



University
of Victoria

Centre for Addictions
Research of BC



UNIVERSITY OF TORONTO
DALLA LANA SCHOOL OF PUBLIC HEALTH



JOHNS HOPKINS
BLOOMBERG
SCHOOL OF PUBLIC HEALTH



DALHOUSIE
UNIVERSITY
Inspiring Minds

madd 

Reducing Alcohol-Related Harms and Costs in Newfoundland and Labrador:

A Provincial Summary Report

Reducing Alcohol-Related Harms and Costs in Newfoundland and Labrador: A Provincial Summary Report

Mark Asbridge and Chris Pauley

Department of Community Health and Epidemiology
Dalhousie University

August, 2013

Suggested citation:

Asbridge, M. & Pauley, C. (2013). Reducing Alcohol-Related Harms and Costs in Newfoundland and Labrador: A Provincial Summary Report. Halifax: Department of Community Health and Epidemiology, Dalhousie University.

ISBN: 978-0-7703-0042-5

Reducing Alcohol-Related Harms and Costs in Newfoundland and Labrador: A Provincial Summary Report

Overview

The overall objective of this project is to encourage greater uptake of evidence-informed prevention and policy initiatives that reduce alcohol-related harms in Canada. This project documents current alcohol policy initiatives across Canada and draws comparisons across the provinces. The project serves to highlight policy strengths across each of these jurisdictions, provide recommendations on how to improve weaker policy areas and disseminate this up-to-date information to major stakeholders and policymakers in each jurisdiction.

In March of 2013, the main report entitled: *Strategies to Reduce Alcohol-Related Harms and Costs in Canada: A Comparison of Provincial Policies* (Giesbrecht et al., 2013), which documents the findings of this project, was released at an event hosted by the Centre for Addiction and Mental Health. The full report is available at:

http://www.camh.ca/en/research/news_and_publications/reports_and_books/Pages/default.aspx

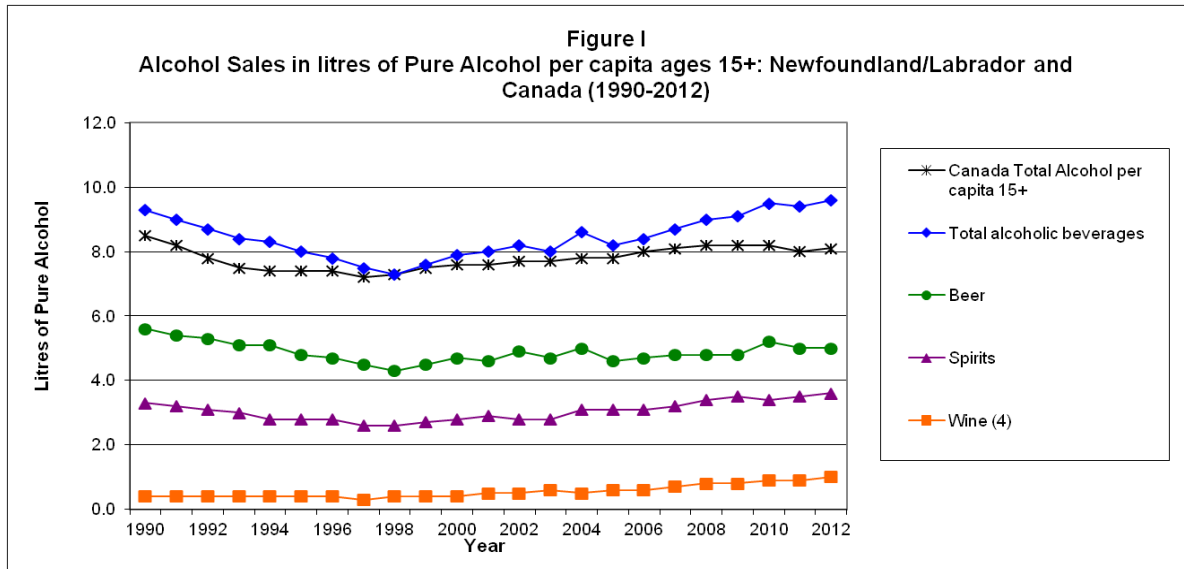
This provincial summary report serves to provide more detailed results and tailored recommendations for the province of Newfoundland and Labrador. This project seeks to disseminate this information to policy-makers, decision-makers and knowledge users in order to stimulate policy change. The project hopes to inform provincial liquor boards and alcohol regulators on the additional roles they can play in helping to reduce alcohol related harms and costs.

