

Evidence Brief: Alcohol screening, brief intervention and referral (SBIR) services in health settings



Key messages

- SBIR is effective if careful consideration is given to setting and specific populations are targeted.
- SBIR in emergency department settings can be effective among adults.
- Findings from this Evidence Brief can help policy makers, hospital administrators and health units decide when to use SBIR to reduce alcohol consumption and associated harms.

March 2017

Background

Alcohol harms

Alcohol is the most commonly used drug in Canada.¹ According to the 2013 Canadian Tobacco, Alcohol and Drugs Survey, 76 per cent of Canadians 15 years and older reported drinking alcohol in the past year.² Alcohol consumption is a causal factor in more than 200 disease and injury conditions worldwide.³ For example, short-term consequences associated with particular drinking occasions include risk of injury and violence, while long-term consumption (e.g., one or two drinks per day on a regular basis) can lead to increased risk for several types of cancers and serious medical conditions such as cirrhosis, pancreatitis and fetal alcohol spectrum disorder.^{1,4}

Low-Risk Alcohol Drinking Guidelines

In 2011, [Canada's Low-Risk Alcohol Drinking Guidelines](#) (LRADG) were released in response to the growing body of evidence identifying both the risks and benefits associated with low levels of alcohol consumption.⁴ Five guidelines were created to assist Canadians in moderating alcohol consumption and reducing short and long-term harms.⁵ The first recommendation provides limits to consider for total number of drinks per week and per day for women and men, respectively. The second addresses special occasions outlining limits for number of drinks consumed on any single occasion for women and men, respectively.⁵ The third recommends zero consumption for certain situations and instances such as while doing any kind of physical activity or driving. The fourth recommends zero alcohol consumption during

pregnancy. The fifth recommends that teens delay consumption of alcohol and speak to their parents before drinking.⁵

Despite these guidelines, in 2013 16 per cent of the Canadian population exceeded the recommendation of guideline one and 11 per cent exceeded the recommendation of guideline two.² Similarly, results from the 2014 Canadian Community Health Survey reported 17.9 per cent of Canadians were classified as heavy drinkers (consuming five or more drinks per occasion at least once a month within the past 12 months).⁶

Screening, brief intervention and referral

In terms of interventions to reduce the harms associated with alcohol use, alcohol screening, brief intervention and referral (SBIR) is one early intervention strategy that has been implemented. Other approaches include alcohol taxation, drinking-driving countermeasures and regulated alcohol marketing.⁷

The studies reviewed in this evidence brief used a variety of interchangeable terms to address alcohol misuse: ‘at risk’, ‘high risk’ and ‘elevated risk’, for example. However, these terms were not explicitly defined within the reviewed studies. Therefore, for the purpose of this Evidence Brief, we have interpreted these terms to mean drinking that occurs above LRADGs—a common and widely referenced measure in Ontario.

The intention of SBIR is to motivate high-risk drinkers to reduce alcohol consumption.⁷ By identifying high-risk drinkers through universal screening,^{8,9} a brief intervention is delivered followed by a referral to treatment, where appropriate.^{8,9} A brief intervention is a non-confrontational conversation with an individual in an attempt to motivate them to make certain behavioural changes.¹⁰ It is often conducted using motivational interviewing techniques. SBIR is typically carried out in emergency departments, primary care settings and electronically through web based or computerized interventions by health care professionals.

