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Strategies to Reduce Alcohol-Related Harms and Costs in Canada:

A Review of Provincial and Territorial Policies

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Strategies to Reduce Alcohol-Related Harms and Costs in Canada: A Review of Provincial and Territorial Policies

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EXECUTIVE SUMMARY

This report provides a systematic and comparative review of the implementation of provincial and territorial policies proven to reduce the considerable health and social harms from alcohol. Results from a 2013 policy review of the 10 provinces are shown alongside the latest findings collected for 2017. The overall objective is to encourage greater uptake of effective alcohol control policies and programs to reduce the harms of alcohol in Canada.

A companion report focusing on alcohol-related policies and initiatives at the Federal government level has been released in tandem with this provincial and territorial review (1). A series of shorter summaries have also been prepared for individual jurisdictions that include tailored recommendations, promising policies and areas for improvement for each (visit alcoholpolicy.cisur.ca to download all reports).

Background

Alcohol is the most popular recreational drug in Canada. While often used in a low-risk fashion, it is also associated with a wide range of harms and social problems. It was estimated that in 2014 there were 14,800 deaths and 88,000 hospitalisations attributed to alcohol across Canada, substantially higher than the 4,500 deaths and 21,900 hospitalisations attributed to all illicit drugs combined in that year (2). The estimated economic cost of alcohol in 2014 for healthcare, policing, lost productivity and other areas was $14.6 billion, substantially higher than net revenues brought in from alcohol sales ($10.9 billion) and more than the costs of any other psychoactive substance, including tobacco. What can be done to reduce the chronic disease, trauma, social problems and economic costs related to alcohol? The extensive international evidence clearly points to the importance of some specific alcohol policies as being key to a comprehensive and effective response.

Methods

Drawing upon an extensive international literature, we developed detailed descriptions of alcohol policy best practices for improving public health and safety outcomes from alcohol use. The project team updated, improved and expanded on the 10 policy domains and the data used in the previous 2013 report (3); input was also obtained from representatives across jurisdictions via stakeholder interviews. We identified the latest and most comprehensive meta-analyses, systematic reviews and seminal alcohol policy studies to select 11 domains for detailed data collection and analysis. Seven of these domains have been shown to directly impact alcohol consumption and related harm: Pricing and Taxation; Physical Availability; Impaired Driving Countermeasures; Marketing and Advertising Controls; Minimum Legal Drinking Age; Screening, Brief Intervention and Referral; and Liquor Law Enforcement. Four other domains have indirect impacts by facilitating implementation of the seven direct domains: type of Alcohol Control System; existence of a formal provincial/territorial Alcohol Strategy; Monitoring and Reporting of alcohol harms; and Health and Safety Messaging about alcohol.

These domains were each weighted on two dimensions: (i) the *strength of evidence for effectiveness* in reducing harms from alcohol, and (ii) the *scope or population reach* of the domain i.e. the extent to which implementation of a policy has the potential to reach all those affected by alcohol-related

harm. For each domain a detailed scoring rubric was developed which involved a combination of verifiable policy and practice indicators. Lastly, three international experts were asked to review our selection of domains, indicators and relative weightings.

Data collection involved extensive assessment of official regulatory documents and communication with officials working in the relevant provincial and territorial ministries. We then sent our data summaries, for each jurisdiction and policy domain, to the jurisdictional contacts and asked them to confirm whether they were accurate and complete.

Scoring was conducted independently by two team members who applied the scoring rubrics to assign scores for each indicator, for each domain and each province and territory. The indicator scores were combined into overall scores for each of the 11 domains and weighted for effectiveness and population reach. The weighted domain scores were then summed to obtain a total weighted policy implementation score for each jurisdiction. Letter grades ranging from an A+ (highest score) to an F (lowest score) were also applied to further highlight the current performance of the provinces and territories in each policy domain.

To further assess the feasibility of implementing the full suite of recommended policies, the highest scores achieved for each indicator across all jurisdictions were compiled into one overall best current practice score. Provinces and territories were then also scored on how well they performed against this best current practice score.

Results

Across all 11 policy domains, Canadian jurisdictions[1] collectively achieved less than half (43.8%, Grade F) of their potential to reduce alcohol-related harm through the use of evidence-based policies. The national policy implementation score, assessed across all Canadian jurisdictions, was slightly lower than in 2012 (43.8% vs 47.7%) suggesting some erosion of alcohol control initiatives over the intervening years. Two provinces, MB and QC, achieved higher scores than in 2012, while NL, NB and ON had lower scores.

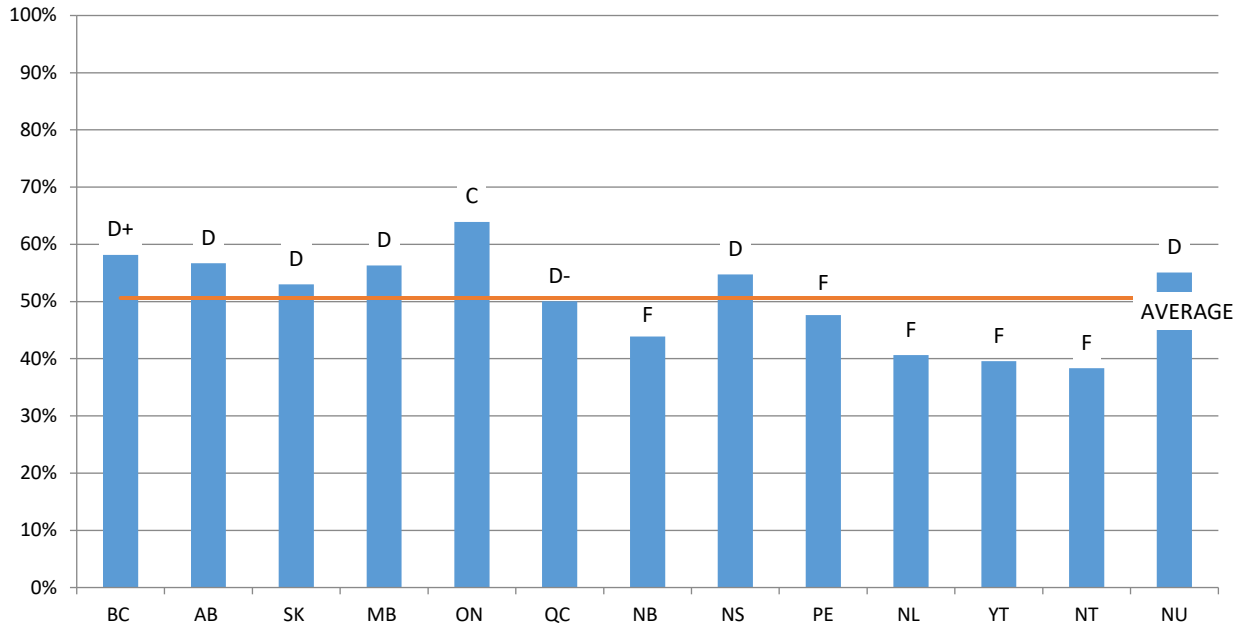
When best current practices were analyzed across all domains and jurisdictions, the collective best current practice score was 86.6% (Grade A). This underscores the feasibility of a greatly improved Canada-wide response to the reduction of alcohol-related harm since much of what is being recommended has already been implemented in at least one jurisdiction in Canada. In other words, if a jurisdiction was to implement all the best current practices identified, many of which include gold standard best practices, they would receive an A Grade.

In the Figure A1 below we present adjusted total policy implementation scores achieved for each province and territory calculated on the basis of the percentage achieved of the best current practices identified somewhere in Canada. ON led the way in 2017 with a Grade C (63.9%), followed by BC (58.1%) and AB (56.7%) with D+ and D grades respectively. Six jurisdictions still scored less

[1] BC: British Columbia; AB: Alberta; SK: Saskatchewan; MB: Manitoba; ON: Ontario; QC: Quebec; NB: New Brunswick; NS: Nova Scotia; PE: Prince Edward Island; NL: Newfoundland and Labrador; YT: Yukon; NT: Northwest Territories; and NU: Nunavut.

than 50% (Grade F). It is important to note that these assessments were conducted before recent deregulatory changes to alcohol policy in ON.

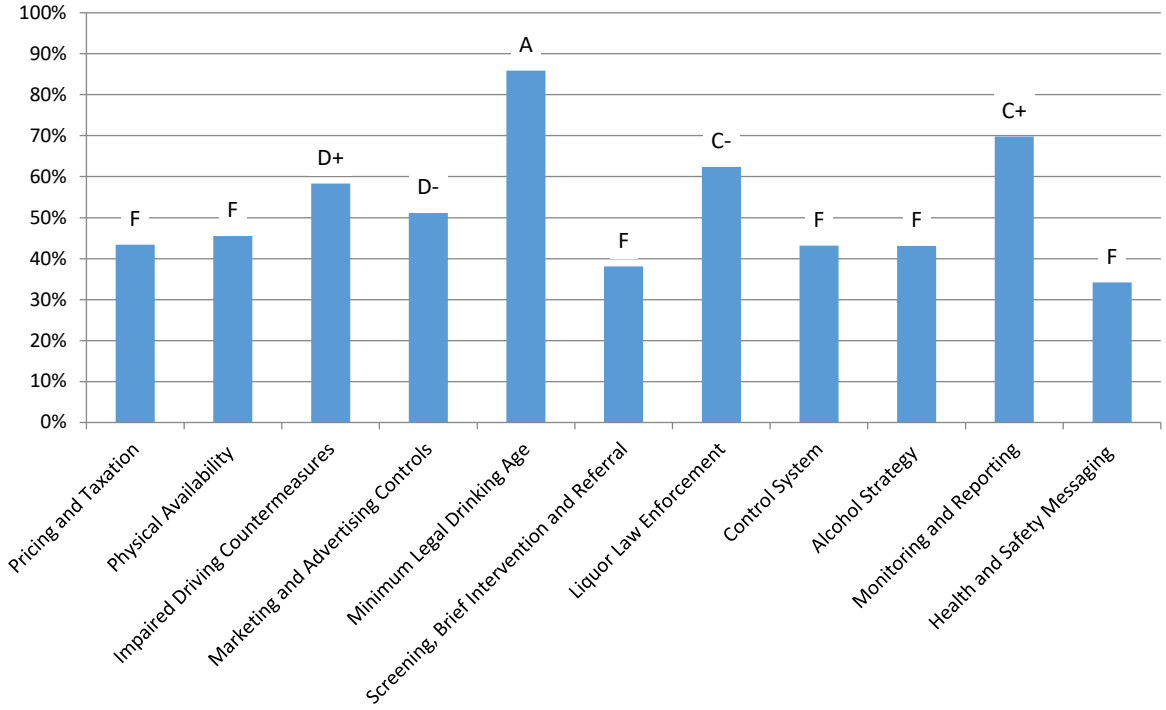
Figure A1: Adjusted Total Policy Implementation Score* by Province and Territory, 2017



*As assessed against best current practice in Canada

Adjusted average policy domain scores across all Canadian jurisdictions are presented below in Figure A2 for each of the 11 policy domains assessed. They were scored to reflect the average performance across all provinces and territories against best current practices in that domain. These scores varied quite substantially across the different policy domains with Minimum Legal Drinking Age achieving a Grade A (85.9%) being the highest and Health and Safety Messaging with a Grade F (34.2%) the lowest. Monitoring and Reporting on alcohol-related harms (69.8%) and Liquor Law Enforcement (62.4%) were the next highest scoring domains with Grades C+ and C- respectively. A total of six policy domains were scored below 50% (Grade F). The average policy domain score across all jurisdictions was 50.6% (Grade D-) of best current practice.

Figure A2: Adjusted Average Policy Domain Scores* across all Canadian jurisdictions, 2017



*As assessed against best current practice in Canada

Conclusions

The weakening of effective alcohol policies over the past decade has been accompanied by an increase in the harms and economic costs of alcohol use in Canada. MADD Canada can be credited with encouraging a general strengthening of effective policies to deter impaired driving through their regular review of impaired driving laws and advocacy. There has been some admirable progress in policy development in some parts of Northern Canada (e.g. NU) where alcohol-related harm has long been a major burden. There have been some encouraging developments in some jurisdictions in the key domain of pricing (e.g. minimum pricing by alcohol content in Manitoba). However, overall, alcohol policy in Canada has been largely neglected relative to emerging initiatives addressing tobacco control, responses to the opioid overdose crisis, and restrictions imposed on the new legal cannabis market. Furthermore, in several jurisdictions, alcohol control systems are being privatized, customer convenience and choice are being given priority over health and safety concerns. Also, the responsibility of governments to warn citizens of potential risks is largely absent, and new digital media are being used to promote unsafe and unhealthy ways of using alcohol as a more efficient means to reach consumers.

The greater economic costs associated with alcohol use in Canada relative to tobacco and all other psychoactive substances, suggests the need for better funding, and a more coordinated, comprehensive, and effective set of policies than are currently in place. The great majority (87%) of evidence-based policies and strategies identified in this report are currently being implemented in at least one Canadian jurisdiction. The goals of this report are to raise awareness of the many possible avenues for more effective action and to encourage sharing of best practices between jurisdictions, in order to reverse current trends of increasing alcohol-related harms and costs in Canada.

Recommendations for Provinces and Territories

We present a series of specific recommendations in each of the identified alcohol policy domains, along with some general, overarching recommendations. These build on strong policies and practices that are already in place in many provinces and territories in Canada. We also identify below some jurisdictions as best current practice leaders where appropriate, though some of their obtained scores were still short of the gold standard best practices recommended in this report. In certain cases asterisks were used to indicate which jurisdictions have implemented the recommended policies in the table below.

Direct Policy Domain Recommendations	Best Current Practice Leaders
1. Pricing and Taxation	
• Implement a minimum price of at least $3.50/standard drink for on-premise sales* and at least $1.75/standard drink for off-premise sales**, index minimum prices to jurisdiction specific inflation*** and exclude loopholes such as volume discounts; and	*BC, **NL, ***ON
• Set minimum alcohol prices according to alcohol content.	MB
2. Physical Availability of Alcohol	
• Set in regulation maximum trading hours from 11am to 8pm for off-premise outlets* and 11am to 1am the next day for on-premise establishments** with no extensions permitted; and	*NB, **ON and PE
• Set upper limits on the density of both on-premise and off-premise liquor outlets based on population.	SK and QC
3. Impaired Driving Countermeasures	
• Implement graduated licensing programs along with zero BAC limits for new drivers to continue for three years beyond program-completion;	SK, MB, ON, QC, NB, PE, and NL
• Have increased penalties when alcohol is detected in combination with other drugs;	ON
• Require successful completion of ignition interlock programs as a condition of re-licensing for all alcohol-related *Criminal Code* impaired-driving offenders	BC, AB, SK, MB, ON, NB, PE, and NL
• Introduce mandatory vehicle impoundment for all drivers with a .05% BAC; and	AB, SK, and NL
• Have administrative licensing suspensions for at least 3 days for the first 0.05% offence and 7 days for the second.	BC, AB, SK, MB, ON, NB, NS, PE, and NL

Direct Policy Domain Recommendations	Best Current Practice Leaders
4. Marketing and Advertising Controls	
• Implement comprehensive restrictions covering placement, quantity, and content of ads as well as sponsorship restrictions for all media;	None
• Implement an independent complaint system and penalties that escalate with the frequency and severity of the violation;	QC
• Have independent monitoring and enforcement of alcohol advertising and marketing, including pre-screening of ads; and	QC and NU
• Require government liquor regulators and/or government retailers to use social media platforms to present evidence-based health and safety messages related to alcohol.	AB
5. Minimum Legal Drinking Age (MLDA)	
• Implement a minimum legal drinking age of at least 19 years, without exception; and	BC, SK, ON, NS, NL, and NT
• Consider graduated drinking policies with age-based alcohol restrictions, similar to graduated driver's licensing programs (e.g., age-based restrictions on strength and number of drinks to be served up to 21 years).	None
6. Screening, Brief Intervention and Referral (SBIR)	
• Implement SBIR practice guidelines endorsed by a credible professional association (e.g. the College of Family Physicians of Canada);	BC, AB, ON, QC, and NS
• Fund online or in-person SBIR programs or services; and	ON, NS, and PE
• Encourage and monitor SBIR implementation by physicians.	None
7. Liquor Law Enforcement	
• Implement Risk-Based Licensing and Enforcement programs for all liquor outlets informed by outlet and licensee characteristics as well as data on violent and impaired driving offences, especially targeting high-risk premises;	SK and QC
• Employ at least 1 liquor inspector per 300 outlets;	AB, SK, MB, NS, YT, and NT
• Implement Mystery Shopper and police inspection programs with publicly reported penalties escalating with frequency and severity of offences; and	SK, ON, and QC
• Mandate evidence-based Responsible Beverage Service Training for all venues and levels of staff.	BC, AB, and PE

Indirect Policy Domains Recommendations	Best Current Practice Leaders
8. Alcohol Control System	
• Maintain a government-owned and run retail network for off-premise outlets* that reports to a ministry with a mandate to protect health and safety**;	*NS and NU **BC
• Include the protection of public health and safety as a stated objective of the control system;	YT and NU
• Legislate earmarked funds to support harm reduction and health promotion initiatives;	MB, QC, and NU
• Discontinue plans for privatisation of retail alcohol sales; and	None
• Phase out online ordering, liquor delivery services and ferment on premises.	NT and NU
9. Provincial and Territorial Alcohol Strategy	
• Create an alcohol-specific strategy incorporating a full range of evidence-based interventions and policies;	AB
• The alcohol strategy should be developed independently from the alcohol industry, be government-endorsed, and reviewed at least every five years;	AB and NU
• Fund a lead organisation with a public health and safety mandate to facilitate implementation of the strategy; and	None
• Fund on-going independent monitoring of the strategy's implementation.	None
10. Monitoring and Reporting	
• Fund the tracking and public reporting of key alcohol-related harm indicators annually through a centralized system with an identified lead agency; and	BC
• Track indicators that include: per capita consumption; alcohol-related hospital admissions and deaths, and alcohol-related crime.	BC, AB, SK, MB, ON, NB, PE, and YT
11. Health and Safety Messaging	
• Require prominent placement of alcohol labels that include rotating health and safety messages, standard drink information and Low-Risk Drinking Guidelines; and	YT and NT
• Require health and safety messaging at all on and off-premise outlets* supported by other suitable media platforms**.	*BC and ON ** AB, MB, ON, and QC

General Recommendations
• Given the substantial and increasing harm from alcohol use, all provinces and territories should give greater priority to funding and implementing effective alcohol policies.
• Following some European countries, liquor regulation should be located within ministries directly concerned with health and safety rather than with finance and economic development.
• The recent trend to treat alcohol as an ordinary commodity to be sold alongside food and other grocery items should be reconsidered as this leads to greater consumption and related harm.
• All provinces and territories are encouraged to learn from each other's experiences with successful implementation of effective alcohol policies.
• There needs to be concerted action involving government, NGOs and other stakeholders in implementing a combination of population level policies and more focused interventions for priority populations.
• Greater investment in public education about the risks of alcohol, including the comparative risks of alcohol and other substances, is needed to create a more supportive climate for enacting effective policies. This can be achieved with initiatives such as mandatory warning labels on all alcohol containers and clear and consistent public health messaging on a range of health topics.
• Careful documentation of policy changes and regular monitoring and evaluation of public health and safety outcomes are needed to inform future policy development.

INTRODUCTION

Background

This is the second report prepared by the Canadian Institute of Substance Use Research (CISUR), the Centre for Addiction and Mental Health (CAMH) and public health experts from across Canada, on the implementation of evidence-based policies to reduce alcohol-related harm. In this new report we use an updated and refined methodology, incorporating new data sources, we include the three territories for the first time, and report on shifts in policies in the provinces since 2012 (3, 4).

Alcohol remains Canada's favourite recreational drug with almost 80% of Canadians reported drinking at least one alcoholic drink in the previous year (5). While many Canadians consume alcohol within recommended limits, approximately 15-20% of those 15 years and older who drink alcohol report doing so above the Canadian Low-risk Drinking Guidelines (LRDG) for acute and chronic effects (5). However, when adjusted for under-reporting, these estimates increase to approximately 40% for acute harm and almost 30% for chronic harm from drinking (6, 7). Young adults up to the age of 25 are more likely to demonstrate risky patterns of alcohol use than youth or adults over that age (5, 6, 8).

Alcohol is a risk-factor for many serious conditions and is also directly associated with many types of acute harm such as injuries and poisonings (9, 10). In 2014, alcohol use caused an estimated 14,800 deaths, 88,000 hospital admissions, and contributed to 139,000 years of productive life lost in Canada (2).

Consumption of alcohol is on the rise in several Canadian jurisdictions (e.g. BC) and there is strong evidence that as consumption and hazardous drinking patterns increase, so do a wide rage of alcohol-related harms to both drinkers and non-drinkers (6, 11-16). The economic cost of alcohol in Canada was recently estimated to have been $14.6 billion in 2014, consisting mainly of healthcare, law enforcement and lost productivity costs (2). In contrast the net income from alcohol in Canada totaled $10.9 billion in 2014 (17). Since 2007, alcohol-related health and social costs have increased by approximately 12% (2) and may continue in this direction given the ongoing shift towards privitisation of liquor stores, easier access to alcohol, pervasive marketing, and the continued normalisation of drinking in Canadian culture (18-21).

The current levels of alcohol-related harm in Canada are not inevitable. There is now substantial international evidence identifying policies that can powerfully impact levels of alcohol consumption and related harm (16, 22). These policies include, but are not limited to, maintaining alcohol prices with the cost of living, limiting the places and times where alcohol can be purchased, restricting advertising and effectively enforcing liquor licensing and drink-driving laws. Knowledge about how these policy "levers" may be used to promote public health and safety have moved beyond such general ideas as reducing price, availability and advertising, to include a broad range of more specific measures. For example, setting a minimum price per standard drink indexed to the cost of living (i.e. indexed Minimum Unit Pricing)(23) and reducing the density of privately-owned liquor stores (24).

In our previous report (3, 4) we estimated that Canadian provinces were achieving only about one-half their collective potential to implement effective policies to reduce alcohol-related harm. There were examples of excellent practices in almost all policy domains we examined, but these were mostly the exceptions, not the rule. Of concern, those policies with the most potential to reduce harms (e.g. pricing and availability policies) were least likely to be effectively implemented. In the present report we update our previous evaluation and assess the implementation of effective policies and practices that advance public health and also those likely to increase consumption and harm across all Canadian jurisdictions.

Objectives

The overall objective of this project is to facilitate the implementation of evidence-informed policy initiatives that reduce alcohol-related harms. This will be accomplished by: providing a systematic and comparative review of recent policies and practices known to reduce the health and social harms from alcohol in the 10 Canadian provinces and three territories; highlighting the policy strengths across each of these policy domains; providing recommendations on how to improve weaker policy areas; and finally disseminating this up-to-date information to stakeholders and policymakers in each jurisdiction for their review and potential action. A detailed outline of the project activities is provided in the Methods section of this report.

Audience

Efforts to reduce alcohol-related harm will be most effective if a "whole of government" approach is taken highlighting the need for collaboration and coordination between different levels of government. While the regulation of alcohol falls mostly to provincial governments, federal and municipal governments play key roles in regulating alcohol in Canada, see: Wettlaufer et al., 2019 (1) for a companion report on federal alcohol policies. While it was beyond the scope of the current project to assess municipal level alcohol policies, the content of this and subsequent reports is highly relevant to regulating alcohol at the municipal level. Municipal governments can implement additional pricing, availability and advertising policies, for example, over and above provincial and territorial policy requirements. They can also devote resources to supporting effective policing of impaired driving and liquor licensing laws.

Alcohol licensing and control in Canada has been administered by a range of provincial and territorial ministries, including tourism and economic development, small business, mining and energy resources, justice and, most commonly, finance. However, health ministries also have a legitimate role in influencing a wide range of policy issues, even those that fall outside their traditional mandate. For example, access to alcohol or maintaining the real costs of beverage alcohol. Two Scandinavian countries, Finland and Sweden, position their liquor control agencies within ministries for health and social welfare. The intended audiences for this report, therefore, includes the health and safety authorities as well as the finance departments and liquor boards and retailing agencies that are responsible for the control and distribution of alcohol in the majority of Canadian provinces and territories. It also includes those stakeholders involved in policy development and analysis. Furthermore, it includes national, provincial and, territorial NGOs that deal with chronic diseases and injuries, and other conditions where alcohol is a contributing factor. Given the important role that the media play in drawing attention to social and health issues, the results of this project are also intended for media consumption. Finally, this report is also intended for Canadian citizens who

are keen to understand how their jurisdiction is implementing policies to reduce alcohol-related harm.

Overall Study Design

This review is an update of the 2013 report *"Strategies to Reduce Alcohol-Related Harms and Costs in Canada: A Comparison of Provincial Policies"* which assessed implementation of evidence-based alcohol policies in the ten provinces in 2012. The current report includes an updated and revised protocol, new indicators and data, and the addition of the three Canadian territories. Please refer to the 2013 report for the original methodology (3).

Our 2013 report was inspired by the approach concieved and implemented by MADD Canada to assess the progress of policies to reduce impaired driving (see e.g. Solomon et al, 2018 for the latest report)(25). Produced in Canada since 2000, the MADD Canada legislative review series has documented and made public systematic information about the implementation of effective impaired driving policies in each province and territory in order to support governments in their quest to reduce alcohol-related death and injury on Canadian roads. MADD Canada's detailed report cards have been used to support extensive advocacy efforts to ensure that the recommended regulatory and legislative practices are considered by policy makers. Since 2000, numerous MADD Canada recommended regulatory and legislative changes have been made by Canadian jurisdictions to reduce deaths and injuries caused by impaired driving.