Methods

This project builds on the model implemented by MADD Canada and is based on well established and rigorous systematic reviews on the effectiveness of alcohol prevention measures as well as other studies which take a comparative approach to assessing alcohol policies (Anderson et al., 2009; Babor et al., 2010; Brand et al., 2007; Karlsson & Österberg, 2011). The policy dimensions central to this project were selected based on a review of the literature and best practices and overlap with those identified by the World Health Organization and the Canadian Centre on Substance Abuse. The scoring rubric consists of 10 weighted policy dimensions which are each comprised of several scaled indicator measures and was peer reviewed by three international alcohol policy experts. Data for this project was collected systematically from official sources and verified by representatives from the relevant ministries. Finally, following a pilot test of the scoring system, the final scores were tabulated and weighted to produce the final provincial rankings.

The Current Status of Alcohol Use in Newfoundland and Labrador

While the total alcohol consumption for Canada increased by 12.5% between 1996 and 2012 the per capita alcohol consumption for Newfoundland and Labrador has been relatively stable in recent years and is consistently lower than the national average (see Figure I). Newfoundland and Labrador survey data indicate that approximately 75.2% of Newfoundland and Labrador residents, ages 15 years and older, have consumed alcohol in the last 12 months (Ialomiteanu et al., 2012; Health Canada, 2012). Approximately 22.8% of drinkers in the province regularly consume amounts above the Canadian low-risk drinking guidelines (Ialomiteanu et al., 2012).



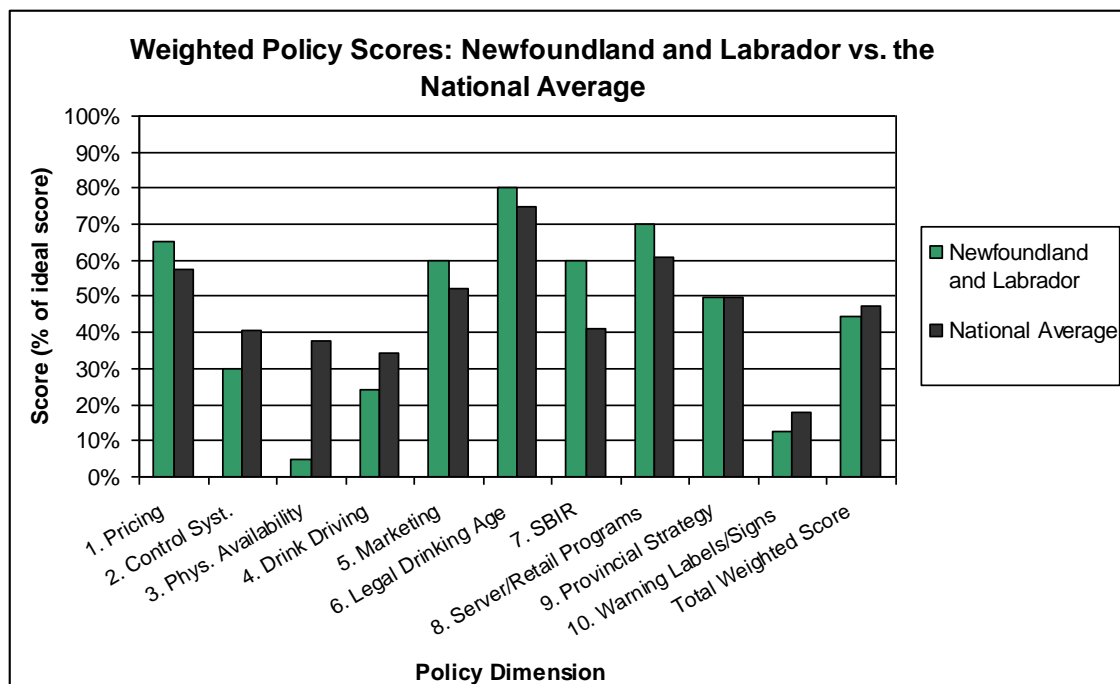
Recent Developments in Alcohol Policy in Newfoundland and Labrador (since November 2012)