Current landscape

In 2011, the National Alcohol Strategy Working Group released a report outlining strategies to address alcohol misuse.¹¹ The report was

developed in partnership with members of the Public Health Agency of Canada, the Canadian Public Health Association and other public health partners. The report described alcohol use as a public health issue where both primary care and public health can contribute to reducing alcohol-related harms.¹¹ Implementation of SBIR was one of 41 recommendations put forth in the report: “to develop integrated and culturally sensitive screening, brief intervention and referral tools and strategies”.^{11(p.12)} To guide SBIR implementation, the College of Family Physicians of Canada released *Alcohol Screening, Brief Intervention & Referral: A Clinical Guide*.¹⁶ This resource provides an overview of the SBIR process, incorporating the LRADGs.¹⁶

In Ontario, health units are required to deliver programs and services that address alcohol use as mandated by the Ontario Public Health Standards (OPHS).¹² As such, implementation of universal SBIR has the potential to contribute to a health unit’s effort in addressing alcohol use within their jurisdictions. Additionally, LRADG data are often used as an indicator to determine a health unit’s success in this area. Further, the Registered Nurses Association of Ontario,¹³ Ontario Medical Association (OMA)¹⁴ and a report published by one of PHO’s Locally Driven Collaborative Projects¹⁵ have recommended SBIR be implemented across Ontario health units.

Research question

To inform decisions about integrating SBIR into public health practice, we sought to determine the effectiveness of SBIR in various settings conducive to public health. This Evidence Brief asks: *What is the effectiveness of screening, brief intervention and referral at reducing alcohol consumption and alcohol-related harms in different health settings?*

Methods

MED LINE, Embase, CINAHL, PsychINFO, SOCINDEX and Health Policy Reference Centre were searched on June 21, 2016 by PHO Library Services for articles published between 2001 and 2016, limited to reviews, systematic reviews and meta-analyses. The search strategy was developed by PHO Library Services and adapted for all databases. Articles retrieved during this search were assessed for eligibility by one reviewer. Reviews were eligible if

published in English, focused on interventions that included both screening and brief intervention components of SBIR, and if outcomes on the effectiveness of SBIR were reported. Articles were excluded if they focused on substances other than alcohol (e.g., tobacco and cannabis), if the brief intervention excluded the screening component of SBIR and if SBIR effectiveness was not the primary outcome. Aligned with recommendations presented at both national (National Alcohol Strategy Working Group¹¹) and provincial (Locally Driven Collaborative Project¹⁵) levels that highlight the need for a combined approach to screening and brief intervention, only reviews that evaluated these components together were included.

One reviewer screened all titles and abstracts. Articles meeting the inclusion criteria were retrieved for full text review. All articles needed to include both screening and brief interventions in the title and/or abstract to be included in full text review. Two PHO staff conducted quality appraisal of the articles using the *Health Evidence Quality Assessment Tool* for review articles. All assessed articles were rated moderate or high. All relevant information was extracted from each included article using a standardized data extraction form. The full search strategy can be obtained from PHO upon request.

Main findings

The literature search identified 1,969 potentially relevant articles, eight of which were included in this Evidence Brief. Four reviews focused on screening and brief interventions delivered within emergency department settings.¹⁷⁻²⁰ Two reviews assessed the effectiveness of web/electronic based screening and brief interventions,^{21,22} and another two examined the effectiveness of alcohol screening and brief interventions within primary care settings.^{23,24} Interventions in the reviews targeted a range of populations (e.g., adolescents, adults), were delivered using various platforms (e.g., electronic, in-person) and across a variety of settings (e.g., primary care, emergency settings). Results found that SBIR is effective in certain settings and among certain populations. Reviews evaluating SBIR delivered within a public health setting were not found within available literature.

Therefore this Evidence Brief summarizes the effectiveness of SBIR in health settings outside of, but relevant to, public health.

Emergency department-based screening and brief interventions

Four systematic reviews evaluating the effectiveness of SBIR within emergency department settings were examined. The first two focused on interventions for adults; the next two assessed interventions for younger populations (e.g., 11-25 years).