In the same way, the present report also seeks to stimulate the implementation of effective alcohol policies by providing provincial and territorial policy-makers, decision-makers and knowledge users with detailed assessments of the extent to which effective policies and interventions are in place in their respective jurisdictions. The report also provides practical suggestions as to how jurisdictions can modify and improve their alcohol control and prevention strategies, and what positive impacts could be expected from these changes. In order to further increase the effectiveness of this report, early on we also conducted interviews with stakeholders from several jurisdictions and relevant sectors (e.g. ministries of health and finance, alcohol retailers and regulators, and NGOs) to get feedback on the impact of the 2013 report, gather input on the new protocol, and get suggestions for effective dissemination of the updated findings. Follow-up interviews will be conducted with stakeholders post-release of this report to evaluate the overall process and maintain engagement with jurisdictions as they review the findings and recommendations specific to their province or territory.

The parallel policy domains included in this assessment were selected on the basis of published evidence of effectiveness including systematic and thematic literature reviews as well as other policy analysis frameworks. Several scientific publications where alcohol policies were scored were used to inform the development of the assessment criteria specific to this project, including Babor et al., (2010, chapter 16), published scientific papers by Anderson et al., (2009), Karlsson & Österberg (2001) and Brand et al., (2007)(16) (15) (26) (27) as well as the dimensions used by MADD Canada(25). Additionally, the selected policy domains correspond closely to those identified in other strategic documents such as the World Health Organisation's global strategy on alcohol (28) and the Canadian Public Health Association's position paper on alcohol (29). Similarly, a 2018 report by the Pan American Health Organisation assessed and scored the 33 member states of the

Americas on the ten action areas of the WHO global alcohol strategy (30). Policy domains are also included in the companion report assessing Canada's federal alcohol policies (1).

Project Scope

Provincial and Territorial focus

This project focuses on alcohol-related policies and programs in Canada's 10 provinces and three territories. Each of their economic and regulatory environments have unique features having, for example, different types of control systems and varying degrees of government control over alcohol distribution and sale, see Table 1. There is also considerable variation in terms of levels of per capita alcohol consumption and alcohol-related harms, reflecting varied economic, social and demographic characteristics as well as the implementation of different alcohol policies. The three territories in particular represent distinct cultural and geographical contexts but are also unique in terms of population size and dispersion, and varying alcohol regulatory frameworks with less infrastructure capacity. Due to funding limitations, the territories were not included in the first 2013 iteration of this project. However, in the present project we have carefully applied the same protocol, to the extent possible, for an evaluation of the implementation of effective alcohol policies in the three territories. This report considers every province and territory individually while also drawing cross-jurisdictional comparisons across each of the policy domains and indicators.

While some key alcohol-related policy levers are controlled at the federal level, such as national advertising codes, alcohol labelling, and federal excise tax rates (1), many others are under provincial and territorial control. While it is acknowledged that municipalities may have locally-tailored interventions, it is beyond the scope of this project to review policies across several thousand Canadian municipalities. However, provincial and territorial policies that allow for greater municipal control such as regulations that provide municipalities with the powers to control outlet placement and hours of operation have been taken into account.

Table 1: Alcohol Regulatory Environments: Type of Retail System, Alcohol Sales, and Alcohol Cost by Province and Territory

Province/ Territory	Type of Retail System	Government-Run Off-Premise Outlets (%)	Per Capita Alcohol Consumption Age 15+, 2016[1]	Overall Alcohol-Related Harms Cost, 2014 (2)	Net Revenue from Alcohol, 2014 (17)
BC	Mixed government/ private system	7.6%	9.9L	$1,936M	$1,621M
AB	Wholesale: government Retail: Private	0.0%	9.7L	$2,396M	$1,111M
SK	Mixed government/ private system	5.2%	9.0L	$563M	$391M
MB	Mixed government/ private system	12.6%	8.5L	$577M	$431M
ON	Mixed government/ private system	22.9%	8.4L	$5,344M	$3,918M
QC	Mixed government/ private system	4.9%	9.1L	2,589M[2]	2,445M
NB	Mixed government/ private system	22.3%	7.7L	$326M	$247M
NS	Mixed government/ private system	34.7%	8.5L	$427M	$372M
PE	Mixed government/ private system	28.8%	8.1L	$67M	$56M
NL	Mixed government/ private system	3.1%	10.1L	$276M	$248M
YT	Mixed government/ private system	6.1%	15.0L	$41M	$17M
NT	Wholesale: government Retail: Private consignment system	0.0%	12.8L	$56M	$30M
NU	Mixed government/ private system[3]	100.0%	5.8L	$43M	$1.75M

[1]Alcohol sales data from Statistics Canada; Litres of absolute alcohol for total per capita sales (age 15+) adjusted for unrecorded alcohol consumption (10)

[2] Cost estimates do not include inpatient hospitalization, day surgery and emergency department costs for Quebec.

[3] See Text Box 1 in Alcohol Control System for an overview of NU's regulatory system. NU has only one off-premise outlet but, in practice, controls only a limited amount of the alcohol distributed for consumption there.

METHODS

Alcohol Policy Domains

The design of this provincial and territorial assessment builds on a model first developed by MADD Canada nearly twenty years ago that was used to produce a report card evaluating the implementation of provincial impaired driving policies. Our team of experts originally adapted the MADD Canada concept to apply to the alcohol policy field for provincial jurisdictions as part of the evaluation project that was published in 2013 (3, 4). The alcohol policy scoring rubric and protocol developed for the 2013 study were updated by the broadly same team of experts both for the current provincial and territorial assessment as well the companion evaluation of federal alcohol policies in Canada (1).

Both the provincial and territorial evaluations as well as the federal evaluation specifically assess implementation of 11 evidence-based alcohol policy domains in Canada. Updated thematic literature reviews were conducted for each of these policy areas to ensure the domain indicators were informed by the most current evidence. Domain content was also informed by peer reviewed alcohol policy analysis frameworks (31, 32) and policy recommendations from the WHO Global Strategy to Reduce the Harmful Use of Alcohol, of which Canada is a signatory (28). Another valuable source of input on the domains and domain content came from interviews we conducted with 20 stakeholders across 12 of the 13 provinces and territories. These stakeholders represented a variety of relevant sectors including: health ministries; mental health and addictions departments; alcohol retailors and regulators; finance and treasury departments; and NGOs related to alcohol education and driving safety.

The majority of the alcohol policy domains (7 of 11) included in our assessment were noted as having strong evidence of effectiveness as a *direct* means of reducing population level consumption of alcohol and/or serious harms. This determination was based on rigorous systematic reviews of the public health and safety impacts of alcohol policy measures (15, 16, 31). The seven *direct* policy domains comprise: alcohol Pricing and Taxation; Physical Availability of Alcohol; Marketing and Advertising Controls; Impaired Driving Countermeasures; Minimum Legal Drinking Age (MLDA); Screening, Brief Interventions and Referral (SBIR); and Liquor Law Enforcement. We considered the remaining four policy domains to be *indirect*, meaning they are a set of strategies that can facilitate implementation of the aforementioned seven *direct* policy domains. The four *indirect* domains are: the type of alcohol Control System; extent of formal Provincial and Territorial Alcohol Strategies; Monitoring and Reporting of alcohol-related harms; and Health and Safety Messaging.

A combination of policy and practice indicators was developed to assess each of the 11 different policy domains. *Policy indicators* mostly reflect whether a particular policy or program is required by law and/or regulation at the provincial or territorial level (e.g. a policy that restricts the number of allowable retail outlets). *Practice indicators* mostly reflect outcomes from the implementation of a particular policy (e.g. the actual density of retail outlets).

Alcohol Policy Domain Weights

While each of the 11 policy domains assessed in this project plays an important role in reducing alcohol-related harms, they are not all equally effective and nor do they have the same potential to reach all those at risk of alcohol-related harm. As such, the project team determined the weightings for each of the domains by rating them on a five-point scale according to each policy's degree of effectiveness (or facilitation) and its scope or reach.

To determine the weights of the direct domains (1 through 7), ratings of effectiveness (out of 5) were made based on the breadth and strength of research evidence for a policy domain's potential to reduce alcohol-related harms under optimal implementation conditions. **Effectiveness** ratings took into account: a) published evidence with special emphasis on systematic reviews and meta-analyses and b) theory and principles established in other areas of prevention and health policy. To determine the weights of the indirect domains (8 through 11), ratings of the domains' ability for **Facilitation** were also based on prevention and health policy theory but additionally on their assessed potential to facilitate implementation of evidence-based alcohol policies (i.e., one or more of the seven direct policy domains). For **Scope**, ratings for all domains (1 through 11) were based on estimates of the proportion of the population, affected either by their own or others' alcohol use, that could potentially be reached if the policy or practice was fully implemented. Ratings were made independently and there was a high degree of inter-rater reliability across the investigative team. A follow-up meeting was held to discuss and reach consensus on a small number of discrepancies in the ratings. The domain weightings were calculated by multiplying together the effectiveness/facilitation and scope ratings for each domain, the weightings determine the **maximum possible score** for each domain. The domain weightings were all determined prior to the commencement of data collection.

As an example, the Pricing and Taxation policy domain received the maximum rating of 5 for both effectiveness and for scope giving it a weight of 25 (maximum possible score 14%). The evidence for effectiveness of pricing policies such as minimum pricing and taxation is strong (effectiveness rating of 5 out of 5) and policies such as alcohol sales taxes impact all alcohol sold in Canada (scope rating of 5 out of 5). In contrast, the Minimum Legal Drinking Age domain received lower ratings on effectiveness and scope resulting in a weight of 12 (Maximum possible score 7%). Although evidence indicates that policies around having a legislated minimum legal drinking and purchase age are effective at reducing harmful consumption and related harms by young people (effectiveness rating of 4 out of 5), these types of these policies only impact a small proportion of the total population that consumes alcohol (scope rating 3 out of 5). See Table 2 for final policy domain weights.

Table 2: Provincial and Territorial Alcohol Policy Domain Weights

Direct Policy Domains	Effectiveness (out of 5)	Scope (out of 5)	Maximum Possible Score[1] (out of 25)	Maximum Possible Score[2] (%)
1. Pricing and Taxation	5	5	25	14%
2. Physical Availability of Alcohol	4	4	16	9%
3. Impaired Driving Countermeasures	5	3	15	9%
4. Marketing/Advertising Controls	3	5	15	9%
5. Minimum Legal Drinking Age	4	3	12	7%
6. Screening, Brief Intervention and Referral	3	3	9	5%
7. Liquor Law Enforcement:	3	3	9	5%
Indirect Policy Domains	**Facilitation (out of 5)**	**Scope (out of 5)**	**Maximum Possible Score[3] (out of 25)**	**Maximum Possible Score (%)**
8. Alcohol Control System	5	5	25	14%
9. Alcohol Strategy	4	5	20	11%
10. Monitoring and Reporting	4	4	16	9%
11. Health and Safety Messaging	3	4	12	7%
Overall Maximum Possible Score			**174**	**100%**

[1] Maximum possible score (MPS) = Effectiveness * Scope
[2] MPS % = (MPS/sum of all MPS) e.g. MPS % for Pricing and Taxation = (25/174) = 14%
[3]MPS = Facilitation * Scope

Alcohol Policy Domain Indicators and Point Values

Each policy domain is comprised of policy or practice indicators that can be used to measure implementation of specific best practice policies relevant to that domain. The research team operationalised the domain indicators after consultation with project co-investigators and other experts in the field. A scoring rubric modelled on the 2013 report was then developed for the 11 policy domains and their respective indicators; each domain was assigned a maximum of ten points. Within each domain the ten points were scaled to reflect each indicator's relative capacity to reduce alcohol-related harms; point values were finalised through multiple team consultations. The 11 policy domains and scoring rubric was then sent for external peer review to three international alcohol policy experts: Tobin Nelson, Associate Professor, Division of Epidemiology and Community Health, University of Minnesota, United States; Tanya Chikritzhs, Professor and Program Leader, Alcohol Policy and Strategies, National Drug Research Institute, Australia; and Robyn Burton, Senior Alcohol Research Officer, Public Health England, UK.

The three external peer reviewers were asked to comment on several aspects of the scoring rubric including: the comprehensiveness and relevance of the selected policy domains and their respective operational indicators; the relative weights given to each policy domain and their respective indicators; and the supporting evidence and rationale provided for each policy domain and their respective indicators. Feedback from the external reviewers was used to refine the scoring rubric and fine tune the indicator content and the relative weighting given to each of the policy domains and indicators. The reviewer feedback was integrated into the final version of the scoring rubric. See Appendix B for the full final scoring rubric and Appendix C for the best practice alcohol policy framework.

Data Collection and Validation

Detailed data collection templates were developed based on the 11 policy domains and their respective indicator criteria. Research Coordinators (RCs) conducted online document and website searches to collect all publicly available policy information up until the data collection cutoff date of February 28th 2018. The policies and practices evaluated for the Impaired Driving Countermeasure domain were based on the MADD Canada 2018 Provincial and Territorial Legislative Review led by R. Solomon; this review had a slightly earlier data collection cutoff date of September 16th 2017.

Official regulatory documents such as provincial and territorial liquor control and licensing acts and corresponding regulations were used to collect the relevant data whenever possible. Other public sources of information such as provincial and territorial alcohol strategies; liquor board annual reports, government information documents designed for the public and media; data from Statistics Canada and data from MADD Canada were also used. Only policies that had been implemented by the end of the data collection period were included in this assessment. Data were collected for the most recent period available; in most cases this period was 2017. For policy domain indicators where data were not readily accessible, information was sought directly from contacts at the provincial or territorial alcohol retailer and regulators, the ministries responsible for alcohol retail and regulation, and the ministries of health.

We enlisted key contacts from each jurisdiction in order to review the accuracy and completeness of the data files. These included representatives of the provincial or territorial alcohol retailers and/or regulators, ministries responsible for alcohol retail and regulation, and ministries of health who would be familiar with alcohol regulatory and retailing arrangements, prevention initiatives and enforcement in each jurisdiction. To facilitate this validation process we used interactive forms that allowed the provincial or territorial reviewers to make corrections and add additional data sources or comments as needed. Further follow-up via email and teleconference was initiated when clarification or elaboration was required from representatives. Any revisions or updates provided by the representatives conducting the data validation were incorporated into the final data spreadsheets in advance of scoring. All data were fully validated in each jurisdiction with the exception of Ontario where the alcohol regulator did not submit complete validation of the data we sent to them.

Data Scoring and Weighting

Blind scoring was conducted with each policy domain scored independently by two members of the co-investigative team and subsequently reviewed by an RC to identify any discrepancies. Scorers received data for the relevant policy domains (with jurisdictional identifiers removed) along with the scoring rubric which outlined the scoring criteria to be applied to each policy indicator. Any instances where no policy information was available in the public domain or provided by the validation contacts, it was assumed that no policy was in place and a conservative score of zero was applied. There was only one instance in the provincial and territorial assessment where a lack of policy information resulted in a score of zero and that was for missing consumer price index data, which are not collected by Statistics Canada. Once scoring was complete the data file was submitted to an RC for review and any discrepancies in scoring were brought to the attention of the two scorers and subsequently discussed and resolved. For any discrepancies that could not be resolved between the two scorers, the principal investigators (T. Stockwell and N. Giesbrecht) made the final scoring determination. Once the data were scored the RCs calculated the individual **policy domain scores** for each province and territory, as well as a **total policy implementation score** for each jurisdiction, See Appendix A.

As a further illustration of the best practice policies achieved across jurisdictions, all of the top scores for each indicator across all jurisdictions were compiled into a **best current practice score** to show the level of policy implementation that has been achieved collectively across the provinces and territories. Next, **adjusted total policy implementation scores** for each province and territory were calculated on the basis of the percentage achieved of the Best Current Practices identified somewhere in Canada. The purpose of this adjustment is to present a practical assessment of alcohol policy implementation against a standard of the Best Current Practices achieved collectively on every indicator across all jurisdictions in Canada. An example illustrating how the various policy implementation scores were calculated is provided in Appendix A.

Similar to the presentation of results in MADD Canada's reports and further recommended in the feedback from our interviews with stakeholders, letter grades were used to illustrate scoring ranges from the highest to lowest with the following percentage breakdown:

A+	90-100%	B+	77-79%	C+	67-69%	D+	57-59%	F	0-49%
A	85-89%	B	73-76%	C	63-66%	D	53-56%		
A-	80-84%	B-	70-72%	C-	60-62%	D-	50-52%		

Comparing 2012 and 2017 Provincial Domain Scores

Policy scores from the 2013 provincial review are compared with policy scores presented in the current 2019 report. For each year the policy scores reflect the degree to which a jurisdiction has implemented best practices in alcohol policy. Given that the evidence on the effectiveness of various alcohol policies continues to grow, a number of indicators within each policy domain were changed since 2013. The comparison of scores is a reflection of best practices in place at the time of data collection for each assessment. In the case of Monitoring and Reporting, this policy domain was added in 2017 based on evidence supporting its important role in facilitating the implementation of effective policies. The remaining 10 domains were updated in 2017 to varying degrees to reflect current best policy practices. Somewhat more significant changes were made to the indicators for the Pricing and Taxation; Marketing and Advertising Controls; Screening, Brief Intervention and Referral; and Alcohol Strategy domains. The most substantial changes were made to the Liquor Law Enforcement domain which was revised from the 2012 domain of Server Training Challenge and Refusal to reflect the importance of Risk-Based Licensing and Enforcement programs. Because the three territorial jurisdictions were not included in the 2013 report, their scores are obviously excluded from comparisons between the 2012 and 2017 data.

DOMAIN RESULTS

In this section we present for each of the 11 domains: a summary of the most recent international evidence; a description of the best practices for each domain and how they were scored; the domain and indicator results; jurisdiction-specific examples of promising practices and areas for improvement. The seven *direct policy domains* are presented first followed by the four *indirect policy domains*.

Direct Policy Domains

1. Pricing and Taxation

Pricing and Taxation Domain Evidence

Although there are important differences, alcohol is like many other consumer products in that demand is inversely related to its price. This means that when the prices of alcohol products increase, sales decrease if other factors such as income remain constant. Decades of research from numerous countries show that increasing the price of alcohol, through interventions such as excise taxes and minimum pricing, is one of the most effective approaches for reducing consumption and, importantly, alcohol-related health and social harm (16, 33-36). Pricing interventions that better target risky products and risky drinkers have been implemented and systematically evaluated in several jurisdictions in Canada and elsewhere (37-43). Two such policies include minimum prices, which reduce the economic availability (i.e., increase the price) of the least expensive alcohol favoured by risky drinkers, and pricing on alcohol content, which raises the price of higher strength products and reduces the price of lower strength products to reduce overall ethanol consumption across the population (44, 45). A third pricing policy, regularly adjusting alcohol prices for inflation, ensures that alcohol products do not become cheaper relative to other goods in the marketplace thus maintaining their ability to protect public health over time (16, 46).

Pricing and Taxation Domain Scoring

Our assessment of pricing and taxation policies in the 10 provincial and three territorial jurisdictions is based on how well they reflect these interventions: progress toward indexed Minimum Unit Pricing (iMUP) for alcohol (for both off-premise and on-premise establishments), and having a general pricing structure that ensures alcohol is priced at a level to deter harmful consumption, keeps pace with inflation, and reflects alcohol content.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: PRICING AND TAXATION

The following policies represent the current gold standard best practices for pricing and taxation policies. To get top marks a jurisdiction needed to have implemented the following policies and practices:

1. Indexed Minimum Unit Pricing (iMUP) for alcohol sold from off-premise outlets (up to 5 points[1] – weighted by % of sales via off-premise outlets): There are minimum prices for all beverage types sold in liquor stores and these are set according to a formula that ties the minimum price directly to the volume of alcohol in a drink, are set at a minimum of $1.71/standard drink, are automatically indexed annually to provincial/territorial inflation rates, and are not undermined by pricing loopholes that would allow products to be sold at cheaper rates. Implementing all of these components of iMUP effectively sets a minimum unit price for alcohol that increases with the cost of living and represents the ideal policy.

2. iMUP for alcohol sold from on-premise outlets (up to 5 points* - weighted by % of sales via on-premise outlets): There are minimum prices for all beverage types sold through licensed establishments and these are set according to a formula that ties the minimum price directly to the volume of alcohol contained in a beverage, are set at a minimum of $3.42/ standard drink, are automatically indexed annually to provincial/territorial inflation rates, and are not undermined by pricing loopholes that would allow products to be sold at cheaper rates. Implementing all of these components of iMUP effectively sets a minimum unit price for alcohol that increases with the cost of living and represents the ideal policy.

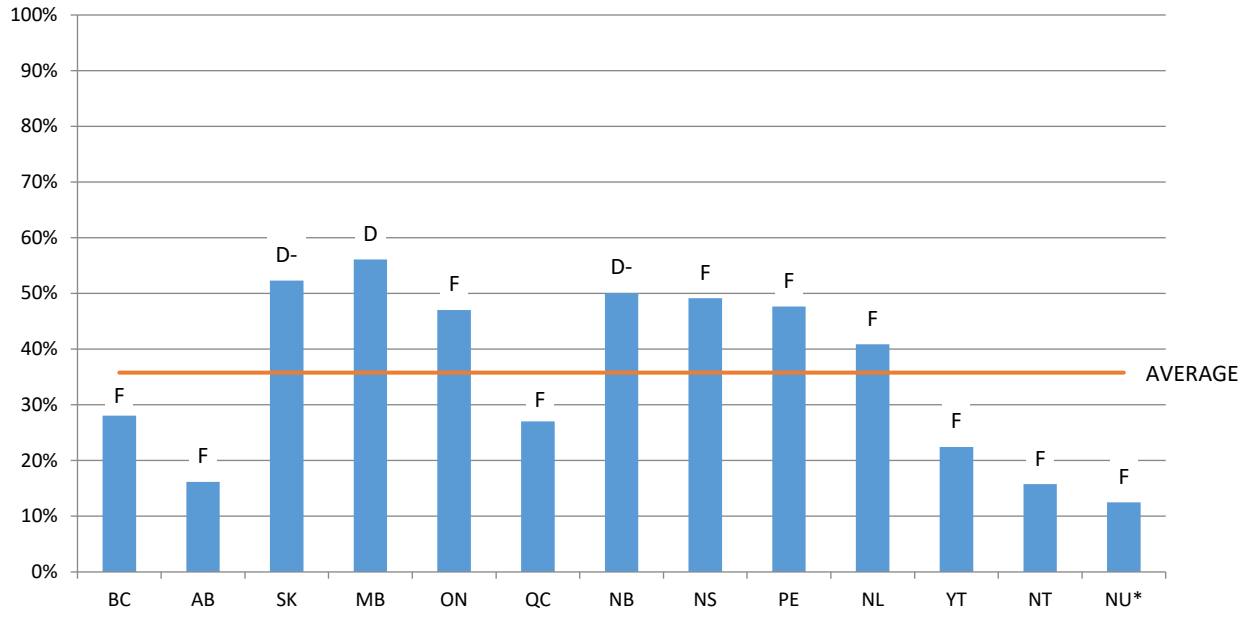
3. General pricing indicators (up to 5 points): Overall average price levels for alcohol sold by both on- and off-premise establishments are sufficiently high and have kept pace with inflation over the past 5 years. Actual prices of common high and low strength products sold from off-premise outlets are set to reflect alcohol content and are at minimum $1.71/ standard drink and are taxed at a higher rate than other goods.

[1] The scores for off-premise and on-premise minimum pricing were weighted by the % sales sold through the respective channels.

Pricing and Taxation Domain Results

Much policy variation was observed across the provinces and territories in the highly important domain of alcohol pricing and taxation with no jurisdiction scoring above a D grade overall. The highest overall score on pricing policies was obtained by MB (56.1%, D), followed closely by SK (52.3%, D-) and the Maritime provinces (47.7, F-50.1%, D-). Lowest scores were obtained by AB and the three territories (12.5-22.5%, F). The average score for this domain across all jurisdictions was 35.8% (F), see Figure 1.

Figure 1: Pricing and Taxation: Domain Scores by Province and Territory, 2017



* Insufficient CPI data available for NU. Their score was adjusted to account for this missing information.

Indexed minimum unit pricing for alcohol sold from off-premise outlets

Approximately two thirds of the jurisdictions have minimum prices for all beverage types sold in off-premise outlets with MB (68.8%), NS (67.2%) and ON (65.6%) scoring highest on this indicator, see Figure 2. AB and the territories all scored zero as they have no off-premise minimum prices. QC (21.9%) only has minimum prices for off-premise sales of beer and malt-based coolers, see Figures 2 and 3. It is a common misperception that having high overall prices means it is unnecessary to control minimum prices. While prices are generally high in the territories and some provinces for a range of reasons including, economies of scale, transportation and other distribution costs, it is still possible to find some relatively cheap products in government owned liquor stores e.g. at around or below one dollar per standard drink. Generally, minimum prices were lower than the recommended $1.71 per standard drink (2017 rates) for off-premise outlets, except in NS, PE, NL, see Figure 3. It only takes a small number of cheap high-strength products to help facilitate heavier drinking patterns (44).