In terms of developments in alcohol policy and practices that have taken place, been announced, or been brought to the team’s attention in Newfoundland since the end of the data collection period of the main report in fall 2012, one matter has been brought to the team’s attention:

- Newfoundland and Labrador will be participating in a third cycle of the National Treatment Indicators report for addictions led by the CCSA

Newfoundland and Labrador Specific Results:

In terms of total weighted scores across the country, Newfoundland was the third to lowest-ranked province (although it is important to keep in mind that the national average score was less than 50% of a perfect score; there is much unrealized potential for improvement in every province). Newfoundland demonstrated areas of strength around its management of limitations on the quantity of alcohol advertisements, its intentions to introduce SBIR for the general population as a priority in their provincial strategy, and its tracking of challenges and refusals in on-premise establishments. Figure II shows a comparison between Newfoundland and Labrador’s scores on each of the policy dimensions compared to the national average score for each policy dimension.



The following is a detailed review of the results for Newfoundland and Labrador and includes specific policy recommendations for the province. It should be noted that the policy dimensions listed below are listed in order of their level of effectiveness and population reach i.e. the policies are listed in the order in which they are likely to have the most impact on reducing alcohol related harms and costs.

1. Pricing

Promising Practices: Newfoundland and Labrador is among many Canadian jurisdictions which has begun to adjust its minimum prices for alcohol content, meaning that lower strength products are usually cheaper than higher strength products. This practice helps prevent relatively inexpensive products from emerging.

Areas for improvement: Several jurisdictions, including Newfoundland and Labrador, set their prices using a "flat" rate per litre of beverage. Not adjusting prices for alcohol content means higher strength products are cheaper per standard serving than lower strength products, thus providing incentives for consumers to choose higher alcohol content beverages. Furthermore, Ferment on Premise (FOP) outlets that allow patrons to make their own wine do not have regulated minimum prices that apply to products purchased from these commercial outlets. This is a significant loophole that undermines the value of minimum pricing by providing very inexpensive sources of beer and wine in large quantities. Loopholes also exist in the on-premise Newfoundland and Labrador minimum pricing system; manufacturers are permitted to provide free samples to customers provided they are purchased from the licensee. The final cost to the consumer is zero. This undercuts the value of the on-premise minimum pricing policy in the province.

Recommendations: As price is one of the most potent policy levers to reduce alcohol-related harm, there are a number of steps that should be taken. Newfoundland and Labrador is encouraged to set regulations in three areas. First, they should set indexed minimum pricing for both on-premise and off-premise sales, and at levels that are substantially higher than what currently is charged for non-alcoholic beverage of the same volume. For example, they could set a minimum price of \$3.00 per standard drink for alcohol sold from on-premise outlets. Prices from all channels, internet sales, and ferment on premise outlets should be in line with minimum price regulations. Furthermore, all prices should be indexed to inflation to prevent alcohol from becoming cheaper relative to other goods over time, and adjusted according to alcohol content so that the price per standard drink remains stable across products of different strengths.

2. Alcohol Control System:

Promising Practices: Newfoundland and Labrador disseminates social responsibility messages through a variety of mediums including online content, corporate websites and social media, print materials, TV and radio advertisements, workshops and more.