Adult populations

SBIR was found to be effective at reducing alcohol consumption and associated risk behaviour in adult populations. A meta-analysis, which measured the impact of brief interventions on alcohol consumption at 3, 6, and 12 months post-intervention concluded that at 3 months post-intervention there was a reduction in intensity (drinks per drinking day/occasion) of consumption ($Z=3.22$, $P=.001$). At 12 months post-intervention there was a reduction in the quantity (drinks/units per week or month) of alcohol consumed ($Z=3.81$, $P=.0001$) as well as the number of heavy drinking episodes ('binge drinking').¹⁷

The second review found that individuals in the intervention group were less likely to suffer an alcohol-related injury at the 6 and 12 month post intervention periods. SBIR was found to be effective at reducing alcohol-related risk behaviour and was protective against driving while under the influence of alcohol in adults, although no effect sizes were reported.¹⁷⁻²⁰

Adolescent population

The first review considered those between the ages of 13-25 adolescents. This review examined the effect of motivational interviewing delivered through brief interventions in the emergency care setting. The review reported brief motivational interventions were not any more effective than other brief interventions (e.g., brochures, personalized feedback, or contact information for community resources) at reducing high-risk drinking in adolescents.¹⁹

The second review considered those between the ages of 11-21 adolescents. The review reported inconclusive results, but suggested SBIR was effective for patients 18-21 years of age, while not effective for those under 18, with the former less likely to report an alcohol-related injury ($P < .01$) and alcohol-related problems ($P < .05$) 6 months post intervention.²⁰ Overall, it was reported that effectiveness of SBIR for adolescents does have potential for reducing the risk of alcohol related harms in adolescents who were engaged in high risk drinking.²⁰

Screening and brief interventions—electronic delivery

Two reviews compared the effectiveness of electronic screening brief interventions (eSBI) on reducing multiple alcohol related outcomes, namely grams of ethanol consumed per week²¹ and frequency of heavy drinking.²²

The meta-analysis included studies that screened students, high risk drinkers, and adults for alcohol use and delivered a computer or web-based brief intervention (e.g., personalized feedback advice sent over email). Specific population demographics were not reported, but included ‘visitors to website’. At 3 months post-intervention there was a reduction in grams of ethanol consumed per week (mean difference -32.74, 95% CI -56.80 – -8.68, $P = .01$). Similar results were seen between 3 and 6 months (mean difference -17.33, 95% CI -31.82 – -2.84, $P = .02$) and between 6 and 12 months (mean difference -17.33, 95% CI -31.82 – -2.84, $P = .02$). The intervention was found to be no longer effective 12 months post-intervention.²¹

The other systematic review measured the effectiveness of eSBI for alcohol use.²² Results were not supportive of eSBI due to the low quality of included studies and the various methods of reporting outcomes.²²

Primary care based screening and brief interventions

College students

A meta-analysis evaluating the effectiveness of a standardized intervention titled *Brief Alcohol Screening Interventions for College Students*

(*BASICS*) in reducing alcohol consumption and its related problems was examined.²³ At 12 months post-intervention, statistically significant reductions in students’ alcohol consumption (difference between means -1.50 drinks per week, 95% CI -3.24 – -0.29) and related problems (difference between means -0.87, 95% CI -1.58 – -0.20) were reported.

Very heavy or dependent drinkers

The identified review examining very heavy or dependent drinkers reported an absence of evidence to support the effectiveness of SBIR in primary care.²⁴ Therefore, results were deemed inconclusive.²⁴

Discussion and conclusion

Emergency department health care providers often attend to patients for alcohol-related issues and are therefore in the position to identify high-risk drinkers and intervene to prevent future alcohol-related harms.²⁵ Use of SBIR in emergency department settings appears to be effective among the adult population but effectiveness varies at different time periods post intervention. The evidence was less conclusive among adolescents.