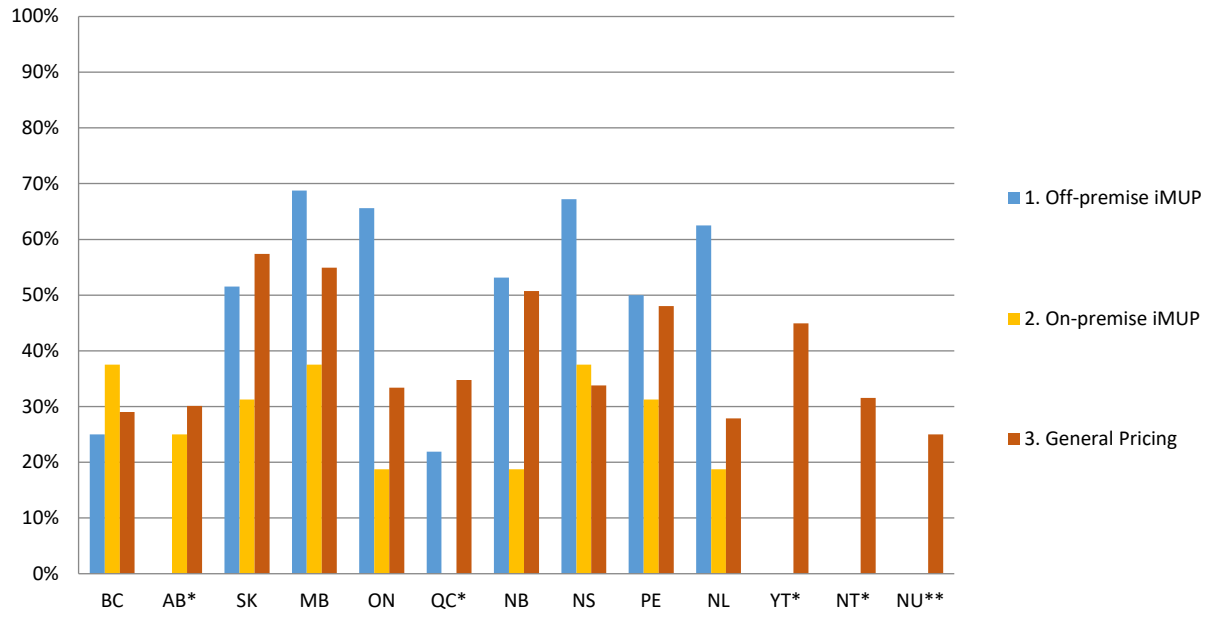
Indexed minimum unit pricing for alcohol sold from on-premise outlets

Apart from QC and the three territories who all scored zero on this indicator, all jurisdictions have separate (and higher) minimum pricing for on-premise establishments, although no jurisdiction scored higher than 37.5% overall, see Figure 2. Generally, minimum prices were lower than the recommended $3.42 per standard drink in bars, clubs and restaurants, (2017 rates) with the exceptions of BC, see Figure 4. All jurisdictions with minimum prices have pricing loopholes that allow alcohol to be sold for less than government established minimum prices; e.g. allowing lower prices for poorly performing ('de-listed') products so they can be removed from the shelves more quickly.

General pricing indicators

Only SK (57.4%), MB (54.9%) and NB (50.7%) scored higher than fifty percent on this indicator and BC (29.0%), NL (27.9%) and NU (25.0%) had the lowest scores for their general pricing indicators, see Figure 2. In most jurisdictions there has been a failure to 'index' alcohol to the cost of living for liquor store sales, so that in real terms the value of alcohol relative to other goods has decreased over the past 5 years. By contrast, sales in bars and restaurants have mostly kept pace with or exceeded inflation, though there is significant variation between beverage types. Across off-premise and on-premise sales, on average alcohol prices in MB and SK have best kept pace with inflation whereas prices in BC and ON have lagged significantly behind, especially for wine. For pricing on alcohol content, only ON, QC and YT have some degree of disincentive in place for purchasing higher alcohol content beverages. Finally, only four of the thirteen jurisdictions, BC, SK, PE and YT, tax alcohol at a higher rate than other goods.

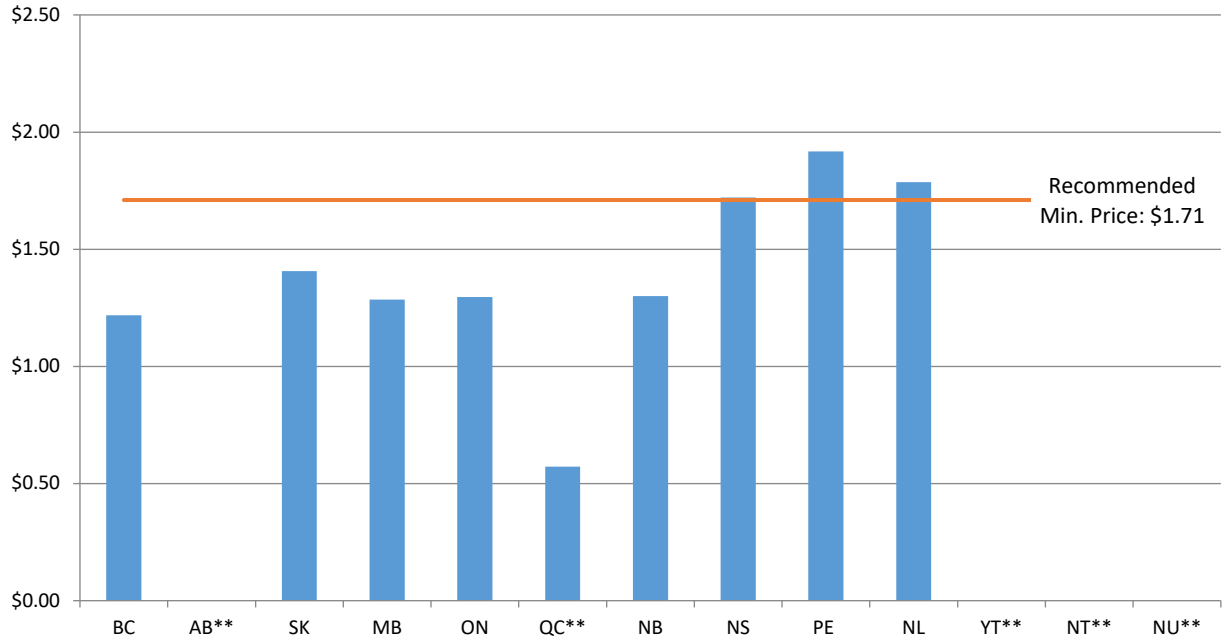
Figure 2: Pricing and Taxation: Indicator Scores by Province and Territory, 2017



* AB, YT, NT, and NU do not set an off-premise minimum price. QC sets an off-premise minimum price for malt-beverages only.

** Insufficient CPI data available for NU. Their score was adjusted to account for this missing information.

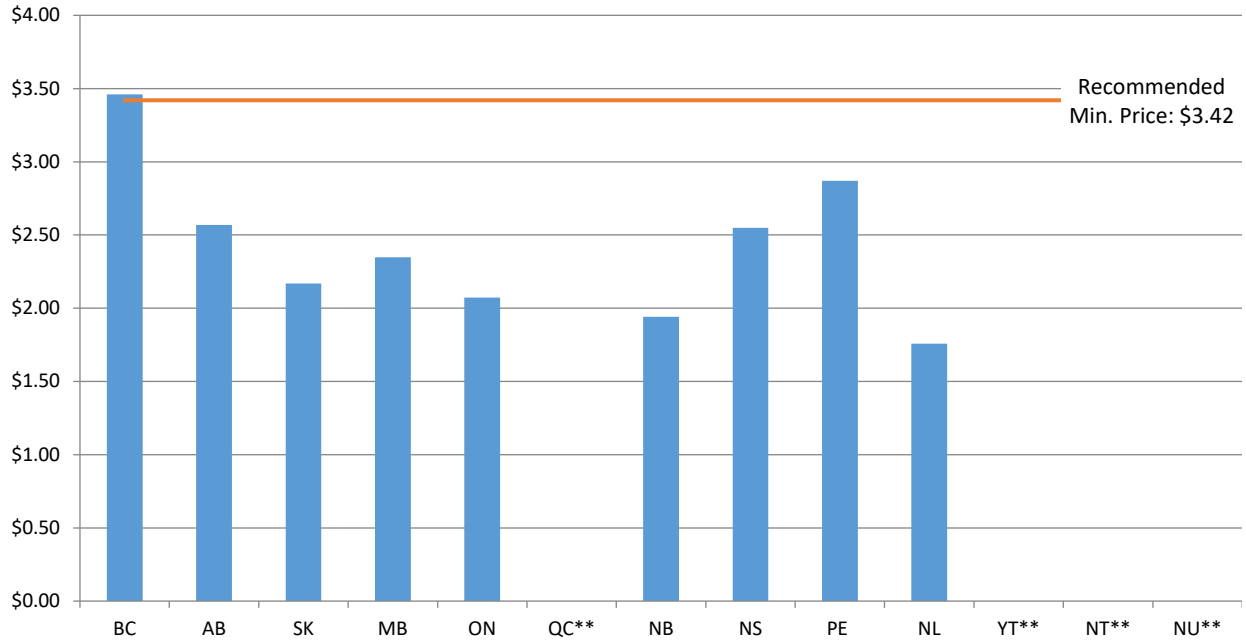
Figure 3: Average Minimum Price per Standard Drink, All Beverage Types, Off-Premise*



* The average minimum price was calculated by taking the mean minimum price for products of common strengths and container sizes across beverage types (e.g. beer, wine, spirits, and coolers).

** AB, YT, NT, and NU do not set an off-premise minimum price. QC sets an off-premise minimum price for malt-beverages only.

Figure 4: Average Minimum Price per Standard Drink, All Beverage Types, On-Premise*



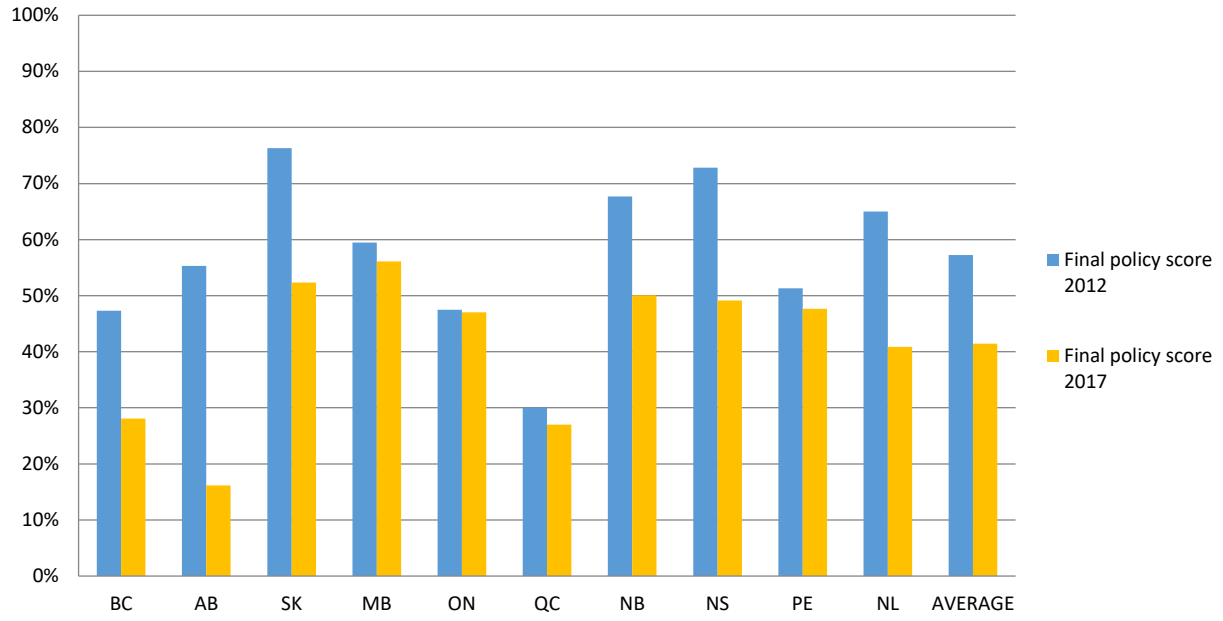
* The average minimum price was calculated by taking the mean minimum price for products of common strengths and container sizes across beverage types (e.g. beer, wine, spirits, and coolers).

** QC, YT, NT, and NU do not set an on-premise minimum price.

Pricing and Taxation: 2012 vs 2017 comparison

Since the 2012 policy assessment there has been some positive progress towards strengthening pricing policy in some jurisdictions. For example, in April 2017 MB implemented a nearly perfect volumetric off-premise minimum price, weakened only by discounts that gradually increase as volumes of drink purchased increase. BC has implemented minimum prices for on-premise establishments that represent some of the highest minimum prices in the country. However, this was undermined by the simultaneous introduction of 'happy hour' policies leading to an overall reduction in the cheapest alcohol available in bars and restaurants (47). A further weakness is that many jurisdictions do not index minimum prices to inflation. Despite being one of the global leaders in minimum price policy the Canadian jurisdictions still have room for improvement, see Figure 5.

Figure 5: Pricing and Taxation: Domain Scores by Province, 2012 vs 2017



Note: policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

PRICING AND TAXATION: PROMISING PRACTICES

- MB currently has nearly perfect volumetric minimum pricing for off-premise alcohol. All minimum prices reflect amount of alcohol in the product, though this is weakened by lower rates for larger volume purchases. ON and SK partially adjust their minimum prices by setting different minimum price rates per litre of beverage that are graduated across a few broad categories of percent alcohol by volume e.g. above and below 16% ABV for wine.
- SK, ON, and NS have implemented fixed surcharges for higher alcohol content beer. ON implements a volumetric surcharge based on alcohol content, which is the ideal, while these surcharges are based only on volume of beverage in SK and NS.
- BC currently sets on-premise minimum prices above the recommended level of $3.42 for all beverage categories except for a discounted rate for draft beer and cider provided in servings greater than 50oz.
- On average, prices for alcohol sold through both off-premise and on-premise sales channels in SK and MB have kept pace with inflation. This is mostly driven by the fact that beer prices have been increasing at a rate that far exceeds the cost of living.
- Four jurisdictions currently tax alcohol at a higher rate than other goods: BC (3% higher alcohol tax), SK (10% higher alcohol tax), PE (25% higher alcohol tax compounded by HST) and YT (12% higher alcohol tax for off-premise sales only).

PRICING AND TAXATION: AREAS FOR IMPROVEMENT

- No jurisdiction currently sets on-premise minimum prices that reflect alcohol content within beverage categories or automatically adjusts on-premise minimum prices to inflation.
- QC only sets minimum prices for select malt-based beverages sold off-premise and AB does not set any off-premise minimum prices although AB does set on-premise min prices for all beverage categories.
- All nine of the provinces that currently set off-premise minimum prices have at least one loophole that undermines the minimum price set by the government.
- Off-premise wine and spirits prices are lagging behind inflation in almost all[2] jurisdictions.
- Ten of the thirteen jurisdictions do not set alcohol prices according to alcohol content, creating financial incentives for purchasing higher strength products.
- All jurisdictions provide volume discounts for larger volume purchases, creating financial incentives for making bulk purchases.

[2] Consumer Price Index (CPI) data were not available for NU

2. Physical Availability of Alcohol

Physical Availability Domain Evidence

Physical availability is a very important population level intervention that can reduce the harms from alcohol. The physical availability of alcohol refers primarily to the number of off-premise outlets and on-premise licensed establishments in a certain area, the hours and days when these outlets are open and the regulations which restrict where alcohol outlets can be located. Outlet density is associated with drinking levels in the local population (48). Restricting alcohol availability by limiting the number of outlets where alcohol is sold has been widely implemented in order to reduce alcohol-related harms by limiting consumption. It is well documented that a substantial increase in the number of alcohol outlets results in increases in alcohol consumption and associated harms (19, 39, 48-51). Evidence points to increases in consumption and harms that can result from even minor changes in outlet density due to the gradual relaxation of liquor regulation (16). The impact of outlet density on high-risk drinking among younger drinkers is especially pronounced (52, 53). There is a long history of research that demonstrates the positive relationship between the density of both on-premise and off-premise outlets, and alcohol-related harms (16, 31). These include violence and injuries, alcohol-related crashes, and suicide (53, 54) as well as public disturbances (55). Harms are especially prevalent in neighbourhoods with high outlet density (56, 57). Livingston (2008) has demonstrated that the effect of outlet density on assaults varies depending on the level of outlet density, suggesting a plausible density limit (52).

International evidence also indicates that longer hours of sale significantly increase the amount of alcohol consumed and the rates of alcohol-related harms (58-62). Changes to late night retail hours are particularly associated with levels of heavy drinking (16). Extended hours of sale attract a younger drinking crowd and result in higher BAC levels for males (63). The literature indicates that acute harms were most likely to increase with the extension of hours of sales (31, 64, 65). Conversely, reducing closing time is associated with a reduction of heavy drinking or acute harm (66-69).

Text Box 1: Alcohol Availability in Nunavut: A Unique Context

Due a variety of geographic, economic and cultural factors, the availability of alcohol in NU is different than other jurisdictions. NUs Liquor Act has a "ranked liquor restriction structure" with four systems and communities are able to choose their preferred system through a plebiscite vote. The four different systems include:

- an ***unrestricted system****:* the community is subject to the general liquor laws of the territory;
- a ***restricted quantities system****:* in addition to general territorial liquor laws there are restrictions on quantities of alcohol an individual may purchase;
- a ***committee system****:* locally elected alcohol education committee may determine who can purchase alcohol and under what conditions; and
- a ***prohibition system:*** prohibits the consumption, possession, purchase, sale or transport of liquor within a particular community (70).

Despite this tailored system of alcohol control NU has historically had high levels of alcohol-related harms and substantial difficulty in controlling illicit sales (71-73). Estimates indicate that in 2014 approximately three times more illicit alcohol was being consumed in NU than was purchased through official legal channels (2).

In 2012, the Nunavut Liquor Act Review Task Force recommended opening a beer and wine store in attempts to divert illicit alcohol sales to legal channels; 78% of Iqaluit voters supported the idea. In an effort to reduce alcohol-related harm, NU developed an alcohol action plan in 2016. The action plan includes the piloting of a beer and wine store in Iqaluit which subsequently opened in September 2017.

Physical Availability Domain Scoring

Our assessment of physical availability of alcohol policies in the 10 provincial and three territorial jurisdictions is based on how well they reflect these five main areas: regulations pertaining to outlet placement, outlet density per population for on- and off-premise outlets, hours of operation, and regulations pertaining to on-premise availability including recorking of unfinished wine and limits on the number of drinks served.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: PHYSICAL AVAILABILITY

The following policies represent the current gold standard best practices for restricting the physical availability of alcohol. To get top marks a jurisdiction needed to have implemented the following policies and practices:

1. Regulations pertaining to outlet placement and safety (up to 2 points): Jurisdictions have legislated powers in place that allow the province, territory or municipality to limit the density of outlets by way of restrictions on outlet placement and/or the number of outlets (absolute number or per capita limit) as well as established policies to enhance safety in and around these outlets.

2. Practice indicator: outlet density (off-premise) (up to 3 points): Jurisdictions have an off-premise outlet density that is less than 2 outlets per 10,000 capita 15 years and older.

3. Practice indicator: outlet density (on-premise) (up to 2 points): Jurisdictions have an on-premise outlet density that is less than 15 outlets per 10,000 capita 15 years and older.

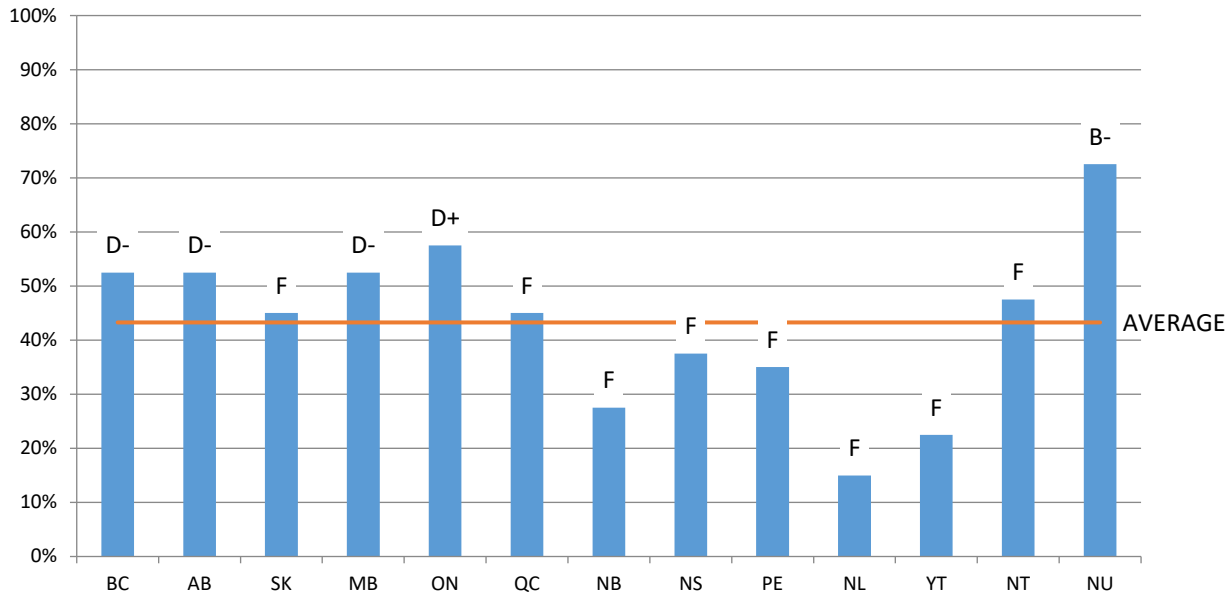
4. Hours of operation (up to 2 points): Jurisdictions have hours of operation set by regulation, without exception, that limit and standardize access to alcohol. Hours of operation for off-premise outlets do not open before 11am and do not stay open after 8pm and for on-premise outlets do not open before 11am and do not stay open after 1am the following day.

5. Regulations pertaining to on-premise availability (up to 1 point): Jurisdictions have regulations for the provision of alcohol in on-premise establishments which prohibit tastings and sampling, permit recorking of unfinished wine and place limits on the number of drinks served per customer at one time.

Physical Availability Domain Results

Overall, alcohol is highly accessible across all provinces and territories, see Figure 6. NU had the best score (72.5%, B-) in this domain due to their unique alcohol control system and limited availability retail system, although this system is not without its challenges, see Text Box 1. ON had the next highest score with 57.5% (D+) of optimal policy implementation and there was a tie for third place between three jurisdictions (BC, AB, and MB) each with 52.5% (D). Lowest scores were obtained by NL (15.0%, F), YT (22.5%, F) and NB (27.5%, F). The average score for this domain across all jurisdictions was 43.5% (F).

Figure 6: Physical Availability: Domain Scores by Province and Territory, 2017



Regulations pertaining to outlet placement and safety

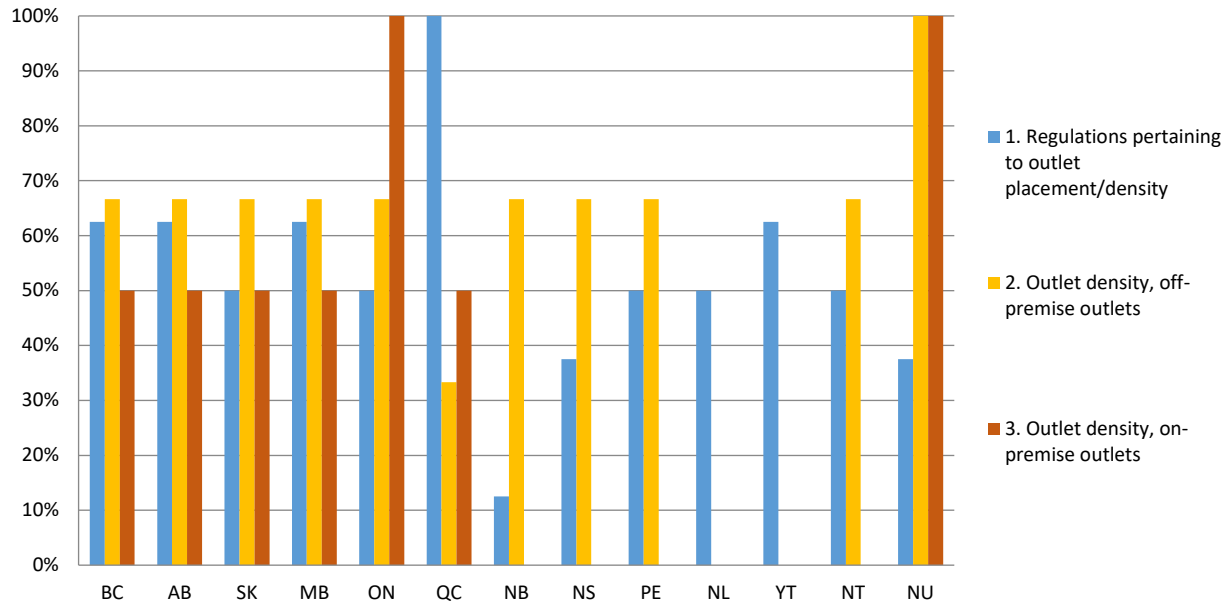
No province has regulated population-based restrictions on overall outlet density. However, all provinces and territories grant municipalities powers to restrict either the location or number of on-premise establishments, and all but two jurisdictions (NB and PE) provide the same powers to municipalities for restricting the placement and/or number of off-premise outlets. Within SK there are limits on the geographical density of off-premise outlets in the Northern Saskatchewan Administration District requiring retail outlets to be a minimum of 40 kilometers apart. Additionally, some jurisdictions require a minimum distance between certain outlet types such as agency stores. QC was the only jurisdiction to get a perfect score for their restrictions on outlet placement and safety regulations. The next highest score was 62.5%, achieved by BC, AB, MB, and YT, see Figure 7.

On- and off-premise outlet density

There were wide ranges of both off-premise and on-premise outlet densities found across the provinces and territories with the highest overall outlet densities found in NB, NL and YT. NL and YT specifically had the highest off-premise outlet density and scored 0%. Along with these two jurisdictions, four other jurisdictions (NB, NS, PE, and NT) also had high on-premise outlet density in relation to their population and scoring 0% on this indicator as well, see Figure 8. NU had the lowest

outlet density for on- and off-premise locations and scored 100% on these indicators. ON had low outlet density for on-premise locations so also achieved 100% for the on-premise outlet density indicator, see Figure 7.