Areas for Improvement: Outside of Prince Edward Island and Nova Scotia, all provinces, Newfoundland and Labrador included, have maintained less than a 26% government monopoly on off-premise retail outlets. In addition, Newfoundland and Labrador allows for the sale of alcohol beyond on-premise and off-premise outlets through ferment at home kits. There remains extensive manufacturer sponsored product promotion initiatives that make use of PEILCC logos and branding.

Recommendations: Newfoundland and Labrador is encouraged to increase government control systems of alcohol distribution, as well as strengthen its social responsibility and control mandates. The authorities overseeing alcohol are encouraged to also pay close attention to other distribution systems such as delivery services, on-line shopping and ferment on premise/brew at home sales. There should be sufficient oversight to curtail sales to minors or intoxicated customers in these systems. Furthermore, with regard to the dual roles of liquor boards, marketing and retailing agendas appear to overshadow control functions. This over-emphasis should be addressed in order to more effectively reduce alcohol-related costs to government. In other jurisdictions, such as Sweden, the liquor retailing agency reports to a health ministry. This option is worthy of careful consideration, as a way of insuring that there is closer attention to health, public safety and other social costs when revenue generating targets are being set for alcohol sales.

3. Physical Availability:

Promising Practices: Newfoundland and Labrador has set hours of operation regulated under its respective alcohol control and licensing act for both on-premise and off-premise outlets.

Areas for Improvement: There were no reported or described regulations pertaining to outlet densities (neither for off- nor on-premise locations) in the course of gathering data for this study. Newfoundland and Labrador should implement such controls, and could also allow for citizen

input regarding the placement of both on-premise and off-premise outlets, which could be used as a tool to support public health input in alcohol policy decisions. Moreover, Newfoundland and Labrador allows for alcohol sales in the early morning (before 11:00 a.m.) and late at night (past 8:00 PM for off-premise establishments and past 1:00 a.m. for on-premise sales). There is leeway granted for extended hours of alcohol sales from on-premise establishments, which may be authorized during events of municipal, provincial, national or international significance such as sporting events or the East Coast Music Awards.

Recommendations: Newfoundland and Labrador is encouraged to set upper thresholds on a per capita basis for outlet density in order to reduce the number of points of access to alcohol. This may be more challenging for on-premise outlets, but not impossible if municipalities are given power to determine a ceiling on the number of licenses to grant. If Newfoundland and Labrador possessed stronger government retail systems, they could more easily set density limits. Strong citizen input is encouraged on all decisions around opening more outlets, including the expansion of government outlets. Newfoundland and Labrador is also encouraged to regulate hours of operation of both on-premise and off-premise outlets and limit the availability of alcohol in the early hours of the morning or very late at night.

4. Drinking and Driving:

Note: The following is based on information provided by MADD Canada in their most recent review of drinking and driving legislation in Canada. For a comprehensive review and comparative analysis of drinking and driving countermeasures in each province please refer to the MADD Canada 2012 Provincial and Territorial Legislative Review (Solomon, Cardy, Noble et al., 2012).

Promising Practices: In recent years Newfoundland and Labrador has strengthened its drinking and driving legislation. Newfoundland and Labrador has a 2 year Graduated Licensing Program (GLP) that is supported by restrictions on night time driving and the number of permitted passengers. The GLP program also requires supervising passengers to have a BAC of 0.00 and recently strengthened police powers to enforce the GLP and other drinking and driving countermeasures by allowing police to stop and question drivers at random about their alcohol use prior to driving. Newfoundland and Labrador has also strengthened its ALS program and lengthened suspension times for its parallel ALS program, with first offences now carrying a suspension time of 7 days and a look back period of 2 years.

Areas for Improvement: The GLP in Newfoundland and Labrador is 2 years and individuals can expedite the process by taking a driver's education course. The province does not have a zero tolerance rule that requires new drivers with less than 5 years experience and those under the age of 21 to have a BAC of 0.00. Currently the ALS program is not paralleled by vehicle impound and interlock programs are not mandatory for all federally impaired driving offenders.