Electronic screening and brief intervention deliver brief interventions through computer programs and web-based platforms.²² This method has potential for effectiveness as it can reach a large proportion of a priority population, offer flexibility and anonymity for the individual and be a cost-effective approach for delivery.^{21,22}

SBIR can also be delivered within primary health care settings, which is often the provision of first-contact services (e.g., family physician).²⁵ The evidence from the included reviews found that SBIR targeted towards college students²³ and non-dependent drinkers in the primary health care setting was effective.²⁴ Implementation of SBIR within this setting could provide an opportunity to identify at risk patients who would otherwise not be recognized as at risk.^{26,27}

Although SBIR was effective in the first few months (e.g., 3 months), with time, its effectiveness became less evident (e.g., 12 months).^{17,21,24} As such, the

long term impact and sustainability of SBIR requires further study to explore its full potential.

Implications for practice

Findings from this Evidence Brief may assist policy makers, hospital administrators and health units in decision-making regarding the use of SBIR to reduce alcohol consumption and associated harms. Overall, SBIR can be effective at reducing alcohol consumption and its related harms when implemented in certain settings and targeted toward specific populations.

Within Ontario, the Association of Local Public Health Agencies (alPHA) supports the implementation of SBIR and has echoed the statements made by OMA by recommending SBIR be adopted within Ontario.²⁸ In addition, the 2012 report *Taking action to prevent chronic disease: recommendations for a healthier Ontario* from Public Health Ontario and Cancer Care Ontario recommends the use of brief interventions to address issues related to alcohol consumption and chronic disease.²⁹ They recommend increasing access to brief counselling interventions for high risk drinkers, those drinking above the LRADGs, through clinics, primary health care services, hospitals, university health care services, workplaces and the Internet.²⁹

Under the Ontario Chronic Diseases and Injuries Program Standards, health units are required to work with community partners to develop and implement healthy policies and programs that address alcohol use.¹² As such, health units work to increase capacity to prevent injury and substance misuse through collaboration with community partners.¹² To address issues associated with alcohol consumption, health units may elect to use SBIR.⁷ Health units can support the adoption of SBIR through collaboration with local primary care providers, hospitals and universities thereby contributing to the overall goal of reducing the impact of preventable injury and substance misuse in Ontario.¹²

The World Health Organization estimates that 10-18 per cent of emergency department patients are a result of an alcohol-related injury³⁰ making it an optimal location for SBIR. Further, the place for

SBIR use in the emergency department is supported by the Canadian Public Health Association who recommend increasing access to screening and brief interventions as cited in their 2011 position paper *Too high a cost: a public health approach to alcohol policy in Canada*.³¹ As per the report: “CPHA calls on the provincial and territorial health systems, NGOs and professional associations to: increase capacity of screening and brief interventions for at risk drinking in both primary health care and emergency room settings.”^{31(p.12)} By promoting implementation of SBIR in this setting, health units will better align with current recommendations for public health practice in Canada.

Within primary care settings, there is evidence demonstrating that SBIR is effective when targeting college students.²³ With rates of alcohol consumption increasing during the transition from secondary school to post-secondary school,³² health units and their local universities/colleges may elect to work together to target alcohol policy interventions towards this population. Additional work to evaluate both screening and brief interventions together within primary care settings is needed to assess its effectiveness in this environment.

As the long term implications have yet to be determined, further research examining SBIR is necessary. Also, evaluations of the impact of SBIR are needed in Ontario and Canada within non-clinical settings (e.g., community-based) and within the broader population.

Limitations

Publication bias was a commonly cited limitation in the assessed reviews¹⁷⁻¹⁹ which may have influenced the validity of the overall findings of this Evidence Brief. In addition, some reviews included studies with poor methodological quality,¹⁹ unclear intervention descriptions,^{18,22} and lack of consistent follow-up intervals across studies, making it difficult to compare short and long term implications of SBIR. Further, alcohol consumption data were often self-reported which is subject to bias. Primary outcomes, consumption and alcohol-related problems, were measured and reported in a variety of ways which provided additional

challenges comparing results across reviews. Moreover, terminology used to refer to different drinking patterns (e.g., binge drinking, heavy drinking) was not consistent across the examined reviews and terms were based on different guidelines depending on their country of origin, impacting the potential for comparison of results. Last, results need to be applied and evaluated in the Canadian context.