Figure 7: Physical Availability: Indicator Scores by Province and Territory, 2017 (Figure 1 of 2)



Note: Indicator 1 reflects the degree of restriction placed on off-premise and on-premise establishments therefore, a higher score indicates a stronger policy. Indicators 2 and 3 reflect the scores achieved on the practice indicator assessing outlet density therefore, a higher score reflects a lower outlet density.

Hours of operation

While nearly all jurisdictions had hours of operation set by regulation, the majority also allowed for a number of exceptions for which they received reduced scores. The types of exceptions included allowing service of alcohol either very late at night and/or early in the morning and allowing hours to be extended for special events and/or holidays. The closing hours for off-premise outlets showed the greatest range; some jurisdictions required off-premise stores to close by 9pm (NB) while others permitted off-premise sale up until 3am (SK). The closing hours for on-premise outlets was more consistent across provinces and territories; ten out of thirteen jurisdictions required on-premise outlets to close by 2am. BC (4am), QC (3am), NS (3:30am for cabaret licenses), and NL (3 am with special licence for Thursday-Sunday) had the latest regulated closing times for on-premise establishments, see Table 3. It is important to note that these are the regulated maximum operating hours and may not always be fully used in practice due to more restrictive licence conditions or retailers voluntarily reducing their hours. NU scored the highest on this indicator (50.0%) but they still only reached half of their potential. Almost all the other jurisdictions scored 0% on this indicator with the exception of NT (37.5%) and ON (12.5%), see Figure 8.

Table 3: Regulated Hours of Operation for Off-Premise and On-Premise Outlet Types

	Off-premise		On-premise	
Province/ Territory	Regulated hours of operation[1]	Maximum hours of operation/ 24 hr. period	Regulated hours of operation[2]	Maximum hours of operation/ 24 hr. period
BC	9:00am- 11:00pm	14	9:00am- 4:00am the next day	19
AB	10:00am-2:00am the next day (off-sales: 10:00am-2:50am the next day)	16	10:00am-2:00am the next day	16
SK	8:00am- 3:00am the next day	19	9:30am-2:00am the next day	16.5
MB	8:00am-12:00am (retail beer vendors: 2:30am the next day)	16-18.5	9:00am-2:00am the next day	17
ON	9:00am-11:00pm[3]	14	11:00am-2:00am the next day	15
QC	8:00am-11:00pm	15	8:00am-3:00am the next day	19
NB	10:00am-9:00pm[3]	11	6:00/9:00am-2:00am the next day[4]	17-20
NS	9:30am-10:00pm[3] (Agency stores: 7:00am-12am)	12.5-17	10:00/11:00am-2:00/3:30am the next day[3, 4]	16-16.5
PE	9:00am-10:00pm[3]	13	11:00am-2:00am the next day[3]	15
NL	10:00am-10:00pm[3] (Brewer's Agent and Brewer's retail stores: 9:00am-2:00am the next day)	12-17	9:00am- 2:00am the next day (3:00am the next day Thursday to Sunday with an extended license)	17-18
YT	9:00am-2:00am	17	9:00am-2:00am the next day	17
NT	Current operating hours[5]: 11:00am-10:00pm[3]	11	10:00am-2:00am the next day[3]	16
NU	Current operating hours[5]: 12:00pm-7:00pm[3]	7	10:00am-2:00am the next day	16

[1] Hours of operation as defined in regulation for off-premise retail outlets. Different retail outlet types such as agency stores and farmer's markets may have varying hours of operation that extend beyond the regulated hours noted above in Table 3.

[2] Hours of operation as defined in regulation for on-premise establishments. Different licence types may have varying hours of operation.

[3] Hours of operation vary by day of the week (i.e. shorter hours on Sundays).

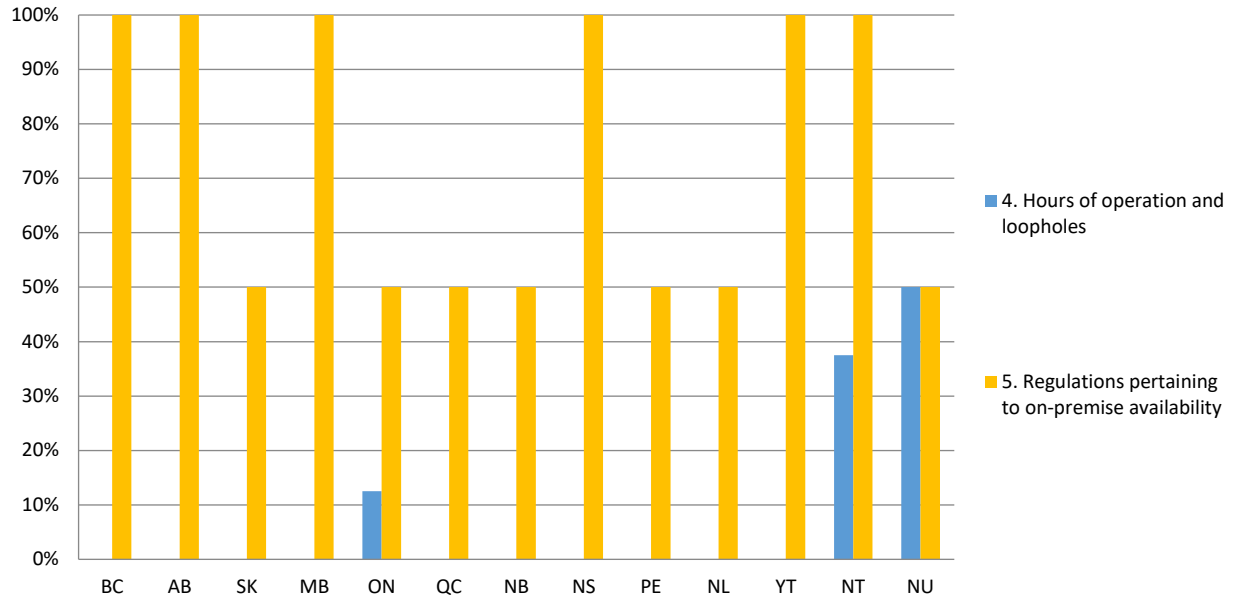
[4] Hours vary by license type.

[5] Hours of operation for off-premise outlets are not set in regulation.

Regulations pertaining to on-premise availability

Nine out of 13 jurisdictions permitted the best practice of re-corking of unfinished alcohol for take-away from on-premise establishments and 10 of 13 jurisdictions placed a cap on the number of drinks served to a patron at one time. Overall six of the jurisdictions (BC, AB, MB, NS, YT, and NT) scored 100% on this indicator looking at regulations pertaining to on-premise availability with the rest of the jurisdictions achieving 50% of the best practice, see Figure 8.

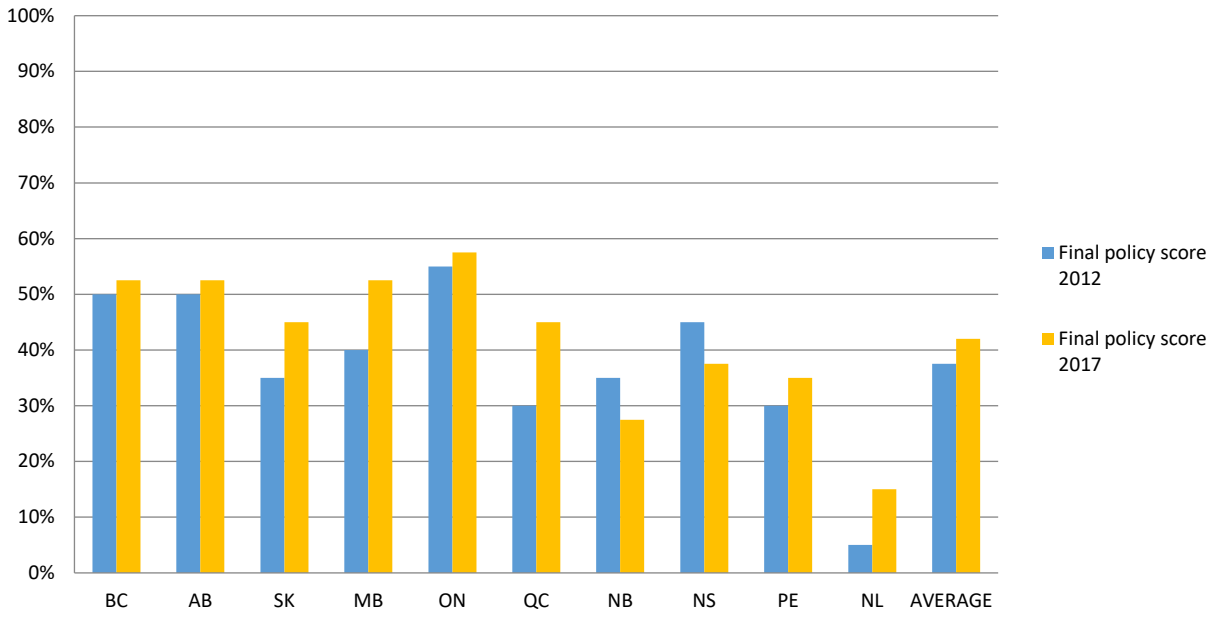
Figure 8: Physical Availability: Indicator Scores by Province and Territory, 2017 (Figure 2 of 2)



Physical Availability: 2012 vs 2017 comparison

In comparing the 2012 and 2017 physical availability scores, it appears that NB and NS had lower scores in the latter year, whereas there was a modest increase between 2012 and 2017 for most other provinces, with a substantial increase evident in QC, SK and MB, see Figure 9. The general upward trend for physical availability scores is likely due to all jurisdictions scoring 50-100% on regulations pertaining to on-premise availability measures such as re-corking and caps on the number of drinks served to a patron at one time, indicators that were not examined in 2012. Additionally, it should be noted that the change in outlet density score for QC is largely a result of a change in methodology used to calculate density due to a change in the data available and should not be interpreted to reflect a change in actual outlet density over time.

Figure 9: Physical Availability Domain Scores by Province, 2012 vs 2017



Note: policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

PHYSICAL AVAILABILITY: PROMISING PRACTICES

- There are some positive examples of regulations for restricting outlet density in SK and QC, although they are limited to specific outlets types or regions.
- NU has an off-premise outlet density of less than 2 outlets per 10,000 people aged 15 years and older and they also had the lowest on-premise density.
- NB limits off-premise sales to a maximum of 11 hours per day by regulation.
- BC, AB, SK, MB, ON, QC, NS, YT, and NT all permit re-corking of unfinished wine for take-away from on-premise establishments.
- BC, AB, MB, NB, NS, PE, NL, YT, NT, and NU all restrict the number of drinks served to an individual at a time in an on-premise establishment.

PHYSICAL AVAILABILITY: AREAS FOR IMPROVEMENT

- NB and PE do not grant municipalities the power to restrict the placement or number of off-premise outlets.
- NT and NU do not set off-premise hours of operation by way of regulation.
- SK, MB, and NL allow for late night off-premise sales, see Table 3.

- BC's regulations allow for on-premise late-night sales up to 4am the following day. Similarly QC allows for late night on-premise sales up to 3am the next day, NS cabarets may operate until 3:30am the next day, and NL's establishments may operate until 3am the next day from Thursday to Sunday with an extended licence.
- The majority of jurisdictions have loopholes that allow for the extension of hours of operation for off-premise outlets and on-premise establishments during holidays and/or significant events.
- NL, NB, and YT have high on-premise outlet density ranging from 31 to 45 establishments per 10,000 capita 15 years and older.
- QC, NL and YT have very high per capita outlet density for off-premise outlets ranging from 12 to 32 outlets per 100,000 people aged 15 years and older.

3. Impaired Driving Countermeasures

Impaired Driving Countermeasures Domain Evidence

Alcohol-related collisions remain one of the leading causes of alcohol-related death and injury in Canada and internationally (74). A number of evidence-based policies and programs have been identified in the research literature that may substantially reduce impaired driving.

Young, novice or newly licensed drivers are at substantially increased collision risk. It has been shown that Graduated License Programs (GLPs), designed to separate young or new drivers from specific driving hazards such as driving after drinking during this learning period, are effective in reducing collision rates, including those resulting from alcohol (75-79).

Research also provides strong support for setting administrative and criminal per se limits at 0.05%, since significant impairment is observed at this level, collision risk is significantly increased at this level, and setting or lowering a legal limit to this level results in significant decreases in alcohol-related collisions, injuries and fatalities (77, 80). As well, sanctions need to have a meaningful deterrent value to be effective (81). Due to the synergistic effects of alcohol on driving ability when combined with other drugs, penalties for the detection of alcohol and other drugs should be modified accordingly (82). Vehicle impoundment has been found to be a meaningful sanction that results in reductions in rates of drinking and driving and related harms (83-86).

Individuals apprehended for alcohol impaired driving offenses are at very high risk for subsequent drinking driving offenses, collisions and alcohol-related deaths (87-89). Programs requiring installation of ignition interlock devices have been shown to reduce recidivism rates substantially while they are in place (83).

Impaired Driving Countermeasures Domain Scoring

Our assessment of impaired driving policies in the 10 provincial and three territorial jurisdictions is based on how well they reflect these five main interventions: implementation of a graduated licensing program, extended .00% BAC limits for new drivers, licensing suspensions and revocations, modified or increased penalties for detected drugs other than alcohol and Interlock programs for federal impaired driving offenders.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: IMPAIRED DRIVING COUNTERMEASURES

The following policies represent the current gold standard best practices for impaired driving countermeasures. To get top marks a jurisdiction needed to have implemented the following policies and programs:

1. Graduated Licensing Program (new drivers) (up to 2.5 points): There are graduated licensing programs (GLP) as well as all the recommended components of those programs, such as a minimum age of at least 16 years to enter into the GLP; a minimum of two stages lasting 12 months and 24 months respectively; and that new drivers be subject to a night time driving ban.

2. Zero tolerance policies for new drivers (up to 1 points): There are zero tolerance limits for GLP drivers that include prohibition on being positive for alcohol or any illicit drugs and the .00% BAC limits for alcohol are extended beyond the GLP for a minimum of three years.

3. Licence suspensions and revocations (up to 3.5 points): There are sanctions that are significant enough to serve as a deterrent against impaired driving such as laws that include Short-Term roadside .05% BAC Administrative Licensing Suspension (ALS) Programs with a minimum 3-day ALS and mandatory or discretionary vehicle impoundment for first occurrence as well as the ALS being recorded on the driver abstract or record for at least three years. There is a licence reinstatement fee, minimum 3-year look-back period for repeat occurrences and a minimum 7-day ALS for a second occurrence.

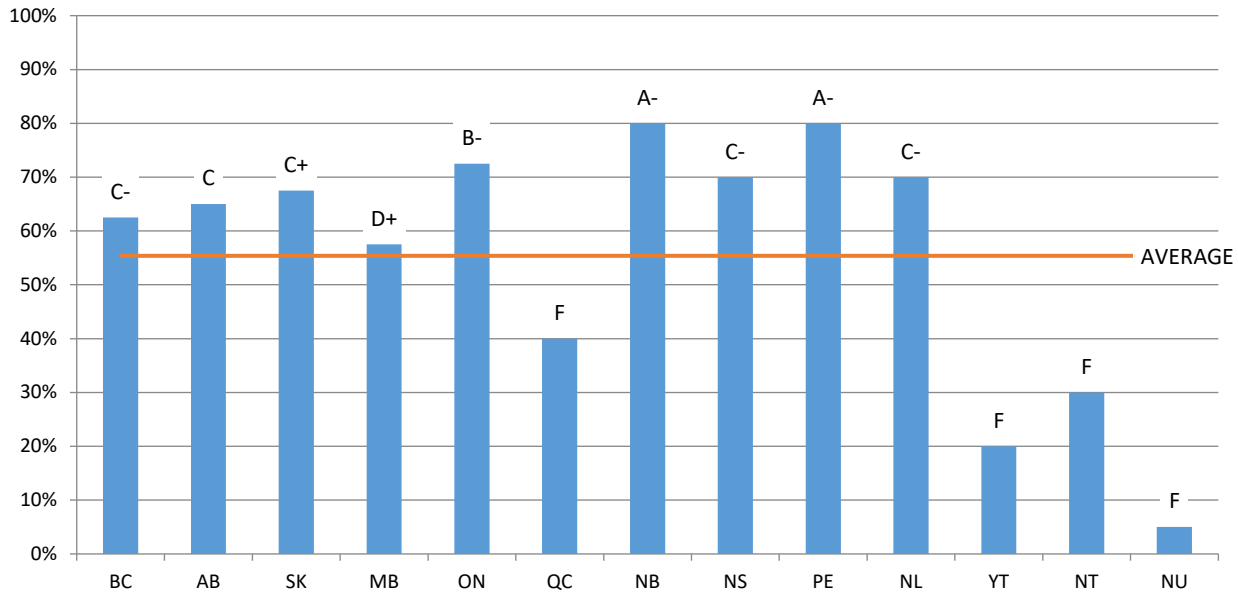
4. Modified or increased penalties when presence of a drug is detected in addition to alcohol (up to 0.5 points): Penalties are increased or modified accordingly when a drug is detected in addition to alcohol.

5. Interlock Programs for Federal Impaired Driving Offenders (up to 2.5 points): There is an established alcohol interlock program in conjunction with licence suspensions as part of a comprehensive approach to dealing with impaired driving offenders. Jurisdictions require successful completion of provincial or territorial interlock program prior to relicensing for all alcohol-related *Criminal Code* offences and those convicted of impaired driving causing death or bodily harm are not eligible for a reduced “hard” suspension.

Impaired Driving Countermeasures Domain Results

NB and PE both achieved the highest scores of 80.0% (A-) for their impaired driving countermeasure policies followed by ON with 72.5% (B-). The lowest scores for this domain were in the three territories with NU scoring just 5% (F) for their impaired driving policies, YT scoring 20% (F) and NT scoring 30% (F). The average score for this domain across all jurisdictions was 55.4% (D), see Figure 10.

Figure 10: Impaired Driving Countermeasures: Domain Scores by Province and Territory, 2017



Graduated licensing program & zero tolerance policies for new drivers

While no jurisdiction achieved full marks on practices around GLPs, three provinces, PE (78.6%), QC (71.4%) and NS (71.4%), fared well due to having longer durations for each of the GLP stages. One jurisdiction (NU) does not have a GLP and scored zero on this group of indicators. A standard minimum age of 16 for starting the GLP is recommended, though five of the 11 jurisdictions set the minimum age for the GLP below age 16, see Figure 11.

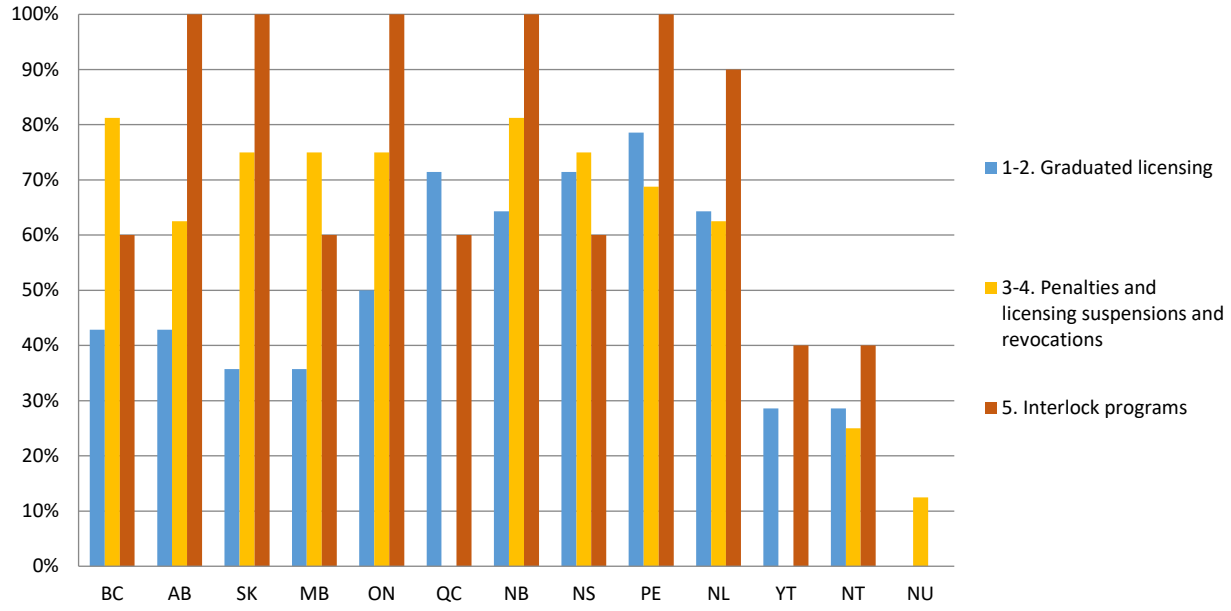
Licence suspensions and revocations & modified or increased penalties

Generally, for penalties and license suspensions, there are several jurisdictions that scored well, led by BC and NB, both scoring 81.3%, but two jurisdictions achieved a score of zero (QC and YT), see Figure 11. Just over half of jurisdictions would improve their score by enacting discretionary or mandatory vehicle impoundment for the first occurrence of impaired driving. While a few jurisdictions have discretionary impoundment only AB, SK and NL have mandatory impoundment in these situations. With the exception of ON, no jurisdiction had any form of modified penalties when drug use is detected in combination with alcohol. ON includes legislation that states that if drugs and alcohol are detected in combination, the individual is not eligible for a reduced suspension after completing the interlock program, though it is unclear how often this is enforced as it may be likely that law enforcement do not screen for other substances once alcohol impairment is confirmed.

Interlock programs for federal impaired driving offenders

With the exception of one jurisdiction (NU), all have some form of voluntary or mandatory interlock program. Six jurisdictions (AB, SK, ON, NB, PE, and NL) have perfect or near perfect scores (90.0-100.0%) for practices related to their interlock programs, see Figure 11.

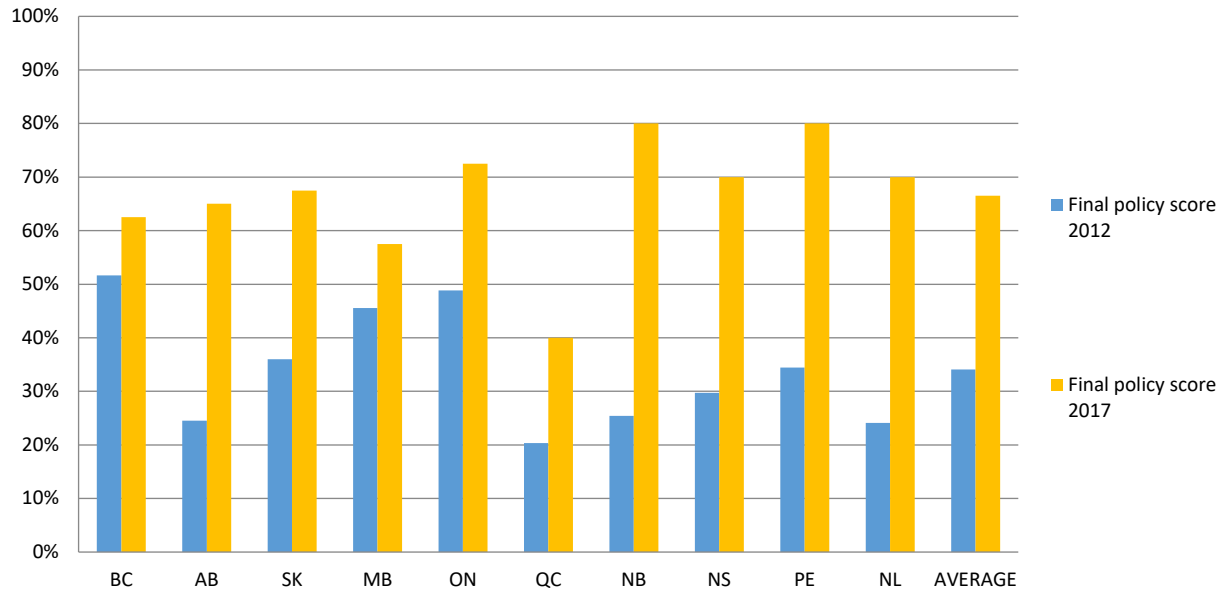
Figure 11: Impaired Driving Countermeasures: Indicator Scores by Province and Territory, 2017



Impaired Driving Countermeasures: 2012 vs 2017 comparison

Overall, there has been a significant shift across the provinces since 2012 in adopting best practices in impaired driving countermeasures. Impaired driving countermeasures is the policy domain in which the largest improvement in scoring at the domain level has been observed, with the average domain score rising from 34.1% in 2012 to 66.50% in 2017, see Figure 12. This increase is due, in large part, to legislative changes in the Atlantic Provinces and in AB which, in each case, led to a doubling of each province's domain score since 2012.

Figure 12: Impaired Driving Countermeasures: Domain Scores by Province, 2012 vs 2017



Note: Policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection.

IMPAIRED DRIVING COUNTERMEASURES: PROMISING PRACTICES

➢ PE has the most rigorous graduated licensing program (GLP) with a minimum age of 16 and a duration of between 33 and 36 months depending on whether the driver successfully completes a driver's education course. GLP drivers also face night-time driving restrictions until the age of 21.

➢ BC and NB performed well with respect to Administrative Licensing Suspension (ALS) regulations. The minimum durations for ALS (both first and second offences) were set at 3 days and 7 days respectively, as recommended. These two jurisdictions only lost points related to ALS for having discretionary vehicle impoundment as opposed to mandatory vehicle impoundment on the first occurrence and for a lack of penalties related to poly substance detection.