Recommendations:

The GLP in Newfoundland and Labrador can be strengthened by lengthening the program to 3 years and requiring an exit test prior to obtaining full driving privileges. It is recommended that the province enact a .00% BAC limit for drivers under the age of 21 and all drivers during their

first 5 years of driving and strengthen police powers to enforce such legislation. Interlock programs should be made mandatory for all federally impaired driving offenders with escalating program lengths for repeat offences or violations within a ten year look back period and that drivers with 3 or more impaired driving convictions be subject to vehicle forfeiture.

5. Marketing and Advertising

Promising Practices: As with all provinces, Newfoundland and Labrador's advertising content regulations go beyond those outlined in the CRTC code. For example, their advertising regulations do not allow the consumption of alcohol to be shown in advertisements, and the CRTC only mandates that consumption not be shown in an immoderate way or in contexts where it is prohibited. In addition, Newfoundland and Labrador is the only province (other than New Brunswick) to place limitations on the quantity of advertisements.

Areas for Improvement: Newfoundland and Labrador lacks the authority to enforce provincial advertising policies. Its liquor board does not emphasize the risk associated with the use of alcohol on its corporate website landing page. Newfoundland and Labrador does not have restrictions on alcohol advertising sponsorship.

Recommendations: Newfoundland and Labrador is encouraged to look closely at the alcohol advertising, marketing and sponsorship evident in their jurisdiction, and explore ways of strengthening controls, particularly those forms of promotion that appeal to youth or to persons drinking in a high-risk manner. They are encouraged to discontinue advertising of discount prices and are strongly urged to continue to limit the quantity of alcohol advertising they permit. Mechanisms for dealing with breaches of codes or guidelines should be strengthened (particularly at the provincial end in terms of enforcing consequences for breaches in policy) and streamlined so that violations are dealt with in a significant and timely way and the public is aware of how to launch a complaint. Furthermore, the provincial liquor board's website should be reviewed to ensure that strong and detailed responsibility messages have a central place. Often these messages only focus on impaired driving or contain messages such as "please drink responsibly" that are vague and are not likely to impact behaviour (Babor et al., 2010). Finally, Newfoundland and Labrador is encouraged to review its sponsorship policies – for example, practices that target youth, such as the sponsorship of academic scholarships should be prohibited as should the sponsorship of events that feature high risk activities when combined with alcohol.

6. Legal Drinking Age

Promising Practices: The minimum legal drinking age in Newfoundland and Labrador, which is 19 years of age, is supported by legislation prohibiting the sale of alcohol to a minor and the purchase of alcohol by a minor. Overall enforcement of the legal drinking age is strong. A mystery shopper program is in place that monitors the enforcement of the legal drinking age in off-premise outlets and Newfoundland has a liquor inspection program/collaboration with law enforcement officials in order to enforce the legal drinking age in on-premise establishments.

Recommendations: The legal drinking age is 19 in Newfoundland and Labrador. While there is some evidence from Canada (Whitehead et al., 1975) more robust evidence comes from the United States (Wagenaar and Toomey, 2002) that supports the implementation of a higher legal drinking age (such as 21) to help reduce alcohol-related harms, drinking and driving incidents, and to delay the onset of drinking (Babor et al., 2010).

7. Screening, Brief Intervention, and Referral

Promising Practices: Newfoundland and Labrador has identified SBIR for the general population as a priority in their provincial strategy or action plan.

Recommendations: At present, Newfoundland and Labrador has no Screening, Brief Intervention and Referrals initiative in place. It has been shown to be effective in reducing consumption among high-risk drinkers, so, as a first step, Newfoundland and Labrador is encouraged to include SBIR protocols in their provincial policy or plan, and to make SBIR available to the general population as well as specific populations. The province is encouraged to support implementation of SBIR by providing organizations with financial support. Instituting a fee for service code for physicians to use for SBIR is one possibility. Having a position paper by a medical or other credible provincial association or developing provincial guidelines could also support the implementation of SBIR. Provinces are encouraged to make use of the SBIR web-based resource released in November 2012 by the Canadian Centre on Substance Abuse (CCSA), the College of Family Physicians of Canada (CFPC).

