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. Naltrexone and Acamprostate pharmacotherapies can be used for the treatment of AUD in older adults, as individually indicated. Psychosocial treatment and support should be offered as part of a comprehensive treatment plan.

### Conclusion

These guidelines provide practical and timely clinical recommendations on the prevention, assessment, and treatment of AUD in older adults within the Canadian context.

**Key words:** alcohol, alcohol dependence, alcohol use disorder, substance use disorder, substance abuse, older adult, geriatric, systematic review, guideline

## INTRODUCTION

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. <sup>(1)</sup> Alcohol use disorder (AUD) and risky alcohol consumption are common among older adults, with reported problem drinking rates ranging from 1–22%. <sup>(2)</sup> Older women may be at particular risk for alcohol-related problems. <sup>(3)</sup> 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. <sup>(1)</sup>

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 with falls and fractures, which may occur as a result of alcohol use.<sup>(4,5,6)</sup> 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 be paid to criteria related to 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 100g 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 infarction), fatal hypertensive disease, and fatal aortic aneurysm.<sup>(7)</sup> 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.<sup>(8,9,10,11)</sup> 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.<sup>(12)</sup> Excessive alcohol consumption in older adults may also be associated with an increased risk of cognitive decline and dementia.<sup>(13)</sup> AUD is a risk factor for suicide in older adults as concomitant AUD may increase the likelihood for isolation, poor health, and depression.<sup>(14,15)</sup>

Older adults are often on multiple medications to manage chronic diseases. Alcohol use introduces the risk for harmful interactions between alcohol and drugs, and may reduce medication efficacy. Furthermore, older adults generally metabolize alcohol at a slower rate than younger adults<sup>(13,16,17,18)</sup> leading to a risk of heightened effects from alcohol among older adults even at relatively low levels of consumption.

## METHODS

The CCSMH Alcohol Guideline Development Working Group was created to lead the process. Peter R. Butt and Marilyn White-Campbell were appointed as co-leads of the group. Group membership was based on willingness to commit to the project and either possessing the required professional expertise or having a lived experience perspective. Ensuring diversity in disciplinary background and geographic distribution across Canada of members guided the final composition of the Guideline Development Working Group.

Members volunteered to focus on either the prevention or management of alcohol use disorder. Within these broad areas, they assumed leadership roles in assessing and drafting recommendations to deal with specific topics. This process was guided by systematic searches of databases to identify relevant literature that was then reviewed by Guideline Development Working Group members. Bi-weekly videoconferences were held to maintain progress, discuss emerging issues, refine recommendations, ensure consistency, and identify

gaps. A modified version of the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) methodology was utilized first to assess (and score) the quality of the available evidence for each recommendation (based on consideration of study design and quality of available studies, applicability to the question being addressed, and confidence in the estimate of the effect); and then to assess its overall strength, which took into account additional factors such as the balance between benefit and harm, patient values and preferences, and whether this would be a wise use of the required resources for implementation (see Box 1).<sup>(19)</sup> A separate category was created for recommendations that were not primarily based on empirical evidence but represented best clinical practice. These were categorized as consensus recommendations.

Members of the Guideline Working Group voted on all recommendations. For adoption, a recommendation had to achieve consensus approval (75%+ affirmative vote). We were actually able to discuss until we reached 100% member consensus on each recommendation. Further details on the methodology used are available at the following— <https://ccsmh.ca/substance-use-addiction/intro/>

The funder had no role in the creation or approval of the recommendations made for alcohol use disorder among older adults. Working Group members submitted annual declarations of potential conflicts of interest, all of which are available upon request.

## RESULTS/RECOMMENDATIONS

### 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;

**BOX 1. Factors used to determine quality of evidence for each recommendation****GRADE**

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.

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

**Quality Of Evidence**

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

**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

**Strength of Recommendation**

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.

**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)

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:

- Standard drink content of the product;
- National Low Risk Drinking Guidelines for both adults and older adults; and
- 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 an initial treatment strategy or as treatment itself. [GRADE: Evidence: High; Strength: Strong]

**Recommendation #12**

Routinely offer pharmacological treatment (e.g., anti-craving medication) with alcohol behavioural intervention and case management in moderate and severe AUD, 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 through 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]



## DISCUSSION

There is a plethora of clinical guidance in the management of Alcohol Use Disorder but a paucity of evidence attributable to the unique and highly diverse older adult population. These guidelines represent a systematic approach to the literature, with particular attention to the evidence, context, and expertise. The guideline group provided multidisciplinary insight, critical analysis, clinical acumen, and lived experience. These 22 guideline recommendations for AUD in older adults cover prevention, screening, assessment, and treatment.