➢ AB, SK, ON, NB, and PE all have very strong interlock regulations. The implementation of mandatory interlocks for those charged criminally for impaired driving as well as a minimum 3 year interlock order are all best practice recommendations.

➢ NB and PE both achieved an 80% overall score on this domain. While there is room for improvement in each area of the impaired driving countermeasures domain, these two provinces are achieving well rounded coverage of all the best practice recommendations for the impaired driving countermeasures domain.

IMPAIRED DRIVING COUNTERMEASURES: AREAS FOR IMPROVEMENT

- ON was the only jurisdiction to have penalties that are modified or increased when the presence of drugs is detected in combination with alcohol.
- Mandatory vehicle impoundment needs to be introduced in all jurisdictions. Currently it is only in AB, SK, and NL.
- NU is the only jurisdiction that does not have a Graduated Licensing Program (GLP). A GLP has been shown to reduce crash deaths and related injuries.
- The ALS periods for first occurrence in YT, NT, and NU are too lenient, with a maximum of only 24h suspension. The best practice recommended by MADD Canada is for an ALS to be three days for the first occurrence and seven days for the second.

4. Marketing and Advertising Controls

Marketing and Advertising Controls Domain Evidence

Alcohol marketing and advertising can impact all sectors of the population in many ways, e.g. through normalizing many drinking contexts, trivializing risks, encouraging early onset of drinking, and potentially offering inducements to those addicted to alcohol or in recovery. This policy domain is also strongly linked with alcohol pricing, (e.g. low prices can be advertised), and physical availability of alcohol (e.g. having alcohol available for sale in corner stores or grocery stores where young people are likely to see it creates a context where the packaging and the placement of the alcohol itself act as marketing).

Youth continue to be exposed to alcohol advertising in traditional media, i.e. on television (90), radio (91) and in magazines (92), as well as in movies (93), in music lyrics, images in music videos (94, 95), and increasingly in digital media, where alcohol marketers have shifted much of their focus (96-100). Additionally, alcohol brand placements in commercial programming and at sponsored events, including the distribution of alcohol-branded merchandise and other promotional giveaways, increase the likelihood that young people will be exposed to more alcohol marketing (101). Repeated exposure to alcohol marketing during adolescence is associated with earlier onset of alcohol use and problem drinking later in life (15, 102, 103).

In Canada, The Canadian Radio-television and Telecommunications Commission (CRTC) sets guidelines on the content and placement of alcohol marketing on television and radio. These regulations have not been updated since 1996. Some provincial regulators have incorporated more specific guidelines for alcohol marketing and have applied these more broadly, however, most of these provincial regulations fall in line with the CRTC code. There are no Canada-specific regulations that govern the content of digital media, nor is there any requirement for alcohol ads to be pre-cleared by any organisation before release. Having an independent authority charged with reviewing complaints is a good practice as the chance of a conflict of interest between the advertiser and the authority responsible for enforcing the advertising regulations is reduced. The independent body that oversees the enforcement has no vested interests, except to enforce the regulations, and therefore will be able to do so with no bias. Having strong enforcement of

provincial and territorial marketing regulations is also important for ensuring the effectiveness of the regulations.

In order to reduce the harms associated with youth exposure to alcohol marketing, the Pan American Health Organisation (PAHO) offers a series of recommendations to institute the following: (1) a specific authority, independent from the alcohol industry, to enforce marketing regulations; (2) a pre-screening system, independent from industry, to ensure that alcohol marketing adheres to regulations; (3) a complaint system, independent from industry, to ensure complaints about alcohol marketing are effectively addressed; and (4) penalties for violations of regulations that are commensurate with the violation and that penalties escalate with the frequency and severity of the violation (104).

Marketing and Advertising Controls Domain Scoring

Our assessment of marketing and advertising policies in the 10 provincial and three territorial jurisdictions is based on how well they reflect the following three main areas, developed in consideration of the PAHO recommendations on reducing alcohol-related harm: comprehensiveness of existing alcohol marketing and advertising regulations, enforcement of regulations and the focus of each jurisdiction's liquor board's social media presence.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: MARKETING AND ADVERTISING CONTROLS

The following policies represent the current gold standard best practices for alcohol marketing and advertising. To get top marks a jurisdiction needed to have implemented the following policies and practices:

1. Alcohol marketing and advertising regulations (up to 6 points): There are content restrictions beyond those imposed by the Canadian Radio-Television and Communications (CRTC) Commission, with restrictions specifically to protect priority populations in addition to youth, such as women, girls and minority groups. There are also restrictions on: the physical location of ads (e.g. ads cannot be placed near schools, substance use treatment centres, community centres, etc.); quantity of ads (ad bans or volume restrictions, e.g. limit on the proportion of commercial space or air time used for alcohol advertising); advertising of price[3] (e.g. policies restricting the advertisement of "cheap" drink specials or 2 for 1 deals); and restrictions on sponsorship that prevent exposure to youth and direct targeting of youth or young adults. Alcohol marketing and advertising regulations also cover additional media types including: web/mobile phones, print media, signage and promotional items. Regulations apply across all advertisers including: government-owned or private off-premise outlets, ferment on premise (FOP) outlets, all manufacturers, on-premise licensees and special occasion permit (SOP) holders.

[3] Restrictions on advertising below minimum price were not assessed in this policy domain. These policies were evaluated under the Pricing and Taxation policy domain.

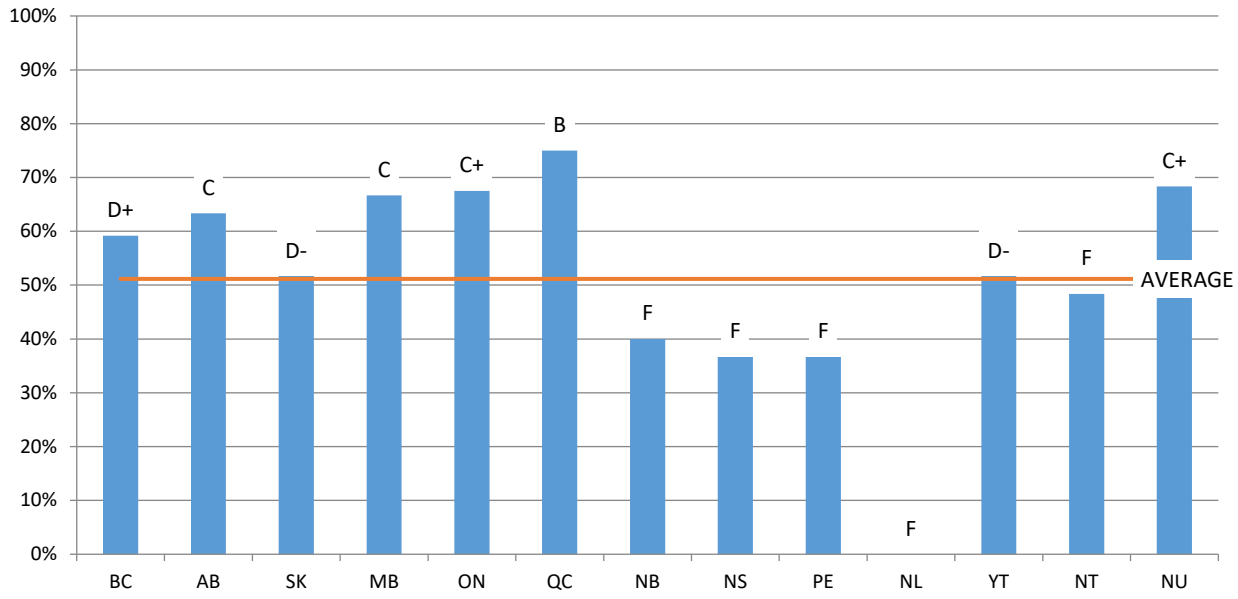
2. Enforcement of advertising and marketing regulations (up to 3 points): There is a specific authority responsible for enforcement of alcohol marketing and advertising regulations that is independent from the alcohol industry and alcohol sales. There is a pre-screening system independent from the alcohol industry in place to ensure advertising and marketing adheres to regulations with an independent complaint system to address violations effectively (the alcohol industry cannot be responsible for monitoring ads for compliance with regulations, nor can they be part of the complaint system or system for delivering penalties for violations; these would represent conflicts of interest). Penalties exist that are commensurate with violations and escalate with the frequency and severity of the violation.

3. Practice Indicator - Focus of the liquor board's social media presence (up to 1 points): Liquor boards have a high proportion of social media posts dedicated to health and safety messaging as opposed to a sole focus on alcohol-promotion posts.

Marketing and Advertising Controls Domain Results

Overall, there was wide variation in how the provinces and territories scored on their alcohol marketing and advertising policies. QC scored the highest of the jurisdictions at 75% (B) with NU (68.3%, C+) and ON (67.5%, C+) rounding out the top three. NS (36.7%, F) and PE (37.6%, F) had some of the lowest scores on this domain with NL coming in at the bottom with a score of zero. The average score for this domain across all jurisdictions was 51.2% (D-), see Figure 13.

Figure 13: Marketing and Advertising Controls: Domain Scores by Province and Territory, 2017



Alcohol marketing and advertising regulations

NU, ON and QC performed well on the comprehensiveness of their marketing regulations, all scoring above 80% on this indicator. All three had implemented restrictions on the placement of ads and on price-based advertising such as drink specials or happy hour promotions; they also adopted content restrictions beyond those set out in the CRTC code. For example, in NU, advertising free alcohol or multiple drinks specials (2-for-1 drinks) is prohibited. NL was the only jurisdiction in Canada with no marketing restrictions extending beyond the federal CRTC code to regulate alcohol marketing and advertising earning them a score of zero on this set of indicators. While it is in the regulatory purview of the provinces and territories to place restrictions on alcohol marketing and advertising, many of the jurisdictions, such as NB (33.3%), NS (44.4%) and NL (0%) who had the lowest scores on these indicators, default to or predominantly rely on the national CRTC advertising code to inform their advertising restrictions at the provincial and territorial levels, see Figure 14.

Enforcement of advertising and marketing regulations

QC scored the highest on this indicator with 83.3% due to the fact that they have an independent authority responsible for alcohol advertising, including monitoring alcohol advertising through their pre-screening and complaint systems. QC is the only jurisdiction to have a mandatory process in place in which alcohol ads are pre-screened and approved by an independent authority (the Régie des Alcools, des Courses et des Jeux) before they can be published. If the submitted advertisement complies with the QC regulations, a certificate of compliance is issued and the advertisement can then be distributed to the public.

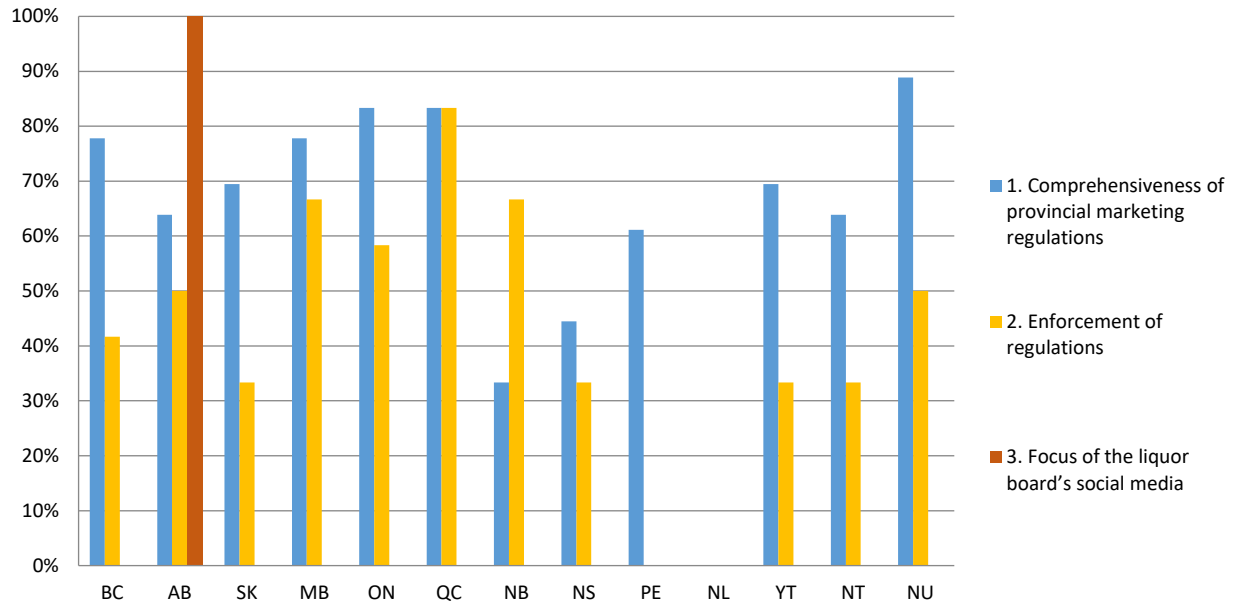
NB (66.7%) and MB (66.7%) had the next highest scores for the enforcement of regulations indicator, with independent authorities that oversee the complaint systems and administer penalties that are commiserate with the violation and escalate with repeat violations. In many jurisdictions, the alcohol regulator is responsible for fielding complaints and delivering sanctions for advertising violations. This is a good practice that allows for an un-biased focus on the regulations. However, it is also common for the government liquor boards to self-monitor and enforce their own marketing and advertising. This is not good practice since the liquor boards often have a mandate to generate revenue from the sale of alcohol.

Jurisdictions with the lowest scores on this group of indicators (SK, NS, YT and NT all tied at 33.3% and PE and NL with 0%) are provinces and territories where conflicts of interest may exist. In these jurisdictions there are no independent authorities that oversee the enforcement of regulations governing the marketing and advertising of alcohol, see Figure 14.

Focus of liquor board social media

AB was the only jurisdiction in Canada with a perfect score for the focus of their liquor control board's social media presence with 50% of their social media posts (i.e., Twitter and Facebook) reflecting a health and/or safety message, see Figure 14. All other jurisdictions got a zero score on this indicator. This low score indicates that they did not actively use social media or they did not take a sufficiently balanced approach to promoting health and safety and product promotion messaging though their social media accounts. Liquor control boards in some jurisdictions, such as ON and QC, operate separate social media accounts for promotional versus health and safety messaging. This separation of messaging was considered less effective as the accounts would have to be sought out by consumers separately.

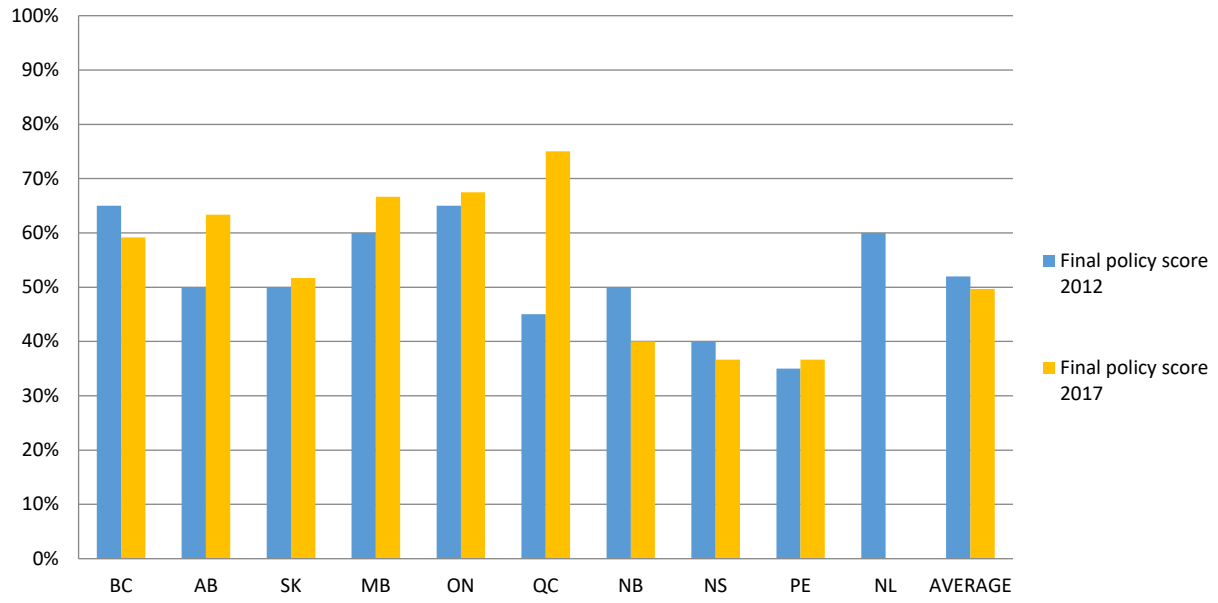
Figure 14: Marketing and Advertising Controls: Indicator Scores by Province and Territory, 2017



Marketing and Advertising Controls: 2012 vs 2017 comparison

Overall there has been very little change to alcohol marketing and advertising policies in the provinces since 2012 with the average policy domain score going from 52% in 2012 down to 50% in 2017, see Figure 15. This small decrease is likely due to the fact that almost all jurisdictions base their advertising regulations on the federal CRTC code which has remained unchanged since 1996. The only exception is NL where certain key advertising restrictions in place in 2012 are no longer reported as being in place in 2017. For the remaining jurisdictions, the maintenance of the status quo does not keep pace with our rapidly changing advertising environment.

Figure 15: Marketing and Advertising Controls: Domain Scores by Province, 2012 vs 2017



Note: policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

MARKETING AND ADVERTISING CONTROLS: PROMISING PRACTICES

- The majority of jurisdictions restrict alcohol marketing beyond broadcast advertising, although the extent of marketing restrictions across different media platforms varies significantly across the provinces and territories.
- AB, ON, QC, NT and NU have restrictions on price-based advertising (e.g. prohibitions against advertising free liquor, multi-drink specials, happy hour specials, pour size specials or all-you-can-drink specials)
- SK and NB implemented restrictions to limit the quantity of point-of-sale ads and broadcast advertising respectively.
- QC and NU have a pre-screening process for alcohol advertisements set in the regulations that is overseen by an independent authority.
- AB takes a balanced approach to disseminating health and safety messaging and promotional messaging on their government liquor commission's social media platforms.

MARKETING AND ADVERTISING CONTROLS: AREAS FOR IMPROVEMENT

- NL does not regulate alcohol advertising beyond the federal CRTC code, severely limiting their liquor control board's ability to keep pace with newer forms of advertising that may negatively influence younger people to drink.
- Several jurisdictions do not have an independent authority to monitor and enforce alcohol advertising and marketing activities by the government liquor boards.
- The liquor control boards for 12 out of 13 jurisdictions either do not use social media platforms or their social media accounts do not present a balanced approach in the health and safety versus product promotion messaging they promote.

5. Minimum Legal Drinking Age

Minimum Legal Drinking Age Domain Evidence

There is strong and growing evidence supporting the protective effective of minimum alcohol drinking age laws have on health and safety outcomes, particularly for younger populations. Two comprehensive reviews on the effectiveness of minimum legal drinking age (MLDA) interventions concluded not only that there is an inverse relationship between the MLDA and various alcohol-related harms, but also that implementing a legal age of 21 for both purchases and consumption of alcohol is effective in reducing related problems among younger drinkers (105, 106). When young people gain legal access to alcohol they incur increased rates of a range of negative alcohol-related health and social outcomes including mortality, serious injuries and medical events requiring inpatient hospital and emergency department services, motor vehicle collisions, alcohol-impaired driving crimes, perpetration of both violent and nonviolent crimes, and criminal violent victimization events (107-111). The MLDA offers significant protective effects; the implementation of a uniform minimum legal drinking age has demonstrated significant decreases in alcohol consumption and reductions in a wide range of alcohol-related harms including: morbidity; mortality; impaired-driving crimes; and the perpetration of a range of crimes (including sexual assault); and violent victimization (16, 107-113).

The evidence suggests that the effectiveness of a higher minimum legal drinking age is strongly influenced by the level and consistency of law enforcement efforts and also by the extent of implementation of other effective alcohol control policies (114). A study by Lipperman-Kreda, Grube, & Paschall (2010) showed that, consistent with social learning theory, community norms and the enforcement of underage drinking laws influence beliefs and behaviours around alcohol (115). Adolescents who perceive drinking to be disapproved of by others also believe alcohol is less available and less common amongst their friends, all beliefs that influence their alcohol consumption.

While implementation is currently limited to only a few Scandinavian countries, graduated access to alcohol with age restrictions on purchase of certain strengths of alcohol and in certain venues is another policy lever that mirrors some of the elements of graduated licensing programs for new drivers. In Sweden, for example, it is illegal to sell a beverage containing more than 2.25% alcohol

content to anyone under the age of 18 for on-premise consumption. Further, there is a higher minimum legal age of 19 years in Sweden for purchasing beverages with 3.5% or more alcohol content from a liquor store. In Norway and Finland, the purchase age for wine and beer is 18 years old and the purchase age for alcohol containing more than 22% alcohol content is 20 years old. This stepped approach to gaining legal access to alcohol may assist young adults who choose to drink in managing this new responsibility and lessen the alcohol-related health impacts they experience (116).

While there is persuasive evidence that increasing the minimum legal drinking age will reduce patterns of alcohol consumption and alcohol-related harms in age-restricted youth (105, 106), there is a much less developed literature addressing whether MLDA laws might be associated with longer-term net decreases in alcohol-related consequences in the adult population. Nonetheless, a reasonable argument can be made that MLDA laws likely effect subsequent reductions in alcohol-related harms in the adult population by reducing youth frequency of drinking, heavy episodic drinking, and problematic drinking (drinking causing alcohol-related problems) – three patterns of youth alcohol consumption which are significantly associated with serious alcohol-related harms in adulthood. For example, two recent cohort studies following individuals from early adolescence until their early thirties found that frequency of drinking, heavy episodic drinking, and problematic drinking during adolescence and young adulthood (up to 21 years) were significantly related to a range of deleterious alcohol-related consequences later in adulthood, such as binge drinking, alcohol dependence (and persistence of alcohol dependence across survey assessment waves), higher levels of alcohol-related problems, and alcohol-impaired driving (117, 118). In addition, some studies have shown that exposure to more permissive MLDA laws is associated with harmful alcohol-related consequences in later adulthood, including persistent patterns of binge drinking (119) and alcohol dependence(120).

Minimum Legal Drinking Age Domain Scoring

Our assessment of minimum legal drinking age policies in the 10 provincial and three territorial jurisdictions is based on the level of the minimum legal drinking age, including graduated drinking policies, in the jurisdiction and the existence of supportive policies such as legislation prohibiting the sale of alcohol to and purchase of alcohol by those below the legal drinking age.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: MINIMUM LEGAL DRINKING AGE

The following policies represent the current gold standard best practices for restricting access to alcohol among youth. To get top marks a jurisdiction needed to have implemented the following policies and practices:

1a. Level of legal drinking age (up to 8 points): The minimum legal drinking age is set at 21 years of age.

1b-c. Legislation supporting the MLDA (up to 2 points): Supportive legislation prohibits the sale of alcohol to those below the minimum legal drinking age, but also the purchase of alcohol by these individuals. Social hosting laws[4] do not extend beyond the private residence.

Minimum Legal Drinking Age Domain Results

The provinces and territories all scored between 40% (F) and 60% (C-) on their minimum legal drinking age policies with the exception of MB with a score of 30% (F). The average score for this domain across all jurisdictions was 51.5% (D-), See Figure 16.

Figure 16: Minimum Legal Drinking Age: Domain Scores by Province and Territory, 2017

[4] Social hosting laws permit the consumption of alcohol by an individual who is under the minimum legal drinking age provided the alcohol is provided by a spouse, parent or guardian.

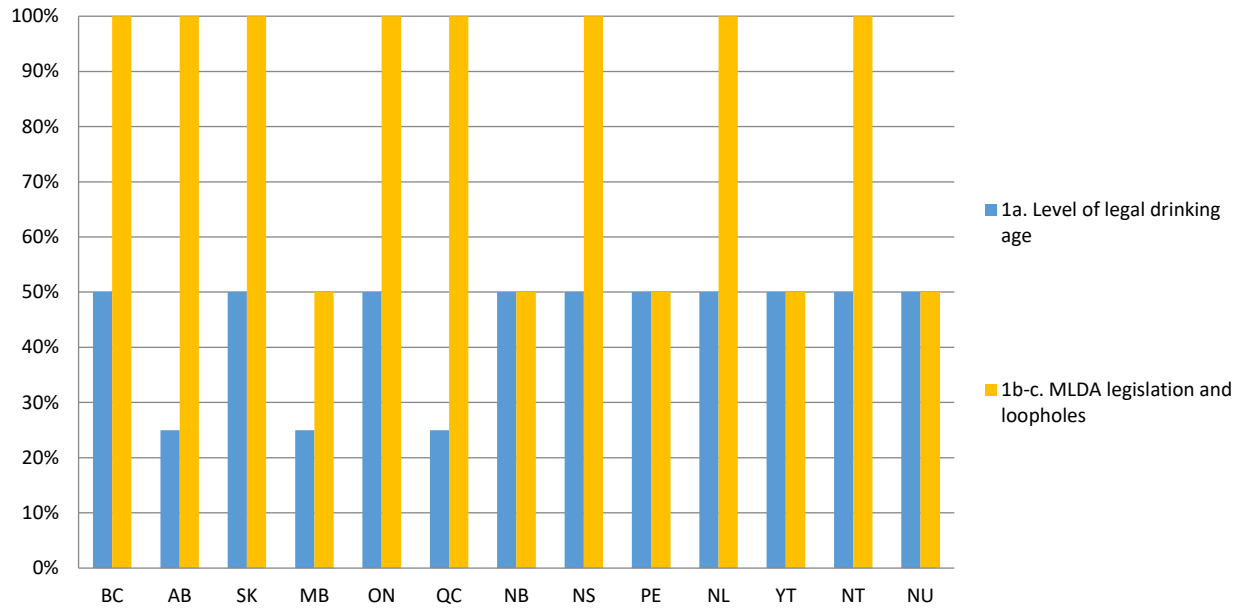
Level of legal drinking age

None of the jurisdictions currently set their minimum drinking age at the recommended 21 years old therefore no jurisdiction scored above half marks on this indicator. The majority of the jurisdictions have a minimum age of 19 and so attained higher scores on this indicator (50%) with the exception of AB, MB and QC who have a lower minimum age of 18 years and all scored 25% on the indicator assessing the level of the MLDA. None of the jurisdictions implement graduated drinking laws that would grant stepped legal access to alcohol as individuals reach the MLDA, see Figure 17.