8. Server Training and Challenge and Refusal

Promising Practices: Newfoundland and Labrador has a server training program, although it is not mandatory. Newfoundland and Labrador has a policy against serving intoxicated patrons for on-premise and off-premise outlets, as well as an off-premise challenge and refusal program that is evaluated through a secret shopper program. Newfoundland and Labrador also has tracking of challenge and refusals in on-premise establishments.

Areas for improvement: While there is a server training program in Newfoundland and Labrador, it is not a condition of licensing. Server training and challenge and refusals programs in Newfoundland and Labrador do not appear to be based on evaluated training interventions shown to reduce over-service or service to individuals below the legal drinking age.

Recommendations: For on-premise sales, Newfoundland and Labrador is encouraged to implement province wide mandatory server training for staff at all licensed events and venues. It is recommended that the province implement programs that have been shown through evaluation to reduce over-service or service to minors and implement tracking of challenges and refusals. For off-premise sales, Newfoundland and Labrador is encouraged to strengthen its program by having ongoing training of staff and comprehensive challenge criteria that include minors, intoxicated individuals or people suspected of attempting to purchase alcohol for either of these groups. It is recommended that Newfoundland and Labrador continue to track the number and type of challenges and refusals as it is, and continue to evaluate the scope and effectiveness of the program through ‘secret shopper’ interventions.

9. Provincial Alcohol Strategy

Areas for Improvement: Newfoundland and Labrador's current provincial health strategy does not include a coordinated alcohol component, including priorities aimed at reducing the public health impact of illicit alcohol and informally produced alcohol.

Recommendations: Newfoundland and Labrador should have a standalone alcohol strategy; the presence of such clearly signals that socially-responsible alcohol use and sales are important health and social issues worthy of government and NGO attention. Furthermore, Newfoundland and Labrador is encouraged to develop an alcohol strategy that includes population level alcohol policies and that outlines a range of interventions and policies along the lines of the WHO's 2010 Global Strategy on Alcohol, which has been signed by Canada.

10. Warning Labels and Signs

Promising Practices: There is much unrealised potential in terms of informing consumers of the risks associated with alcohol use by implementing packaging labels and point of sale messaging. Unfortunately, no province has implemented mandatory warning labels on alcohol containers or packaging and only one province (Ontario) has mandated warning signs in both on-premise and off-premise outlets. However, Newfoundland and Labrador does have an internal or 'in-house' policy requiring these signs be posted at least in off-premise outlets. While the quality of warning messages is variable, Newfoundland and Labrador did provide some nonspecific warning messages, including "Make it a Mocktail" and "It's a Long Weekend - Please Drink Responsibly".

Areas for Improvement: Newfoundland and Labrador has not implemented regulated warning labels on alcohol containers and/or packages, nor made reference to the risks of chronic diseases associated with alcohol use in their warning messages.

Recommendations: There have been several attempts to introduce warning labels in Canada. The public should be made aware of the risks of alcohol use in the most direct ways possible; a label on the beverage container which conveys a clear health message is one way this may be accomplished. Newfoundland and Labrador is encouraged to have mandatory warning signs in both on-premise and off-premise venues, with messages that focus on a range of health related themes and highlight different alcohol problems. Messaging should be clear, visible and concise. For example, vague 'please drink responsibly' messages should be replaced with expanded text offering concrete advice on daily and weekly drinking limits, as well as specific advice on how the drinker can achieve more responsible levels of alcohol consumption. These warning messages and all 'counter-advertising' should be subject to rigorous third party evaluation.

Recommendations for Newfoundland and Labrador

The following is a summary of the recommendations that have been outlined in detail in the above sections. It should be noted that the policy recommendations are listed in the order in which they are most likely to have an impact on reducing alcohol related harms and costs. The potential impact of these policies was assessed based on their scope (population reach) as well as

the evidence of effectiveness. These policies are central to a comprehensive approach and jurisdictions are encouraged to implement policies from all three categories.