Specifications and limitations of Evidence Briefs

The purpose of this Evidence Brief is to investigate a research question to help inform decision making. The Evidence Brief presents key findings based on a systematic search of the best available evidence near the time of publication, as well as systematic screening and extraction of data from that evidence. It does not report the same level of detail as a full systematic review. Every attempt has been made to incorporate the highest level of evidence on the topic. There may be relevant individual studies that are not included; however, it is important to consider at the time of use of this Evidence Brief whether individual studies would alter the conclusions drawn from the document.

Additional resources

Additional resources retrieved while developing this Evidence Brief that may be of interest to readers:

Canadian Centre on Substance Abuse SBIR:

<http://www.sbir-diba.ca/>

References

1. Canadian Centre on Substance Abuse. Alcohol [Internet]. Ottawa, ON: Canadian Centre on Substance Abuse; 2014 [cited 2016 Jul 7]. Available from: <http://www.ccsa.ca/Resource%20Library/CCSA-Canadian-Drug-Summary-Alcohol-2014-en.pdf>
2. Government of Canada. Summary of results for 2013: Canadian, Tobacco, Alcohol and Drugs Survey [Internet]. Ottawa, ON: Government of Canada; [2013] [cited 2016 Jul 11]. Available from: <http://healthy Canadians.gc.ca/science-research-sciences-recherches/data-donnees/ctads-ectad/summary-sommaire-2013-eng.php>
3. World Health Organization. Management of substance abuse: alcohol [Internet]. Geneva: World Health Organization; c2016 [cited 2016 Jul 7]. Available from: http://www.who.int/entity/substance_abuse/facts/alcohol/en/index.html
4. Butt P, Beirness D, Stockwell T, Gliksman L, Paradis C. Alcohol and health in Canada: a summary of evidence and guidelines for low-risk drinking [Internet]. Ottawa, ON: Canadian Centre on Substance Abuse; 2011 [cited 2016 Jul 11]. Available from: <http://www.ccsa.ca/Resource%20Library/2011-Summary-of-Evidence-and-Guidelines-for-Low-Risk%20Drinking-en.pdf>
5. Canadian Centre on Substance Abuse. drinking guidelines [Internet]. Ottawa, ON: Canadian Centre on Substance Abuse; c2016 [cited 2016 Jul 11 2016]. Available from: <http://www.ccsa.ca/Eng/topics/alcohol/drinking-guidelines/Pages/default.aspx>
6. Statistics Canada. Canadian Community Health Survey: heavy drinking, 2014 [Internet]. Ottawa, ON: Statistics Canada; [2015] [cited 2016 Jul 27 2016]. Available from: <http://www.statcan.gc.ca/pub/82-625-x/2015001/article/14183-eng.htm>
7. Babor T, Caetano R, Casswell S, Edwards G, Giesbrecht N, Graham K, et al. Alcohol: no ordinary commodity. 2nd ed. Oxford, NY: Oxford University Press; 2010.
8. Babor TF, McRee BG, Kassebaum PA, Grimaldi PL, Ahmed K, Bray J. Screening, Brief Intervention, and Referral to Treatment (SBIRT): toward a public health approach to the management of substance abuse. *Substance Abuse*. 2007;28(3):7-30.