Legislation supporting the MLDA

All jurisdictions have supportive legislation prohibiting both the sale of alcohol to an individual below the legal drinking age and purchase by those who are underage. Further, BC, AB, SK, ON, QC, NS, NL, and NT do not have any exceptions that allow individuals under the minimum age to legally consume alcohol, including social hosting laws that extend beyond a private residence, earning them a perfect score on this indicator. MB, NB, PE, YT, and NU were penalized as their legislation allows for the provision of alcohol by a parent, guardian or spouse to a minor beyond a private residence such as in certain on-premise settings or at special events so they only achieved 50% on this indicator, see Figure 17.

Figure 17: Minimum Legal Drinking Age: Indicator Scores by Province and Territory, 2017

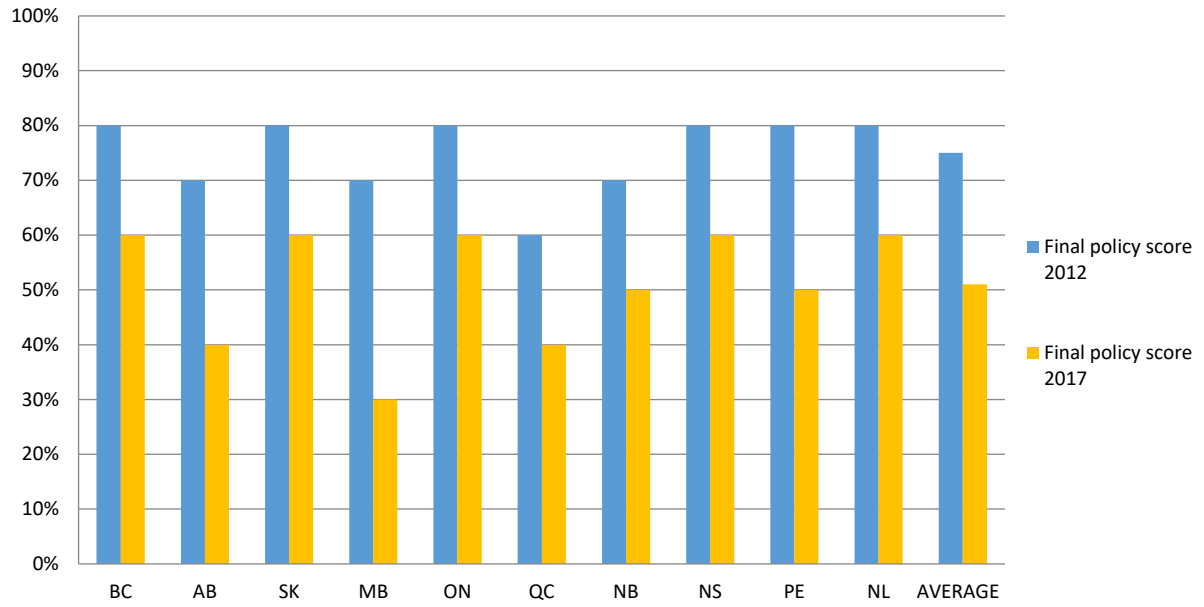


Minimum Legal Drinking Age: 2012 vs 2017 comparison

There were fairly significant changes to some of the domain indicators for minimum legal drinking age policies between 2012 and 2017 limiting direct comparisons, however, the level at which the minimum legal drinking age is set for each jurisdiction remained unchanged between 2012 and 2017, with all jurisdictions still falling short of the ideal minimum age of 21, see Figure 18. Implementing graduated drinking policies that grant stepped legal access to alcohol with age-

specific purchasing restrictions based on strength, volume or hours of sale up until age 21 would be one strategy to mediate the limitations of current minimum drinking age policies in Canadian jurisdictions.

Figure 18: Minimum Legal Drinking Age: Domain Scores by Province, 2012 vs 2017



Note: policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

MINIMUM LEGAL DRINKING AGE: PROMISING PRACTICES

- While not at the current gold standard best practice level of 21 years old, BC, SK, ON, NB, NS, PE, NL, YT, NT, and NU all have a minimum age of 19.
- BC, AB, SK, ON, QC, NS, NL, and NT all have supportive legislation that prohibits the purchase and sale of alcohol involving underage individuals with no existing exceptions allowing for legal consumption of alcohol in certain settings beyond a parent, spouse or guardian providing it in a private residence.

MINIMUM LEGAL DRINKING AGE: AREAS FOR IMPROVEMENT

- AB, MB, and QC all have a minimum drinking age of 18, which is not only below the current gold standard best practice of 21 but is also inconsistent with the minimum age of 19 in other neighbouring Canadian jurisdictions.
- Five jurisdictions have exceptions in their legislation that allow for underage drinking in certain contexts beyond private residences such as when accompanied by a spouse, parent or guardian in certain on-premise settings (MB, NB, YT, and NU) and at special events (NB, YT, and NU).

6. Screening, Brief Intervention, and Referral

Screening, Brief Intervention and Referral Domain Evidence

A comprehensive approach to reducing alcohol-related harms involves both population level policies, as noted in the other policy domain sections, and individual level interventions as discussed here. Alcohol screening, brief intervention and referrals (SBIR) are usually provided in clinical settings, but can be administered in a variety of non-clinical settings to target priority populations (e.g. correctional institutions) or to expand its reach (e.g. electronic SBIR tools). SBIR involves screening for risky alcohol use, providing risky drinkers with advice to reduce alcohol consumption, and referring persons with severe problems to treatment (121). The cumulative evidence from several hundred empirical studies summarized in recent meta-analyses and systematic reviews, is that the use of SBIR in health care settings is an effective method for reducing alcohol consumption, particularly those with early stage or less severe alcohol dependence (122-124). However, the evidence is less clear for adolescents (31, 122-125) and more research is required.

According to one systematic review and meta-analysis, SBIR is a cost-effective measure to reduce alcohol misuse (126). It can be concluded that the integration of SBIR into a range of health care settings could reduce demands on health care resources and attendant costs although some assumptions (such as whether all patients are screened) may not be realistic (127). However, uptake among practitioners remains a challenge as data indicated that only a small proportion of primary care patients are screened in the US and England (128-130). Despite identified challenges raised by some authors (131), others argue for continued research to address the complex implementation barriers to routine SBIR (128). In Scotland the national implementation of alcohol brief interventions was facilitated by national and more focused initiatives: such as funding, national coordination, health board support, locally supported training opportunities, as well as individuals acting as champions (132).

Electronic brief interventions (eBI), by means of text messages or web-based interventions, have the potential to increase reach, especially in remote areas, and reduce implementation costs. According to systematic reviews and meta-analysis, eBI by internet or smartphone are effective in reducing alcohol consumption in the general population and in University students, and could be alternatives or additions to screening in clinical settings (133, 134).

Screening, Brief Intervention and Referral Domain Scoring

Our assessment of SBIR policies in the 10 provincial and three territorial jurisdictions is based on how well they reflect these three main interventions: the existence of SBIR practice guidelines, access to SBIR tools or services and implementation and monitoring of SBIR activities.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: SCREENING, BRIEF INTERVENTION AND REFERRAL

The following policies represent the current gold standard best practices for screening, brief intervention and referral. To get top marks a jurisdiction needed to have implemented the following policies and practices:

1. SBIR practice guidelines (up to 3 points): Authoritative SBIR practice guidelines exist at the jurisdiction level and/or the College of Family Physicians of Canada SBIR tool has been endorsed by a credible provincial or territory professional association (e.g. MD, nurses, psychologists).

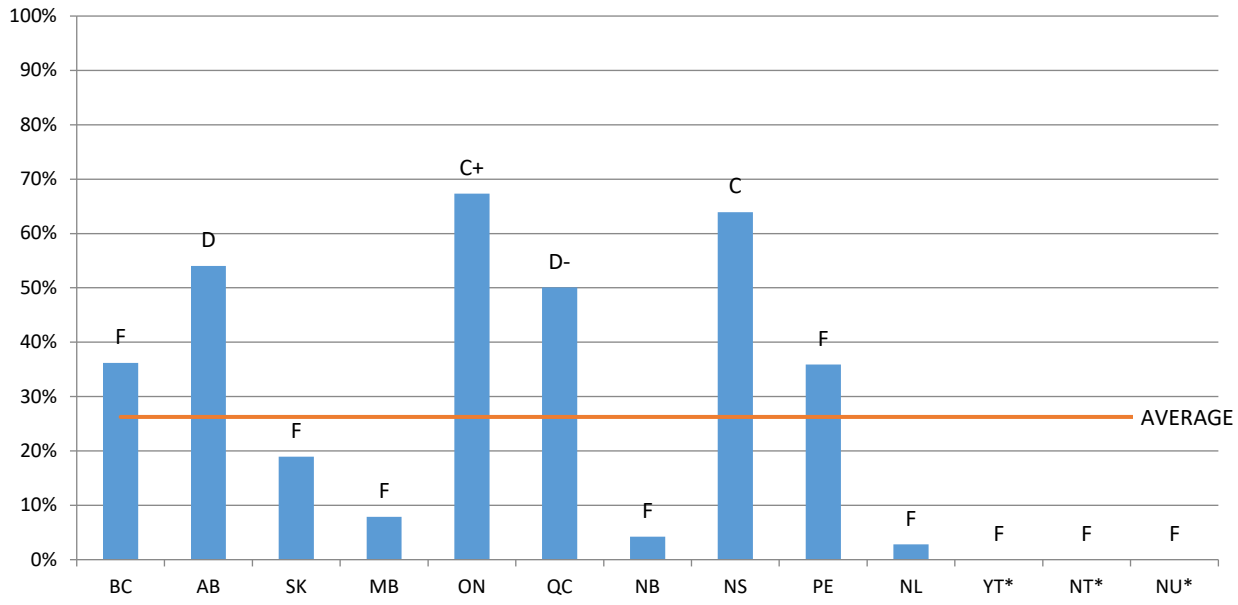
2. Access to SBIR tools or services (up to 3 points): Provincially- or territorially-funded services or programs, either online or in the health care setting, exist for people to assess their drinking habits, receive brief advice about their drinking, and obtain referral information for further support if needed.

3. Implementation of SBIR (up to 4 points): Adults 18 years and older are routinely asked about their alcohol use by their doctor or other clinical staff at the place they regularly seek care. Jurisdictions track or support tracking of SBIR implementation.

Screening, Brief Intervention and Referral Domain Results

There was great variability in this policy domain with ON (67.3%, C+) NS (63.9%, C) and AB (54.0%, D) scoring highest while only reaching approximately two third of their potential in this policy area. The other provinces and territories had little or no activity on SBIR policies, with the lowest scoring jurisdictions being the territories with scores of 0% (YT, NT, NU). The average score for this domain across all jurisdictions was 26.3% (F), see Figure 19.

Figure 19: Screening, Brief Intervention and Referral: Domain Scores by Province and Territory, 2017



* Commonwealth survey data was not available for YT, NT, and NU. Domain scores were adjusted to account for this missing information

SBIR practice guidelines and access to SBIR tools or services

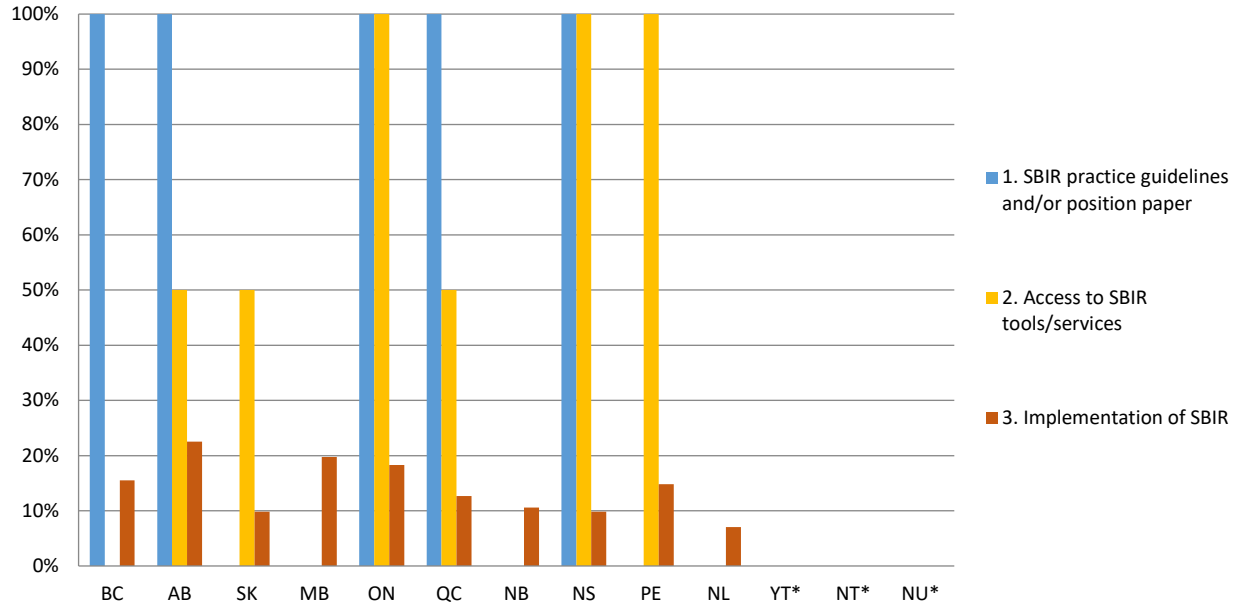
Only 5 of the 13 jurisdictions (BC, AB, ON, QC, and NS) have either provincial or territorial SBIR guidelines or have formally endorsed the College of Family Physicians of Canada SBIR guidelines. Only three of the 13 jurisdictions (ON, NS, and PE) provide comprehensive SBIR tools either online or in health care settings; others (AB, SK, QC) provide access to some component of SBIR tools, see Figure 20.

Implementation of SBIR

There is very low implementation of SBIR activities for alcohol across all provinces[5]. According to 2017 Commonwealth survey data, between 10% (NL) to 32% (AB) of adults 18 years and older across the Canadian provinces had indicated their health care provider talked to them about their alcohol use. This is low relative to tobacco where, on average, 71% of Canadian adults had indicated their health care provider had talked to them about the health risks of smoking and ways to quit. None of the jurisdictions track SBIR implementation, see Figure 20.

[5] Commonwealth survey data was not available for the territories.

Figure 20: Screening, Brief Intervention and Referral: Indicator Scores by Province and Territory, 2017

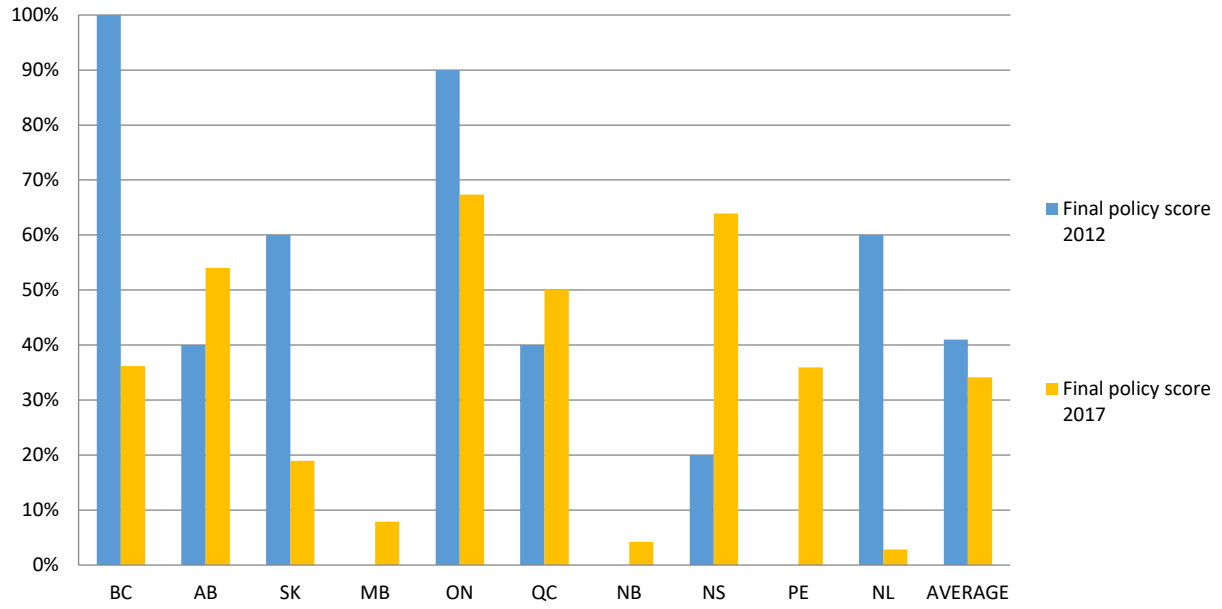


* Commonwealth survey data was not available for YT, NT, and NU. Domain scores were adjusted to account for this missing information.

Screening, Brief Intervention and Referral: 2012 vs 2017 comparison

There have been advances in both practice and research on how best to implement SBIR in a health care setting since 2012, and so we have developed new indicators since 2012 to assess this policy. Despite these changes the scores reflect best practices at the time of data collection. The average policy domain score fell from 41.0% in 2012 to 34.0% in 2017. The majority of jurisdictions are still without formally endorsed SBIR practice guidelines. Without guidelines in place it is unlikely much progress in implementing SBIR will be made. With advances in technology SBIR tools can be made much more accessible to the general population; this is especially promising for jurisdictions like the territories or northern parts of the provinces, where geography can pose as a barrier to accessing such resources in a health care setting, see Figure 21.

Figure 21: Screening, Brief Intervention and Referral: Domain Scores by Province, 2012 vs 2017



Note: policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

SCREENING, BRIEF INTERVENTION AND REFERRAL: PROMISING PRACTICES

- BC, AB, ON, QC, and NS have developed and/or endorsed SBIR practice guidelines for use with the general population and/or priority populations.
- In AB, approximately one in three adults 18 years and older indicated in a national survey that their health care provider had talked to them about their alcohol use. While this remains lower for alcohol than it does for tobacco use, AB exceeds the national average.
- ON, NS, and PE have comprehensive SBIR tools online or in a health setting where the public can access and assess their drinking patterns as well as receive brief interventions and referral information.

SCREENING, BRIEF INTERVENTION AND REFERRAL: AREAS FOR IMPROVEMENT

- The majority of the jurisdictions have yet to implement or endorse SBIR guidelines or tools.
- Health care providers are significantly less likely to talk to their patients about alcohol then they are about smoking.
- Very few provinces have SBIR tools online for public access. Electronic SBIR tools could be a direction that is pursued that would increase access to these tools for the public as well as be cost effective to rollout.
- None of the provinces and territories track SBIR implementation.

7. Liquor Law Enforcement

Liquor Law Enforcement Domain Evidence

Alcohol policies need to be actively and regularly enforced to be maximally effective for reducing the negative consequences associated with alcohol use on licensed premises (32, 135, 136). In the most recent study of the economic costs of substance use in Canada (2), alcohol attributable crime in 2014 was estimated to cost $3.15 billion dollars. Liquor law enforcement strategies can mitigate a major component of these costs by helping to ensure establishments comply with the liquor control and licensing acts and regulations such as laws restricting the sale of alcohol to minors intoxicated patrons. Over-service and service to intoxicated persons is a proven risk factor for motor vehicle accidents and violent incidents (46, 137, 138). Inspection programs (e.g. using mystery shoppers and police walk-throughs) are particularly effective enforcement strategies. Mystery Shopper programs involve an enforcement officer supervising an underage person, a person who appears to be below the MLDA or an individual trained to show signs of intoxication as they attempt to purchase alcohol to ensure the proper ID checks or refusals are performed (139-145).

Another promising strategy is the implementation of Risk-Based Licensing and Enforcement programs which identify establishments that pose increased risks to public safety in order to inform licensing conditions and target enforcement activities (146, 147). Most alcohol-related harm associated with late night drinking venues (e.g. violence, impaired driving) is concentrated in and around a small number of problematic venues (148). A risk-based approach ensures that “high-risk” establishments pay higher licensing fees, have the appropriate restrictions placed on their licence and are inspected more frequently to commensurate with their likelihood of contributing to alcohol-related harm.

However, the effectiveness of enforcement programs is contingent on their quality and the penalties for noncompliance. Compliance tends to be greater when there is more perceived certainty and celerity of consequences (149). Thus, to ensure optimal effectiveness, programs should include compliance checks of *all* establishments, be conducted regularly and according to level of risk (optimally at minimum once per year for low-risk licensees), conduct follow-up checks for establishments who violate policies, and have increasing penalties for subsequent violations (136, 150). These programs should be periodically evaluated in order to assess their impact on reducing risky drinking and related harm to the drinker and others. It is also important that there are sufficient designated personal to carry out enforcement efforts. Moreover, compliance relies on staff being knowledgeable about the potential harms from serving alcohol to underage or intoxicated customers and being equipped to detect and deal with these patrons. Server training programs have weak evidence of effectiveness in the absence of supportive law enforcement programs (140, 142), but are good practice and serve to support implementation of important alcohol policies (31, 135, 138, 141, 151). To enhance effectiveness, these programs should be mandatory for all personnel and require regular recertification (at least every two years) (138).

Liquor Law Enforcement Domain Scoring

Our assessment of liquor law enforcement policies in the 10 provincial and three territorial jurisdictions is based on how well they reflect the following four main interventions: implementation of a risk-based licensing and enforcement (RBLE) program alongside other supportive enforcement programs, the quality of the RBLE program, penalties associated with violating liquor laws and existence of mandatory responsible beverage training programs for all levels of staff and volunteers.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: LIQUOR LAW ENFORCEMENT

The following policies represent the current gold standard best practices for policies related to enforcement of liquor laws. To get top marks a jurisdiction needed to implement the following policies and practices (note: the following best practice indicators operate under the assumption that it is prohibited to serve alcohol to a minor or an intoxicated person):

1. Status of Risk-based Licensing and Enforcement (RBLE) Programs (up to 2.5 points): Jurisdictions have implemented risk-based licensing and enforcement programs, which aim to identify establishments that pose increased risks to public safety in order to inform licence conditions and enforcement activities. RBLE programs need to be in place for both on-premise establishments and off-premise outlets. The jurisdiction must also implement a police inspection program for on-premise establishments and a Mystery Shopper program (to enforce minimum legal drinking age) for off-premise outlets.

2. Quality of RBLE programs (up to 3.5 points): RBLE programs include consideration of risks posed by the type of outlet, the past record of the licence holder and data on past reported incidents for both on- and off-premise outlets to determine licence conditions and inform enforcement activities. RBLE programs cover all liquor outlets and special occasion permits, with frequent (at least annual) compliance and follow-up (within 3 months) checks for liquor law violations for both on- and off-premise and at least one alcohol inspector per 300 outlets for both types of outlets. Mystery Shopper programs and police inspection programs are in place for off-premise and on-premise licenses respectively.

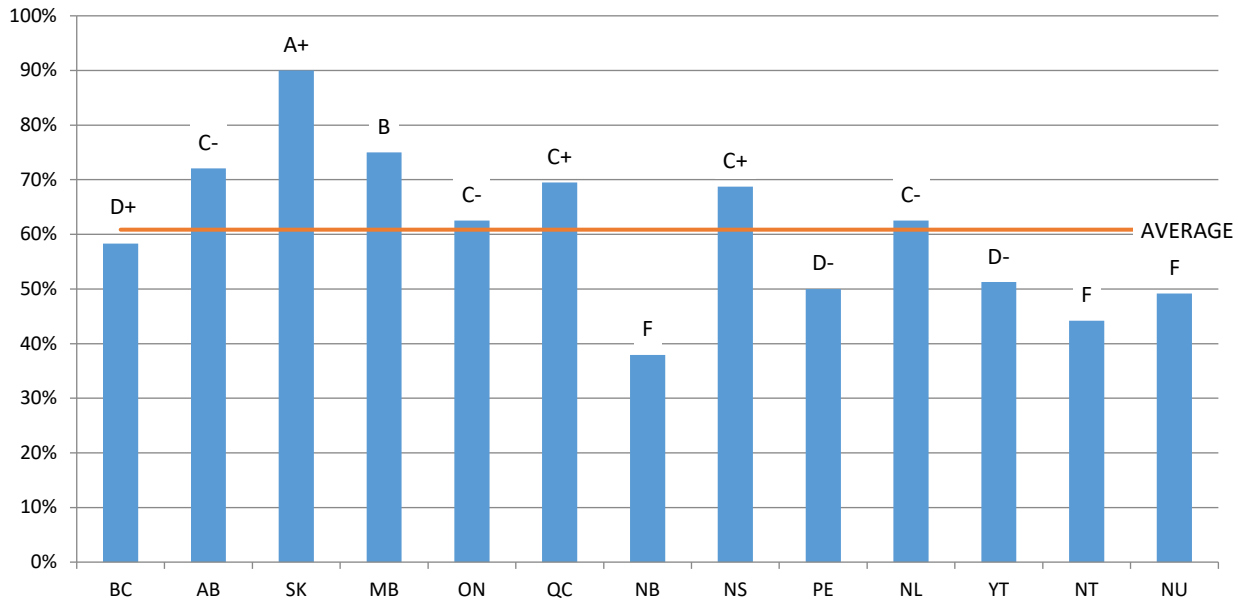
3. Penalties (up to 2 points): Jurisdictions have penalties in place for service to minors and intoxicated persons and penalties are commensurate with the violation, escalate with the frequency and severity of the violation, are tracked and publicly reported.