Although good evidence exists for the treatment of AUD in adults, there is a dearth directly applicable to the older adult population. The literature varied in its definition of older adults and grappled with the diversity of this population with regard to comorbidities, living circumstances and supports, sex and gender, cultural influences, and treatment outcomes in the context of generally declining health.

Studies focused on older adults, inclusive of sub-populations, are needed to create evidence for the effectiveness of psychosocial and pharmacological treatments. The inconsistency around thiamine dosages and routes in detox need to be addressed for all patients. Somewhat related is the determination of the efficacy of oral thiamine supplementation to prevent Wernicke-Korsakoff's syndrome in ongoing chronic, heavy drinkers. Also, in need of further study is the recommendation for managed alcohol tapering in a controlled environment for those transitioning in their level of care. Finally, the use of toxicology screens in the context of falls would greatly assist in identifying the role of substance use in this common, yet highly problematic, occurrence in the older adult population.

In order to facilitate implementation of these recommendations the clinician needs to remain engaged through screening, assessment and treatment, to support both harm reduction and the potential transition into recovery. This is often described as a journey in which the patient is learning how to live without chemical coping, to address their many issues, and reconnect with life. Awareness of these transitions and the provision of appropriate support, without enabling, is an important part of the clinical role and relationship. Appropriate treatment and longitudinal, comprehensive care can be as successful with substance use disorders, as with any other chronic disease.

Care would be greatly assisted by expanded treatment resources, both pharmacologic and non-pharmacologic, for older adults with AUD. Prevention, through beverage alcohol labelling, social marketing of the low-risk drinking guidelines, and education of clinicians, is also important to reduce the human, health, and economic burden of alcohol misuse.

## CONCLUSION

Older adults are more sensitive to the effects of alcohol, and their bodies process alcohol slower than younger bodies do. Many older adults drink alcohol without problems. When problems do develop, they may begin at a young age or later in life. As the population of Canada ages, there is a growing

need for resources regarding alcohol use in older adults. The recommendations found in our Clinical Guidelines are intended to provide health-care workers and policy-makers with evidence-informed, clinically relevant direction and advice on the prevention, screening, assessment, and treatment of AUD in older adults. We hope practitioners will find them both a practical and useful clinical aide, and that community members will find them a helpful educational resource. The expanded version of these guidelines can be accessed electronically ([www.ccsmh.ca](http://www.ccsmh.ca)).

## ACKNOWLEDGEMENTS

Funding for the CCSMH Substance Use Disorder Guidelines was provided by Health Canada, Substance Use and Addictions Program. The CCSMH gratefully acknowledges Health Canada for its ongoing support and continued commitment to the area of seniors' mental health. We would also like to thank Dr. Meldon Kahan, Dr. Harold Kalant, William McDonnell, Dr. Rosemary Meier, Dr. Samir Sinha, and Craig Vickers for their support in reviewing and providing their perspectives on this document. We would like to thank the Canadian Centre on Substance Use and Addiction and the Behavioural Supports Ontario Substance Use Collaborative for their support and contributions throughout the development of the Guidelines, and Tonya Mahar (Manager, Library Services, Baycrest) for her assistance with literature searches. Finally, the CCSMH would like to acknowledge the continued dedication of its Steering Committee members and the outstanding contributions of our Director, Claire Checkland and Project Coordinators Indira Fernando, Natasha Kachan, and Marc-André LeBlanc.

## DISCLAIMER

This publication is intended for information purposes only, and is not intended to be interpreted or used as a standard of medical practice. Best efforts were used to ensure that the information in this publication is accurate; however, the publisher and every person involved in the creation of this publication disclaim any warranty as to the accuracy, completeness or currency of the contents of this publication. This publication is distributed with the understanding that neither the publisher nor any person involved in the creation of this publication is rendering professional advice. Physicians and other readers must determine the appropriate clinical care for each individual patient on the basis of all the clinical data available for the individual case. The publisher and every person involved in the creation of this publication disclaim any liability arising from contract, negligence, or any other cause of action, to any party, for the publication contents or any consequences arising from its use. The views expressed herein do not necessarily represent the views of Health Canada.