- Adjust all prices to keep pace with inflation
- Do not permit exceptions to minimum prices such as delisted products or free samples.
- Establish a strong government monopoly of alcohol retail outlets
- Strengthen liquor board's social responsibility and control mandates. Reduce overemphasis on marketing and retailing agendas at the expense of control functions.
- Involve citizens in decisions regarding the placement of all retail outlets and licensed establishments.
- Limit the availability of alcohol by reducing the hours of operation, starting with agency stores.
- Newfoundland and Labrador should have a provincial alcohol strategy that emphasizes alcohol specific prevention and intervention initiatives. Priorities aimed at reducing the public health impact of illicit alcohol and informally produced alcohol should be included.
- Implement the drinking and driving countermeasures recommended by MADD Canada (i.e. lengthening the GLP to 3 years; enacting a .00% BAC limit for drivers under the age of 21 and all drivers during their first 5 years of driving; making interlock programs mandatory for all federally impaired driving offenders, with escalating program lengths for repeat offences; having drivers with 3 or more impaired driving convictions be subject to vehicle forfeiture).
- Prohibit the advertisement of price or other sales incentives by all alcohol retailers.
- Tighten restrictions on sponsorship, specifically begin by banning alcohol sponsored scholarships and or bursaries that target youth and young adults.
- Increase the minimum legal drinking age to 21 years of age.
- Implement a fee for service code for physicians that can be used specifically for screening brief intervention and referral activities.
- Conduct an evaluation of the server training program with reference to programs with established and demonstrated effectiveness.
- Increase collaboration amongst administrators of the server training programs across provinces.
- Track challenge and refusals in on-premise establishments as well as private retail outlets and make this data available readily for monitoring and surveillance activities.
- Implement mandatory warning labels on beverage containers with clear and direct health messages.
- Expand the current repertoire of mandatory warning signs in on-premise and off-premise outlets to include clear and direct messages on other health topics such as moderate consumption, underage drinking, drinking and driving and alcohol as modifiable risk factor for chronic disease.

Alcohol is no ordinary commodity (Babor et al., 2010; CPHA, 2011). It is imperative that Newfoundland and Labrador continue to implement precautionary alcohol policies in order to reduce the harm and costs associated with alcohol use and to enhance the health and safety of its residents. Refining and implementing the recommendations listed above will require an evidence-based perspective, leadership, commitment to reducing alcohol-related harm and a spirit of collaboration among key stakeholders including various ministries and sectors of

government, NGOs working on health issues, public health advocates and representatives from the private sector. As an immediate next step, Newfoundland and Labrador is strongly urged to establish a strong government monopoly on alcohol retail outlets. Alcohol pricing policies are one of the most potent policy levers to reduce alcohol-related harm and costs. It is important that the integrity of these policies is not compromised by the availability of deeply discounted products.

The province is further urged to consider the public health implications associated with the loosening of these controls and is urged to gather input from key stakeholders committed to reducing the harm from alcohol and conduct pilot evaluations of initiatives prior to implementing them on a province wide basis. Finally, a provincial alcohol strategy would identify alcohol as a priority issue in Newfoundland and Labrador and would serve to guide future alcohol policy developments.

Acknowledgements

The authors would like to acknowledge funding from the [Canadian Institutes of Health Research](#) in support of the project “Reducing Alcohol-Related Problems by Implementing Evidence-based Tools that Translate Research Knowledge into Prevention Practice”, (Principal Investigator: Norman Giesbrecht). We would also like to gratefully acknowledge receipt of data and feedback from Monica Bull, Jay Griffin, and Andrew Bruce. Finally, we thank Mothers Against Drunk Driving (MADD) Canada for permission to use materials collected for their 2012 Provincial and Territorial Review. The in-kind support provided by our organization is gratefully acknowledged. As well, the project team members are thanked for their contributions to this project. The views and opinions expressed in this report are those of the authors and do not necessarily reflect the perspectives or policies of the organizations acknowledged.