4. Training Programs Policy Status (up to 2 points): Jurisdictions' responsible beverage programs are mandatory for all licensed venues (including Special Occasion Permits) and outlets. They must also be required for all levels of staff including volunteers and have a recertification period of no longer than two years.

Liquor Law Enforcement Domain Results[6]

There was considerable variation in overall scores across the provinces and territories for the Liquor Law Enforcement domain. SK achieved the highest overall score for their liquor law enforcement policies with 90% (A+) of the optimal score followed by MB with 75% (B) and AB with 72% (B-). NB had the lowest overall score for their liquor law enforcement policies at 37.9% (F) of optimum with NT scoring slightly higher at 44.2% (F) and NU and PE both scoring 50% (D-) of optimum. The average score for this domain across all jurisdictions was 60.9% (C-), see Figure 22.

Figure 22: Liquor Law Enforcement: Domain Scores by Province and Territory, 2017



Status of risk-based licensing and enforcement (RBLE) programs

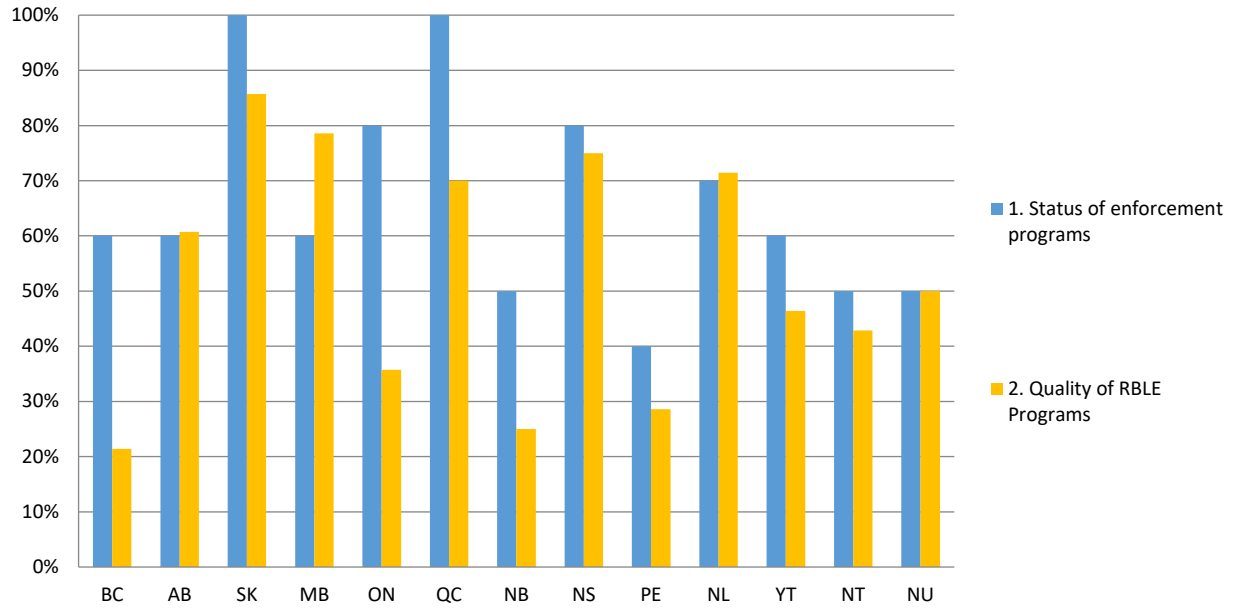
Most jurisdictions had at least some of the components that make up risk-based licensing and enforcement (RBLE) programs even if they were not officially labeled as such. SK and QC were the only jurisdictions with a 100% score on this indicator with elements of risk-based licensing and enforcement in place for both on-premise establishments and off-premise outlets. ON and NS both achieved 80% of optimum for having risk-informed licensing *or* enforcement criteria (but not both) for off-premise outlets. PE (40%) scored the lowest on this indicator as they only have some elements of risk-based licensing for on- and off-premise outlets with no additional support provided by ongoing law enforcement activities, such as police walk-throughs, at on-premise establishments. NB, NT and NU all scored 50% on this indicator for missing either the licensing or enforcement requirements or not having Mystery Shopper programs to assess compliance on ID checks in off-premise outlets, see Figure 23.

[6] The Responsible Beverage Service policy domain included in the 2013 report was revised to focus more broadly on liquor law enforcement in 2017

Quality of RBLE programs

The quality of the risk-based licensing and enforcement programs was quite variable with SK scoring highest on this indicator (85.7%). SK's RBLE program included criteria around outlet characteristics, licence-holder characteristics, incident data from police (for both on- and off-premise locations), frequent compliance checks and a suitable proportion of alcohol inspectors relative to the number of outlets in the jurisdiction. MB (78.6%) and NS (75.0%) also scored relatively high on this indicator although their RBLE programs do not systematically include incident data from the police. BC had the lowest score overall (21.4%) followed by NB (25%) and PE (28.6%) as these jurisdictions did not have risk-informed licensing or enforcement however they do conduct inspections at least once per year and conduct follow-up inspections for failed compliance, see Figure 23.

Figure 23: Liquor Law Enforcement: Indicator Scores by Province and Territory, 2017 (Figure 1 of 2)



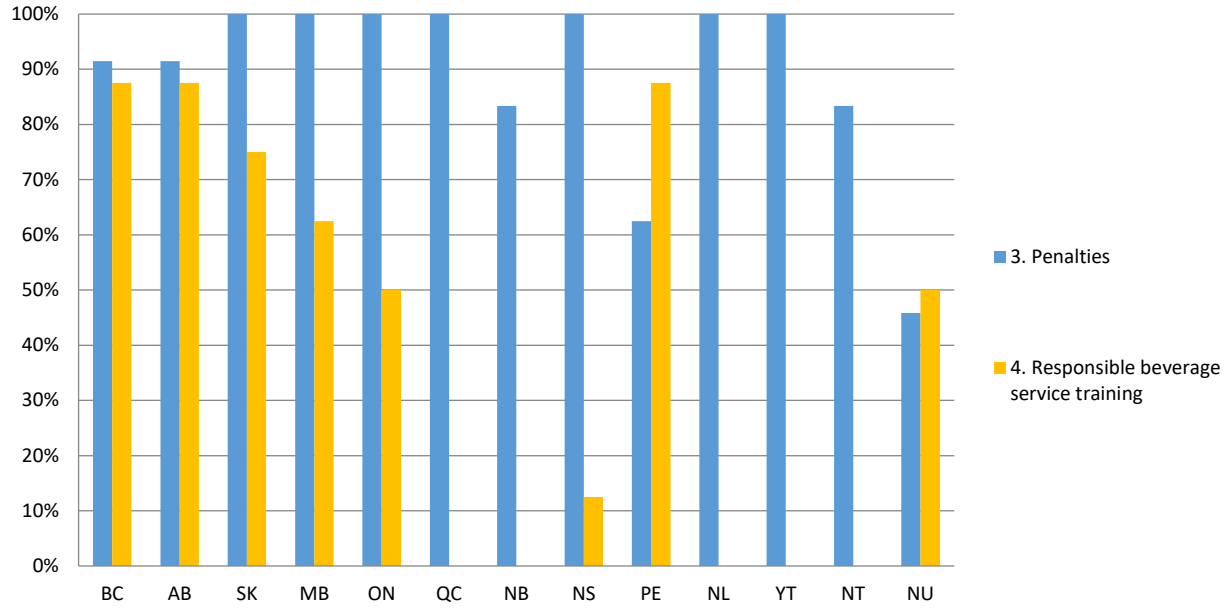
Penalties

All jurisdictions had some kind of penalty system with fines for service to intoxicated or underage customers. Seven jurisdictions received 100% on this indicator and four were between 83% and 92% for implementing penalties that were commensurate with the violations, escalated with frequency and severity, and were tracked and publicly reported. PE (62.5%) and NU (45.9%) had the least well developed penalty systems, see Figure 24.

Training programs policy status

There was the greatest variation in scores for indicators assessing the status of Responsible Beverage Service Programs with scores ranging from very high for BC, AB and PE (88%) down to 0% for QC, NB, YT, NT, and NL. Six jurisdictions had a mandatory server training program but it often did not apply to all license classes and event types. Additionally, the quality of these programs varied across jurisdictions, see Figure 24.

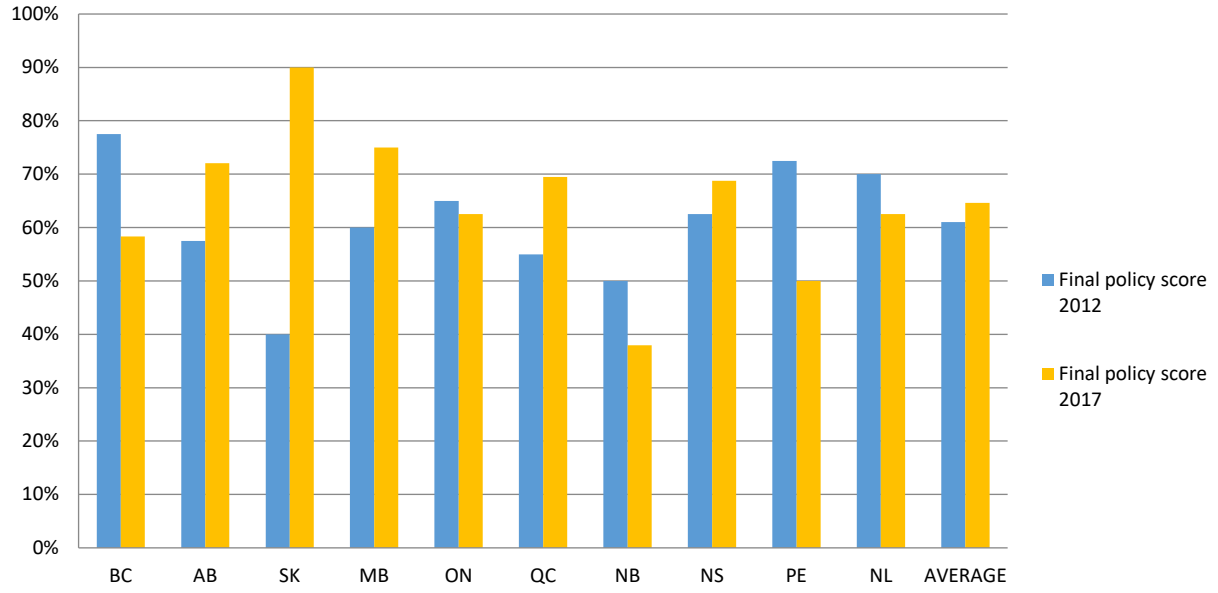
Figure 24: Liquor Law Enforcement: Indicator Scores by Province and Territory, 2017 (Figure 2 of 2)



Liquor Law Enforcement: 2012 vs 2017 comparison

There were fairly significant changes to some of the domain indicators for Liquor Law Enforcement between 2012 and 2017. However, the assessment of mandatory responsible beverage service programs was the main area of overlap across assessment periods. While the changes limit direct comparisons across time, both assessment periods examine programs that aim to enhance liquor law enforcement and evaluate the jurisdictional policies against best practices at the time of assessment. The average overall provincial scores remained similar. The scores in half of the jurisdictions improved with the most notable increase in SK and the other half decreasing with the most significant decrease in score in BC, see Figure 25.

Figure 25: Liquor Law Enforcement: Domain Scores by Province, 2012 vs 2017



Note: policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

LIQUOR LAW ENFORCEMENT: PROMISING PRACTICES

- SK and AB's RBLE program is informed by outlet level incident data which is systematically collected from police, for both on and off-premise outlets. For example, place of last drink information and assaults may factor into a licensees risk level if charges were brought against an establishment.
- All jurisdictions had some type of penalty system in place with fines for service to intoxicated or underage customers.
- Eight jurisdictions had Mystery Shopper programs to assess compliance with laws prohibiting service to underage customers.
- Responsible Beverage Service Training was mandatory for all licensed events and venues in BC, AB, SK and PE.

LIQUOR LAW ENFORCEMENT: AREAS FOR IMPROVEMENT

- While many jurisdictions had some components of risk-based licensing and enforcement in place, the majority only included basic licensing criteria with little or no focus on the crucial risk-based enforcement components i.e. conducting on-going risk-assessments in order to target enforcement at higher-risk premises.
- Very few jurisdictions systematically incorporate incident data on place of last drink information and assault data to conduct on-going assessments of risk.
- QC, NB, NL, YT, and NT had no mandatory Responsible Beverage Service Training in place for all venue types and levels of staff although it was encouraged in several of these jurisdictions.

Indirect Domains

8. Alcohol Control System

Alcohol Control System Domain Evidence

Government run control systems can be effective in restricting alcohol consumption and related harms as they provide a mechanism for implementing some of the evidence-based strategies outlined in this report, principally through controls on pricing, physical availability, youth access and marketing (152). All Canadian jurisdictions retain some government control over the distribution and/or sale of alcohol. Privatisation and deregulation usually lead to a greater number of liquor outlets competing to sell alcohol and for longer hours. It has also been associated with less rigorous interventions to prevent sales to minors or intoxicated patrons. The resulting increase in competition leads to higher average prices but lower minimum prices along with greater advertising and marketing efforts (41). Having a government control system, however, does not guarantee that public health and safety oriented policies will be implemented.

In Canadian jurisdictions where retail monopolies have been dismantled (e.g. Alberta) or partial privatisation has been introduced, increases in consumption and harms have usually in been observed (19, 50, 153-155). Comprehensive and systematic reviews confirm that privatisation of retail alcohol sales is usually associated with substantial increases in per capita alcohol consumption (16, 156). Ramstedt (2002) also found evidence that re-monopolization is associated with a decrease in alcohol-related harms including suicides, falls and motor vehicle collisions. Alcohol-attributable hospital admissions for acute intoxication, alcoholism and alcohol psychosis decreased, while assaults were observed to increase in three of four age groups (157).

More recently, a series of three articles studied the partial privatisation of the government alcohol retail monopoly in British Columbia (50, 158, 159). These studies concluded that an increasing proportion of liquor stores in private ownership assessed across 89 local health regions was associated with increased overall per capita alcohol consumption (50) and, further, with increased alcohol-attributable deaths (158) and hospital admissions (159). In the latter study, this relationship held after controlling for changes in alcohol pricing policies. Studies from several countries show that compared with private off-premise outlets, sales staff in government owned stores are more likely to check for customer's age ID (e.g. Harding et al, 2016)(160).

A recent study estimated the potential health and safety consequences of disbanding the government retail monopoly in Sweden (161, 162). The report studied two possible scenarios: (1) allowing alcohol sales in private liquor stores and (2) allowing alcohol sales in grocery stores. The projected health impacts of both scenarios were dire. In the first scenario, it was estimated that privatisation would result in 41% more alcohol-caused deaths, 22% more alcohol-caused hospital stays and 34% more drink-driving events. In the higher-density second scenario, alcohol would be responsible for a 66% increase in the number of deaths and a 33% increase in the number of hospital stays due to drinking.

There is also evidence that privatisation increases the acceptability of alcohol use (163). Alcohol monopolies also serve as an ideal vehicle for counter advertising. While social marketing programs have shown mixed effects, evidence shows they contribute to raising public awareness and play an important supportive role in a comprehensive alcohol strategy (15, 16).

Alcohol Control System Domain Scoring

Our assessment of alcohol control system policies in the 10 provincial and three territorial jurisdictions is based on how well they reflect these four main areas: whether the off-premise retailing system is publicly or privately run; the existence of alcohol sales beyond on- and off-premise outlets including delivery services, online shopping, ferment on premise outlets and ferment at home kits; and the relative emphasis of the control system on product promotion versus health and safety. In the case of NU, special consideration was taken of the substantial proportion of the alcohol market that is distributed illegally and therefore not under any formal control by government. The Canadian Substance Use Costs and Harms project (2018) estimated there was approximately three times more illicit alcohol being consumed in NU than the amount that was distributed from official legal sources (2).

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: ALCOHOL CONTROL SYSTEM

The following policies represent the current gold standard best practices for type of alcohol control system. To get top marks a jurisdiction needed to implement the following policies and practices:

1. Type of off-premise retailing system (up to 4 points): All off-premise liquor outlets are publicly owned and managed with no private stores.

2. Alcohol sales beyond on-premise and off-premise outlets (up to 1 points): Liquor regulations do not permit any sales beyond traditional on and off-premise channels, such as online sales, liquor delivery services, ferment on premise outlets, or ferment at home kits.

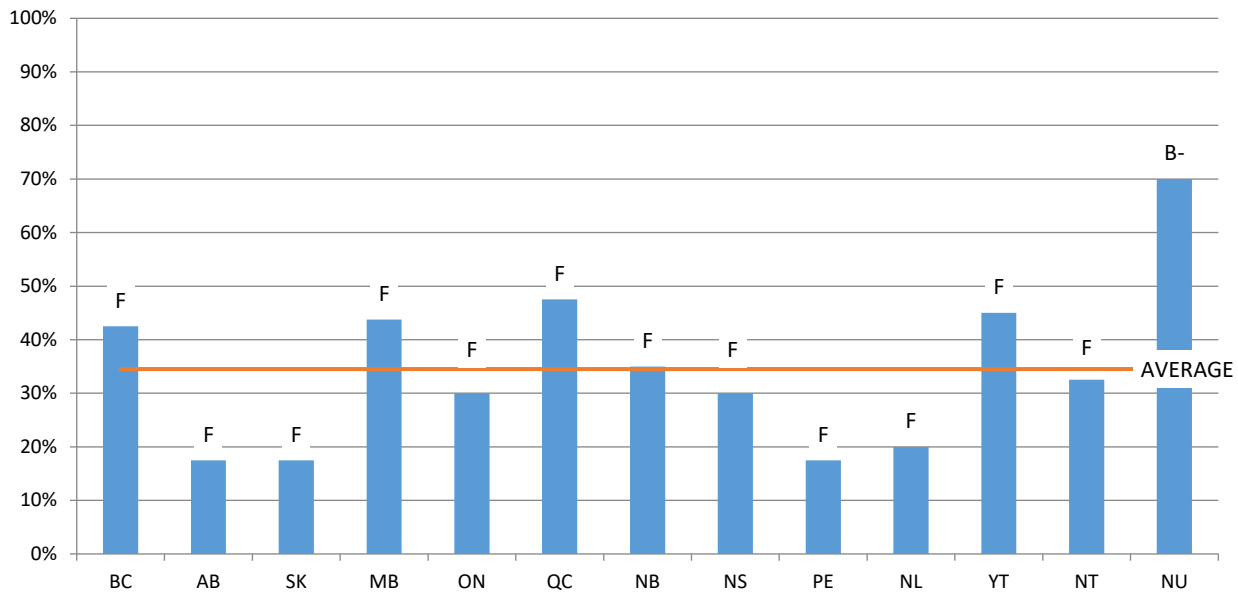
3. Relative emphasis on product promotion vs health and safety (up to 3 points): There is legislated earmarked funds to support harm prevention initiatives and/or promote health and safety messaging. Protection of public health and/or safety must be explicitly stated as an objective of the alcohol control system (both for the retailer and the regulator).

4. Ministry overseeing alcohol retail and control (up to 2 points): The alcohol retailer and regulator are both overseen by a ministry that primarily focuses on health and/or public safety. In addition, there is full separation between the government retailer (i.e. alcohol distributor) and regulator (i.e. policy, licensing and control).

Alcohol Control System Domain Results

Scores across the provinces and territories for the control system domain were very low overall with NU achieving the highest grade of 70% (B-). The next highest scores were below half marks with BC, MB, YT, and QC scoring between 42%-47.5% (F). AB, SK, PE and NL had the four lowest scores ranging from only 17.5% to 20% (F) of optimum. The average score for this domain across all jurisdictions was 34.5% (F), see Figure 26.

Figure 26: Control System: Domain Scores by Province and Territory, 2017



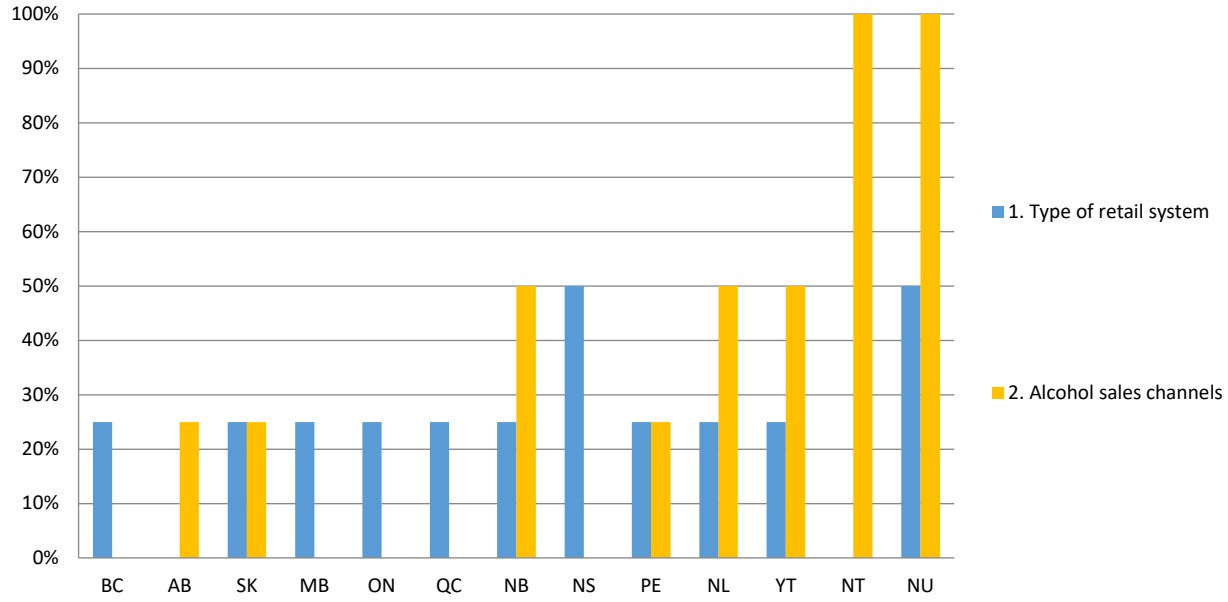
Type of off-premise retailing system

NS and NU have retained greatest government control over their liquor retail systems (although scoring only half marks each for this indicator) whereas neither AB nor NT have government-run liquor stores earning them a score of zero. NU's score was reduced for this indicator since, as noted above, a large proportion of alcohol in this jurisdiction was obtained outside legal channels, see Figure 27.

Alcohol sales beyond on-premise and off-premise outlets

NU and NT have the most restrictions on the types of permitted outlets beyond on-premise and off-premise sales as they do not permit sales by internet or home-made liquor and as a result scored full marks (100%) on this indicator. However, it is important to note that NU has historically had substantial difficulty in controlling illicit sales outside of official channels (71-73). NS, BC, ON, and MB all scored zero on this indicator as they permit alcohol sales across a broad range of sales channels including online and direct to consumer delivery, see Figure 27.

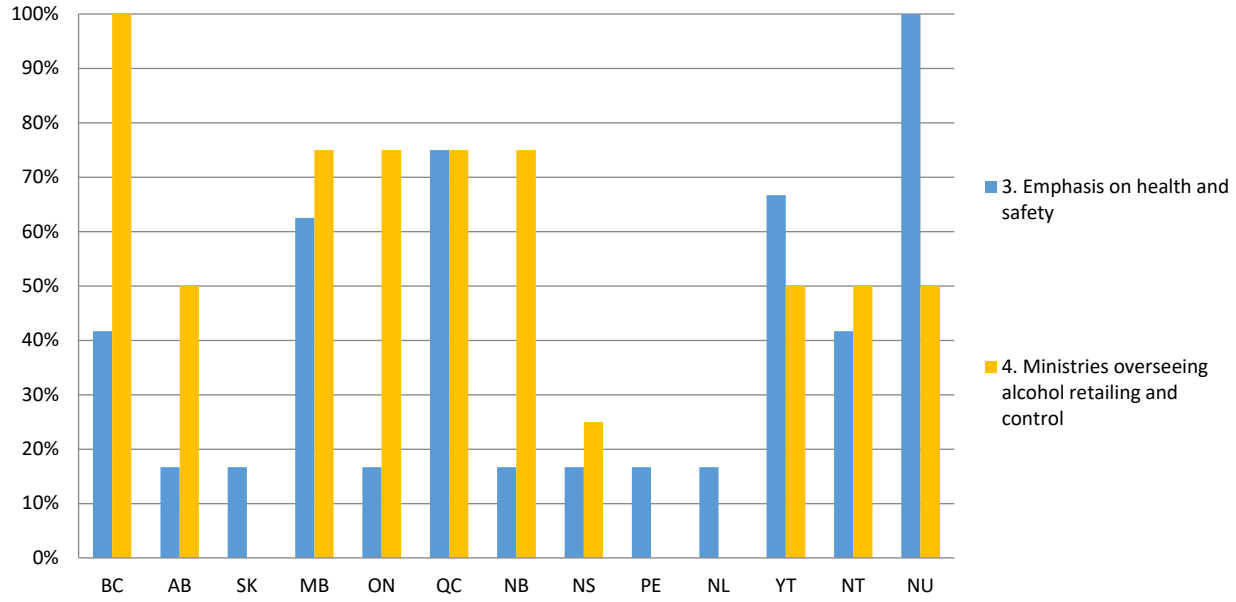
Figure 27: Control System: Indicator Scores by Province and Territory, 2017 (Figure 1 of 2)



Relative emphasis on product promotion vs health and safety and the oversight of the alcohol control system

There was substantial variation in the extent to which jurisdictions were committed to public health and safety objectives, whether through earmarked funding to support health and safety messaging and initiatives, their mandate, or positioning in a particular government ministry. NU had the strongest emphasis on public health and safety versus product promotion, earning them a score of 100% on this indicator. NU was followed by QC (75%); both of these jurisdictions have a form of earmarked funding to support prevention and health and safety messaging. Seven other jurisdictions scored 16.7% on this indicator due to their lack of earmarked funding to support prevention and health and safety messaging and/or health and safety not being explicitly stated in their government retailer and or regulator mandates (AB, SK, ON, NB, NS, PE, NL). BC was the only jurisdiction whose alcohol control system (both the retailer and regulator) was positioned within a ministry unequivocally concerned with public health and/or safety earning full marks on this indicator. Three other jurisdictions, PE, NL, and SK reported solely to finance resulting in a score of zero, see Figure 28.