## CONFLICT OF INTEREST DISCLOSURES

The project was funded by Health Canada (Substance Use and Addictions Program). The funder had no role in the creation

or approval of the recommendations. Authors received an honorarium for their work. A rigorous process was undertaken to ensure that members of the working group did not have any significant conflict of interest.

## REFERENCES

1. Kuerbis A, Sacco P, Blazer DG, *et al.* Substance abuse among older adults. *Clin Geriatr Med.* 2014;30(3):629–54.
2. Woodruff S, Clapp JD, Sisneros D, *et al.* Alcohol use risk levels among older patients screened in emergency departments in Southern California. *J Appl Gerontol.* 2009;28(5):539–59.
3. Blow FC, Barry KL. Use and misuse of alcohol among older women. *Alcohol Res Health.* 2002;26(4):308–15.
4. Johnston JJ, McGovern SJ. Alcohol related falls: an interesting pattern of injuries. *Emerg Med J.* 2004;21(2):185–88.
5. Chen CM, Yoon YH. Usual alcohol consumption and risks for nonfatal fall injuries in the United States: results from the 2004–2013 National Health Interview Survey. *Subst Use Misuse.* 2017;52(9):1120–32.
6. Bjarko VV, Skandsen T, Moen KG, *et al.* Time of injury and relation to alcohol intoxication in moderate-to-severe traumatic brain injury: a decade-long prospective study. *World Neurosurg.* 2019;122:e684–e689.
7. Wood AM, Kaptoge S, Butterworth AS, *et al.* Risk thresholds for alcohol consumption: combined analysis of individual-participant data for 599 912 current drinkers in 83 prospective studies. *Lancet.* 2018;391(10129):1513–23.
8. Taylor B, Rehm J, Room R, *et al.* Determination of lifetime injury mortality risk in Canada in 2002 by drinking amount per occasion and number of occasions. *Am J Epidemiol.* 2009;168(10):1119–25.
9. Mukamal K. Alcohol intake and noncoronary cardiovascular diseases. *Ann Epidemiol.* 2007;17(5 Suppl):S8–S12.
10. Baliunas DO, Taylor BJ, Irving H, *et al.* Alcohol as a risk factor for type 2 diabetes: a systematic review and meta-analysis. *Diabetes Care.* 2009;32(11):2123–32.
11. Díaz L, Montero A, González-Gross M, *et al.* Influence of alcohol consumption on immunological status: a review. *Eur J Clin Nutrition.* 2002;56(Suppl 3):S50–S53.
12. Bagnardi V, Zambon A, Quatto P, *et al.* Flexible meta-regression functions for modeling aggregate dose-response data, with an application to alcohol and mortality. *Am J Epidemiol.* 2004;159(11):1077–86.
13. Andersen K, Bogenschutz MP, Bühringer G, *et al.* Outpatient treatment of alcohol use disorders among subjects 60+ years: design of a randomized clinical trial conducted in three countries (Elderly Study). *BMC Psychiatry.* 2015;15(1):280.
14. Canadian Coalition for Seniors' Mental Health (CCSMH). National guidelines for seniors' mental health: the assessment of suicide risk and prevention of suicide. Toronto, ON: The Coalition; 2006. Retrieved from: [https://ccsmh.ca/wp-content/uploads/2016/03/NatlGuideline\\_Suicide.pdf](https://ccsmh.ca/wp-content/uploads/2016/03/NatlGuideline_Suicide.pdf)
15. Heisel MJ, Links PS. Primary care prevention of suicide among older adults. *Geriatr Ageing.* 2005;8(8):36–41.
16. Vestal RE, McGuire EA, Tobin JD, *et al.* Aging and ethanol metabolism. *Clin Pharmacol Therapeut.* 1977;21(3):343–54.
17. Tupler LA, Hege S, Ellinwood EH. Alcohol pharmacodynamics in young-elderly adults contrasted with young and middle-aged subjects. *Psychopharmacol.* 1995;118(4):460–70.
18. Meier P, Seitz HK. Age, alcohol metabolism and liver disease. *Curr Opin Clin Nutr Metab Care.* 2008;11(1):21–26.
19. Guyatt GH, Oxman AD, Vist GE, *et al.* GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. *BMJ.* 2008;336(7650):924–26.

**Correspondence to:** Dr. Peter R. Butt, BA, MD, CCFP(AM), FCFP, Saskatchewan Health Authority, Mental Health and Addictions, 314 Duchess St., Saskatoon, SK S7K 0R1  
**E-mail:** peter.butt@usask.ca