References

- Anderson, P., Chisholm, D., & Fuhr, D. (2009). Alcohol and Global Health 2: Effectiveness and cost-effectiveness of policies and programmes to reduce the harm caused by alcohol. *Lancet*, 373, 2234–46.
- Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Grube, J., Hill, L., Holder, H., Homel, R., Livingston, M., Österberg, E., Rehm, J., Room, R. & Rossow, I. (2010). *Alcohol: No ordinary commodity – research and public policy – Revised edition*. Oxford: Oxford University Press.
- Brand, D. A., Saisana, M., Rynn, L. A., Pennoni, F., & Lowenfels, A. B. (2007). Comparative analysis of alcohol control policies in 30 Countries. *PLoS Medicine*, 4(4), e151.
- Canadian Alcohol and Drug Use Monitoring Survey – Tables – 2011 – Health Canada. (2011). Retrieved May 3, 2013, from http://www.hc-sc.gc.ca/hc-ps/drugs-drogués/stat/_2011/tables-tableaux-eng.php#t8

- Canadian Centre on Substance Abuse [CCSA]. (April, 2007). *Reducing Alcohol-Related Harm in Canada: Toward a Culture of Moderation*. Recommendations for a National Alcohol Strategy. Alberta Alcohol and Drug Abuse Commission, Canadian Centre on Substance Abuse & Health Canada, 2007.
- Canadian Public Health Association [CPHA] (December, 2011). *Too High a Cost - A public health approach to alcohol policy in Canada*. Ottawa, ON: Canadian Public Health Association.
- Giesbrecht, N., & Ialomiteanu, A., R. (2013). Public opinion on alcohol policy, Ontario, Canada, 1996-2011: Findings, correlates and emerging issues. Presented at Alcohol Policy 16, Washington, DC, April, 2013.
- Giesbrecht, N., Wettlaufer, A., April, N., Asbridge, M., Cukier, S., Mann, R., McAllister, J., Murie, A., Pauley, C., Plamondon, L., Stockwell, T., Thomas, G., Thompson, K., & Vallance, K. (2013). *Strategies to Reduce Alcohol-Related Harms and Costs in Canada: A Comparison of Provincial Policies*. Toronto: Centre for Addiction and Mental Health.
- Karlsson, T., & Österberg, E. (2001). A scale of formal alcohol control policy in 15 European countries. *Nordisk Alkohol & Narkotikatidskrift*, 18 (English Supplement): 117-131.
- Solomon, R., Cardy, J., Noble, I., & Wulkan, R. (2012). *Mapping our progress to safer roads: The 2012 provincial and territorial legislative review*. The University of Western Ontario. Available at: http://www.madd.ca/media/docs/MADD_Canada_2012_Provincial_and_Territorial_Legislative_Review_FINAL.pdf
- Statistics Canada (2012). Table 183-0019 - Volume of sales of alcoholic beverages in litres of absolute alcohol and per capita 15 years and over, fiscal years ended March 31, annual (litres). Accessed May, 2013.
- Wagenaar, A. C., & Toomey, T. L. (2002). Effects of minimum drinking age laws. Review and analysis of the literature from 1960-2000. *Journal of Studies on Alcohol*, 63, S206-25.
- Whitehead, P. C. (1977). *Alcohol and Young Drivers: Impact and Implications of Lowering the Drinking Age*. Ottawa: Department of National Health and Welfare, Health Protection Branch, Non-medical use of Drugs Directorate, Research Bureau.
- Whitehead, P. C., Craig, J., Langford, N., MacArthur, C., Stanton, B., Ferrence, R. G. (1975). Collision behavior of young drivers: Impact of the change in the age of majority. *J Stud Alcohol*; 36: 1208-1223.
- World Health Organization [WHO] (2010). *Global Strategy to Reduce the Harmful Use of Alcohol*. Geneva: World Health Organization.