9. Canadian Centre on Substance Abuse. Canada's low-risk alcohol drinking guidelines [Internet]. Ottawa ON: Canadian Centre on Substance Abuse; 2013 [cited 2016 Jul 12]. Available from: <http://www.ccsa.ca/Resource%20Library/2012-Canada-Low-Risk-Alcohol-Drinking-Guidelines-Brochure-en.pdf>
10. Moyer A, Finney JW. Brief interventions for alcohol misuse. CMAJ. 2015;187:502-6. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1679650/>
11. National Alcohol Strategy Working Group. Reducing alcohol-related harm in Canada: toward a culture of moderation [Internet]. Ottawa, ON: Canadian Centre on Substance Abuse; 2007 [cited 2016 Jul 15]. Available from: <http://www.ccsa.ca/Resource%20Library/ccsa-023876-2007.pdf>
12. Ontario. Ministry of Health and Long-Term Care. Ontario public health standards 2008, Revised May 2016 [Internet]. Toronto, ON: Queen's Printer for Ontario; 2016 [cited 2016 Jul 28]. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/ophs_2008.pdf
13. Registered Nurses' Association of Ontario. Clinical best practice guidelines: engaging clients who use substances [Internet]. Toronto, ON: Registered Nurses's Association of Ontario; 2015 [cited 2016 Jul 28]. Available from: http://rnao.ca/sites/rnao-ca/files/Engaging_Clients_Who_Use_Substances_13_WEB.pdf
14. Ontario Medical Association. Mitigating harm associated with alcohol use [Internet]. Toronto, ON: Ontario Medical Association; 2013 [cited 2016 Jul 19]. Available from: <https://www.oma.org/Resources/Documents/AlcoholPolicy04052013.PDF>
15. Alcohol Locally Driven Collaborative Projects (LDCP). Addressing alcohol consumption and alcohol-related harms at the local level: a resources for public health professionals in Ontario [Internet]. Toronto, ON: Locally Driven Collaborative Projects; 2014 [cited 2016 Jul 20]. Available from: http://www.publichealthontario.ca/en/ServicesAndTools/Documents/LDCP/Alcohol_FinalReport_October2014.pdf
16. The College of Family Physicians of Canada. Alcohol screening, brief intervention & referral: a clinical guide [Internet]. Mississauga, ON: The College of Family Physicians of Canada; [2012] [cited 2016 Jul 12]. Available from: <http://www.sbir-diba.ca/>
17. Schmidt CS, Schulte B, Seo HN, Kuhn S, O'Donnell A, Kriston L, et al. Meta-analysis on the effectiveness of alcohol screening with brief interventions for patients in emergency care settings. Addiction. 2016;111:783-94.
18. Landy MS, Davey CJ, Quintero D, Pecora A, McShane KE. A systematic review on the effectiveness of brief interventions for alcohol misuse among adults in emergency departments. J Subst Abuse Treat. 2016;61:1-12.
19. Kohler S, Hofmann A. Can motivational interviewing in emergency care reduce alcohol consumption in young people? A systematic review and meta-analysis. Alcohol Alcohol. 2015;50:107-17. Available from: <http://alcalc.oxfordjournals.org/content/50/2/107.long>
20. Yuma-Guerrero PJ, Lawson KA, Velasquez MM, von Sternberg K, Maxson T, Garcia N. Screening, brief intervention, and referral for alcohol use in adolescents: a systematic review. Pediatrics. 2012;130(1):115-22. Available from: <http://pediatrics.aappublications.org/content/130/1/115.long>

21. Donoghue K, Patton R, Phillips T, Deluca P, Drummond C. The effectiveness of electronic screening and brief intervention for reducing levels of alcohol consumption: a systematic review and meta-analysis. *J Med Internet Res*. 2014;16:e142. Available from: <http://www.jmir.org/2014/6/e142/>
22. Bewick BM, Trusler K, Barkham M, Hill AJ, Cahill J, Mulhern B. The effectiveness of web-based interventions designed to decrease alcohol consumption--a systematic review. *Prev Med*. 2008;47:17-26.
23. Fachini A, Aliane PP, Martinez EZ, Furtado EF. Efficacy of brief alcohol screening intervention for college students (BASICS): a meta-analysis of randomized controlled trials. *Subst Abuse Treat Prev Policy*. 2012;7:40. Available from: <http://substanceabusepolicy.biomedcentral.com/articles/10.1186/1747-597X-7-40>
24. Saitz R. Alcohol screening and brief intervention in primary care: absence of evidence for efficacy in people with dependence or very heavy drinking. *Drug Alcohol Rev*. 2010;29:631-40. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2966031/>
25. Government of Canada. About primary health care [Internet]. Ottawa, ON: Government of Canada; 2012 [cited 2016 Jul 15]. Available from: <http://healthycanadians.gc.ca/health-system-systeme-sante/services/primary-primaires/about-a-propos-eng.php>
26. Fleming MF. Screening and brief intervention in primary care settings. *Alcohol Res Health*. 2004-2005;28(2):57-62.
27. Spithoff S, Turner S. A systemic failure to address at-risk drinking and alcohol use disorders: the Canadian story. *CMAJ*. 2015;187(7):479-80.
- Available from: <http://www.cmaj.ca/content/187/7/479.long>
28. Jaeger V (Council of Ontario Medical Officers of Health). Re: Ontario Medical Association policy paper mitigating harm associated with alcohol use [Internet]. Toronto, ON: Association of Local Public Health Agencies; 2013 [cited 2016 Aug 25]. Available from: http://c.ymcdn.com/sites/www.alphaweb.org/resource/collection/7DCF40E5-9508-4227-8FC4-31F29C8717D7/COMOH_Letter_OMA_LRADG_171013.pdf
29. Cancer Care Ontario, Ontario Agency for Health Protection and Promotion (Public Health Ontario): Taking Action to Prevent Chronic Disease [Internet]. Toronto, ON: Queen's Printer for Ontario; 2012 [cited 2016 Oct 28]. Available from: <https://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=125697>
30. World Health Organization. Alcohol and injury in emergency departments: summary of the report from the WHO collaborative study on alcohol and injuries [Internet]. Geneva: World Health Organization; 2007 [cited 2016 Jul 20]. Available from: http://www.who.int/substance_abuse/publications/alcohol_injury_summary.pdf
31. Canadian Public Health Association. Too high a cost: a public health approach to alcohol policy in Canada [Internet]. Ottawa: Canadian Public Health Association; 2011 [cited 2016 Oct 28]. Available from: http://www.cpha.ca/uploads/positions/position-paper-alcohol_e.pdf
32. Mallett KA, Varvil-Weld L, Borsari B, Read JP, Neighbors C, White HR. An update of research examining college student alcohol-related consequences: new perspectives and Implications for Interventions. *Alcohol Clin Exp Res*. 2013;37(5):709-16.

Authors

Safia Mohamed, Practicum Student, HPCDIP
Shawn Hakimi, Product Development Advisor, HPCDIP

Reviewers

Jason LeMar, Health Promotion Consultant, Alcohol Policy, HPCDIP
Emily Bray, Practicum Student, HPCDIP

Special thanks

PHO Library Services

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario), Mohamed S, Hakimi S. Evidence Brief: Alcohol screening, brief intervention and referral (SBIR) services in health settings. Toronto, ON: Queen's Printer for Ontario; 2017.

ISBN: 978-1-4606-8683-6

©Queen's Printer for Ontario, 2017

Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario's government, public health organizations and health care providers. PHO's work is guided by the current best available evidence.

PHO assumes no responsibility for the results of the use of this document by anyone.

This document may be reproduced without permission for non-commercial purposes only and provided that appropriate credit is given to Public Health Ontario. No changes and/or modifications may be made to this document without explicit written permission from Public Health Ontario.

For further information

Health Promotion Capacity Building, Health Promotion, Chronic Disease and Injury Prevention
Email: hpcb@oahpp.ca

Public Health Ontario

Public Health Ontario is a Crown corporation dedicated to protecting and promoting the health of all Ontarians and reducing inequities in health. Public Health Ontario links public health practitioners, front-line health workers and researchers to the best scientific intelligence and knowledge from around the world.

For more information about PHO, visit www.publichealthontario.ca.

Public Health Ontario acknowledges the financial support of the Ontario Government.