Figure 28: Control System: Indicator Scores by Province and Territory, 2017 (Figure 2 of 2)



Alcohol Control System: 2012 vs 2017 comparison

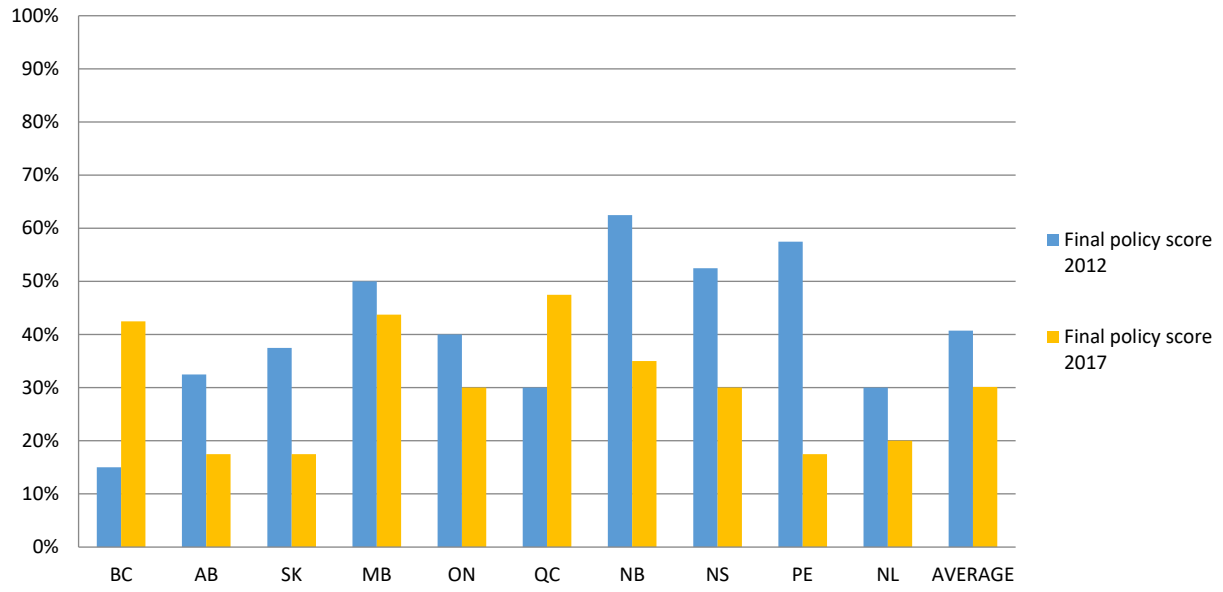
The average score across the provinces for this policy domain was very low across both assessment periods. The score for this domain dropped from 41% (F) in 2012 to 30.1% (F) of optimal practice in 2017. The drop reflects an increasing trend towards deregulation and privatisation of alcohol markets in Canada, which further affects the government's ability to implement evidence-based policy levers related to pricing, availability and marketing. BC's liquor control system score greatly improved in 2017 mainly as a result of a change in ministerial oversight, switching from the Ministry for Small Business and Red Tape Reduction in 2012 to the Ministry of Attorney General in 2017 (15% vs 42.5%), see Figure 29.

While the four main indicators selected for this domain provide an essential snapshot of the state of alcohol control in a jurisdiction, they do not fully capture all of the recent developments associated with government initiatives to "modernize" alcohol retail environments in several jurisdictions. Since 2012 the trend toward "modernization" (a code for privatisation and deregulation) has continued, as is evident, for example, in SK, ON, BC, and to a lesser degree in several other jurisdictions. These initiatives have typically included the privatisation of government liquor retail outlets, the expansion of the craft industry and alcohol sales through other private channels such as grocery stores, farmers' markets and various other licence types.

In ON alcohol was introduced into large grocery stores in 2015 with about 390 outlets in place in November 2018, and the aim to open 450 new outlets, an increase of 22% of off-premise venues. Furthermore, there is a proposal to allow corner stores to sell beer, wine and spirits – the latter involving a dramatic transformation of alcohol retailing in this province.

In BC alcohol is now sold in grocery stores and restaurants are able to serve alcohol with no food purchase requirements after 9 PM. There are 'happy hours', prices have gone down because of the extra competition in both bars and liquor stores, alcohol consumption has increased surpassing the average consumption rate for Canada, and alcohol-related harms have been going up for the last several years (164).

Figure 29: Control System: Domain Scores by Province, 2012 vs 2017



Note: policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

ALCOHOL CONTROL SYSTEM: PROMISING PRACTICES

- The BC alcohol regulator and retailer both uniquely report to a ministry concerned with public safety.
- NU has an explicit focus on improving health and safety outcomes through comprehensive liquor policies which were recently strengthened as a response to the high levels of alcohol harm reported in this territory.
- QC and MB have dedicated funding programs for supporting social responsibility initiatives including research and treatment centres.
- AB, NL, NT, and NU do not allow alcohol sales through ferment on premise outlets and eight of 13 jurisdictions do not allow online alcohol sales.

ALCOHOL CONTROL SYSTEM: AREAS FOR IMPROVEMENT

- Nearly all jurisdictions have weakened government control over local alcohol markets thus reducing their ability to influence evidence-based alcohol policies. No jurisdiction has retained a government monopoly over more than 35% of off-premise alcohol sales.
- 11 of 13 jurisdictions allow sales beyond on- and off-premise outlets such as online ordering, liquor delivery services, home brew kits or ferment on premise outlets thereby broadening access to alcohol.
- The controls systems of very few of the jurisdictions have a strong emphasis on health and safety mandated in the objectives of their control systems with SK, PE, and NL having no separation between the alcohol regulator and retailor and reporting to non-health-focused ministries.

9. Provincial and Territorial Alcohol Strategy

Alcohol Strategy Domain Evidence

Provincial and territorial alcohol strategies can help guide efforts to coordinate and prioritize alcohol-focused policy initiatives and interventions under government leadership, with the overarching goal of reducing harm from alcohol consumption (28, 165). Provincial and territorial strategies should aim to address goals outlined in the WHO Global Strategy on Alcohol (2010) and the 11 domains highlighted in this document. These include health services' responses, community action, pricing and marketing policies, other control policies, leadership, paired with a strong monitoring and evaluation framework (28). Babor et al. (2010) note the importance of coordinated and focused alcohol policy, drawing on effective health policy development in France and the USA as examples. Of key importance, alcohol strategies must avoid the influence of the alcohol industry, which have plagued the implementation of jurisdictional alcohol strategies elsewhere (166, 167).

The Canadian Public Health Association has called on all levels of government (federal, provincial/territorial, and municipal) to engage in creating coordinated, evidence-based, and effective multi-sectoral strategies (29). Evaluations of alcohol strategies are limited and challenging to complete. This is due to the complexity of the components of a strategy and how they interplay to produce change, as well as prevailing trends in other indicators, outside of the policy, that may shape alcohol-related harm. One recent evaluation of the effectiveness of Scotland's Alcohol Strategy in reducing alcohol-related harm was inconclusive, due, in part, to the observation that reductions in alcohol-related harms were likely a result of broader socioeconomic fluctuations rather than the implementation of the strategy, per se (168). It was also noted that there had been legal impediments, which were recently overcome, to the recommended introduction of a minimum unit price for alcohol. An evaluation of England's first national alcohol strategy was praised for its focus on surveillance and emphasis on evidence-based treatment models; yet, roundly criticized for a lack of new funding to support implementation, weak leadership, a failure to define measurable targets to track progress, and a lack of emphasis on the most effective, evidence-based strategies (169). As such, the mere

presence of a strategy without the appropriate support or levers for action must be avoided. Despite the mixed evidence, a comprehensive alcohol strategy supports the effectiveness of other alcohol policy levers by offering an integration and coordination of jurisdictional efforts, coupled with appropriate monitoring and evaluation.

Alcohol Strategy Domain Scoring

Our assessment of alcohol strategies and related policies in the 10 provincial and three territorial jurisdictions is based on how well they reflect these three main areas: existence of standalone alcohol strategy in each jurisdiction; the range of evidence-based policies included in the strategy and how the strategy was developed and implemented.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: ALCOHOL STRATEGY

The following policies represent the current gold standard best practices for a provincial or territorial strategy for alcohol. To get top marks a jurisdiction needed to have implemented the following strategy components:

1. Main focus of the provincial or territorial strategy (up to 2 points): Jurisdictions have an alcohol-specific strategy document.

2. Range of evidence-based policy recommendations within the strategy (up to 4 points): The strategy includes a wide range of population level evidence-based alcohol control interventions and policies including: pricing; physical availability; impaired driving countermeasures; marketing and advertising controls; minimum legal drinking age; screening, brief intervention and referral programs; and enforcement.

3. Implementation of the provincial or territorial strategy (up to 4 points): There is dedicated funding to support the strategy that includes at least one alcohol specific policy recommendation[7] and there is an identified leader to facilitate implementation of the strategy. The strategy was developed free from alcohol industry input, has been updated no more than five years ago and includes rigorous mechanisms in place to monitor the implementation and effectiveness of the alcohol strategy[8].

Alcohol Strategy Domain Results

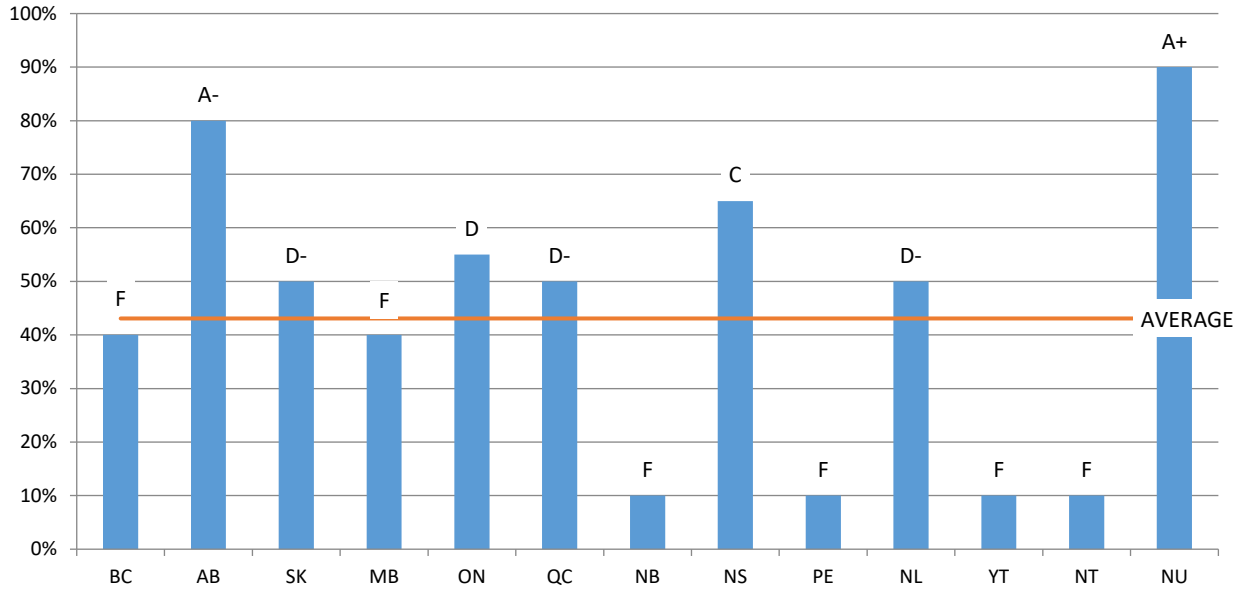
The top scoring jurisdictions for this domain included NU (90.0%, A+) and AB (80.0%, A-) reflecting their wide range of evidence based policy recommendations. The lowest scoring jurisdictions were YT, NT, PE, and NB, all earning 10% (F) on this domain. These low scores were mostly due to the fact that these jurisdictions did not have alcohol specific strategies and the broad wellness, mental health and addictions strategies did not include recommendations for targeted approaches to

[7] Note: Strategies that did not include alcohol specific recommendations were not assessed on implementation and received a score of zero for this indicator.

[8] Note: It was beyond the scope of this project to assess implementation of each provincial or territorial strategy, we therefore assessed the rigor with which each jurisdiction monitors the implementation of their respective strategies.

reducing alcohol consumption and harms. The average score for this domain across all jurisdictions was 43.1% (F), see Figure 30.

Figure 30: Provincial and Territorial Alcohol Strategy: Domain Scores by Province and Territory, 2017



Main focus of the provincial or territorial strategy

NU, AB, NS, and MB are the only jurisdictions to have an alcohol specific strategy, earning them 100% on this indicator. It should be noted that these strategy documents have received varying levels of government support and endorsement. For example, NS's alcohol strategy document was never funded or formally adopted by the provincial government. All other jurisdictions have other broad health related strategies that included alcohol to some degree, earning them 50% on this indicator, see Figure 31.

Range of evidence-based policy recommendations within the strategy

The range of interventions targeted at reducing harm specific to alcohol can be linked to the focus of the strategy. Jurisdictions with a more focused strategy on alcohol tended, on average, to have a greater number of recommended interventions targeted at reducing population level consumption of alcohol and related harms. Only one province (AB) scored 100% on this indicator by including a range of evidence based policy interventions in their strategy that covered all seven of the direct policy domains[9]. MB, NS and NU came close at 75.0% by having five of the seven direct policy domains covered off in their strategy recommendations. Four jurisdictions (NB, PE, YT, and NT) did not include any recommendations in their strategies that fall within the seven

[9] The 7 direct policy domains include: pricing and taxation; physical availability; impaired driving countermeasures; marketing and advertising controls; minimum legal drinking age; screening, brief intervention and referral programs; and liquor law enforcement programs and initiatives.

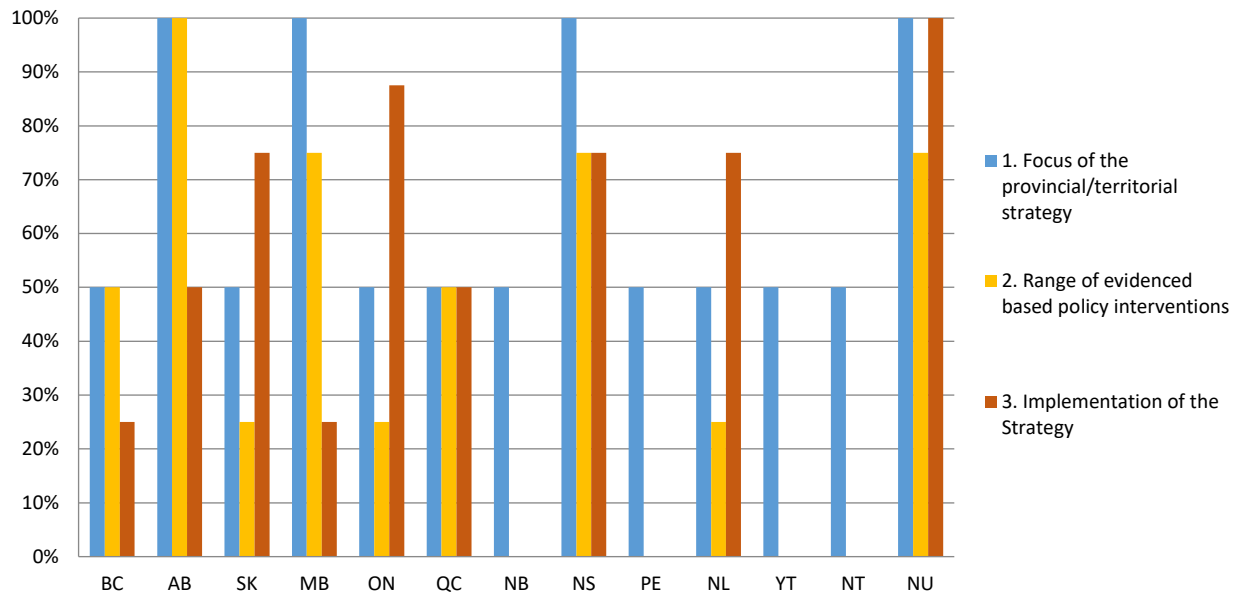
direct policy domains thus scored 0% on this indicator, see Figure 31. The inclusion of alcohol specific policy recommendations in a strategy document is important as they help ensure the strategy is implemented in a way that is evidence informed and actionable. While higher level strategy goals are important, they are often broadly defined and more difficult to translate into action as they are subject to interpretation. Without identifiable and actionable policy recommendations there is the risk that weaker but more politically popular policies, such as education, will be implemented. Additionally, vested interests can also derail or weaken the implementation of stronger policies if the strategy is not clear on what policy interventions need to be put in place.

Implementation of the provincial or territorial strategy

NU achieved a perfect score on this indicator (100%) for having a recent, alcohol-specific strategy, dedicated funding to support their strategy, an identified leader and a plan for reoccurring strategy implementation assessments. ON had the second highest score (87.5%) although they were one of the jurisdictions penalized for having a strategy that has not been updated since 2011.

Ten of the provincial or territorial strategies are at least partially funded and 11 of the strategies have identified leaders responsible for overseeing the implementation of the strategy. All strategies, with the exception of QC's, recognize the importance of evaluation although not all strategies include reoccurring implementation assessments. The majority (9 out of 13) of strategies have been developed or updated in the past five years and nearly all strategies were developed without industry participation with the exception of MB who were penalized for having industry involvement in their strategy development. NB, PE, YT, and NT scored 0% on this indicator as their strategies do not include any recommendations based on the seven direct evidence-based policy domains. These jurisdictions were penalized because, while it is important to have a strategy in which alcohol is addressed, without identifiable and actionable recommendations pertaining to alcohol included in the strategy it is unlikely to be effective at reducing alcohol-related harms, see Figure 31.

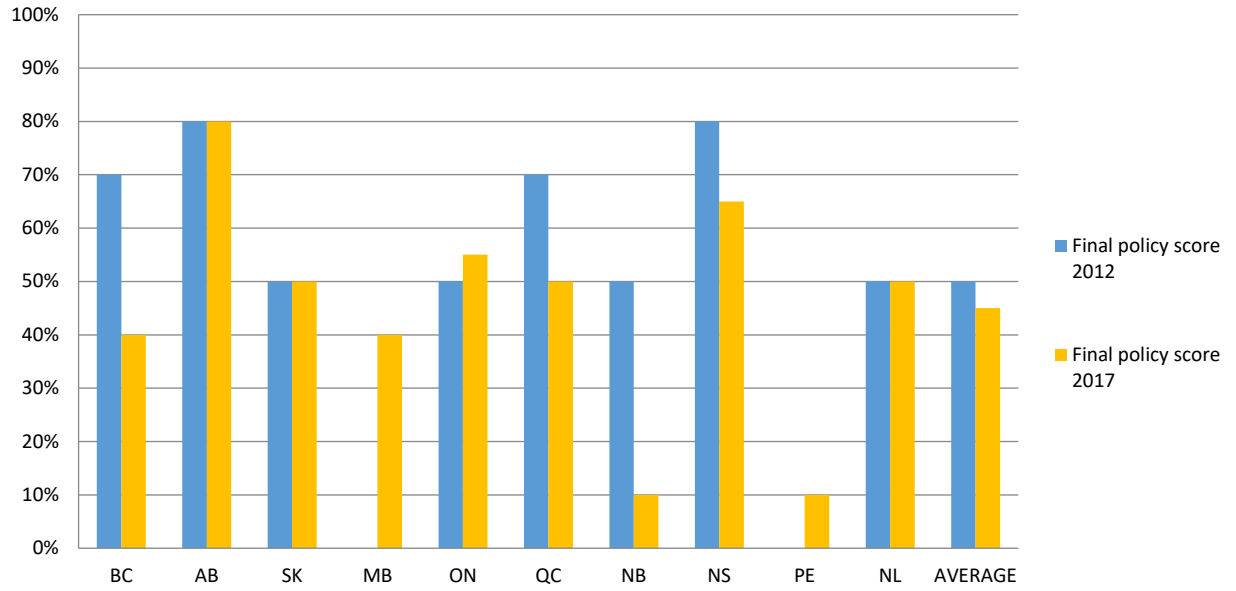
Figure 31: Provincial and Territorial Alcohol Strategy: Indicator Scores by Province and Territory, 2017



Alcohol Strategy: 2012 vs 2017 comparison

Since 2012 there has been significant interest at the provincial and territorial levels in tackling alcohol issues through an organized strategic approach. Following the 2013 policy assessment, MB has developed an evidenced-based alcohol strategy that has guided policy change in their province (e.g. introduction of new minimum pricing policy) (3). Similarly, NU has released their action plan *Taking Steps to reduce Alcohol-related Harm in Nunavut* which takes an all-of-government approach to addressing alcohol issues. ON announced the development of an alcohol strategy in 2015. However, no strategy was launched, and since that time there has been a change in provincial government. The new ON government has not commented on the development of an alcohol strategy for ON at this time despite making a number of regulatory changes concerning the availability of alcohol. Finally, NL has begun initial consultations to inform a future provincial alcohol plan. While these plans are promising, the average domain score has decreased slightly from 50.0% in 2012 to 45.0% in 2017 due to a continued lack of funding for strategy implementation and the need for updated, alcohol-specific strategies in several jurisdictions, see Figure 32.

Figure 32: Provincial and Territorial Alcohol Strategy: Domain Scores by Province, 2012 vs 2017



Note: policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

ALCOHOL STRATEGY: PROMISING PRACTICES

- AB's alcohol strategy took a comprehensive approach to tackling alcohol issues by including recommendations from all seven evidence-based direct policy domains. Similarly, MB, NS, and NU's strategy documents include recommendations from 5 of the 7 direct evidence-based policy domains.
- NU scored top marks (100.0%) for implementation of their current alcohol strategy by having funding support, an identified strategy leader, a recommendation to evaluate the strategy and having developed the strategy independently from the alcohol industry.
- Almost all provincial and territorial strategies relating to alcohol are relatively recent, having been developed or updated in the past five years. Additionally, jurisdictions that have not yet developed an alcohol specific strategy, or that have older less specific strategies, are undergoing the process of updating and/or creating alcohol specific strategies. For example, NL has begun initial consultation to inform a provincial alcohol plan.

ALCOHOL STRATEGY: AREAS FOR IMPROVEMENT

- Only two jurisdictions (AB and NS) include recommendations pertaining to the control and regulation of alcohol marketing in their strategy document recommendations.
- In developing their provincial alcohol strategy MB included representation from the alcohol industry on their steering committee, including representation from the Manitoba Hotel Association, Restaurants Canada, and Manitoba Restaurant & Foodservice Association.
- ON announced the development of an alcohol strategy in 2015 which is yet to be released. Concrete steps are encouraged to make this public, and initiate implementation.
- The provincial or territorial strategies in NB, PE, YT, and NT do not include specific evidenced-based targeted interventions at reducing consumption and related harms. This is likely due to the fact that alcohol is encompassed under broad wellness, mental health and addiction strategies.
- Not all strategy documents have been endorsed by government or received dedicated funding support. Without government support progress on the strategy is less certain and likely to be a challenge.

10. Monitoring and Reporting

Monitoring and Reporting Domain Evidence

An essential component of any alcohol harm reduction strategy includes the routine and comprehensive monitoring of changes in alcohol consumption, drinking patterns and alcohol-related harms over time (28, 132, 170, 171). Monitoring is a systematic and continuous process to collect, analyze and interpret up-to-date and relevant information from various data sources over time to assess policy or program effectiveness (172, 173). Public reporting is the process of making performance data and information more accessible to the public in an effort to be more transparent and accountable. In our previous report on alcohol policy implementation in Canadian jurisdictions (3, 4), we concluded that less than half the preventive potential of evidence-based alcohol policies was being realised in the country overall. Monitoring and reporting of alcohol-related harms is a key facilitator of change or performance improvement (or 'as a facilitator of learning and knowledge exchange across jurisdictions'), as such we have included it as its own domain in the comparative policy analysis. Where feasible, monitoring should incorporate measurement across population subgroups (e.g. age, sex, gender, income, and urban versus rural) to provide insight into policy reach and effectiveness for priority populations (174, 175). This is particularly important for directing limited resources towards areas with the greatest need.

A comprehensive alcohol monitoring and reporting system will inform and facilitate effective policy and enhance comparability and interpretation across jurisdictions (28, 170, 171). Effective dissemination of the results of monitoring (i.e., public reporting) is important for demonstrating accountability to stakeholders and can serve to raise the awareness of the contribution of alcohol to a wide range of health conditions. Publicly reporting monitoring and evaluation results may also stimulate improvement efforts, as demonstrated in health care quality and safety efforts (176-178). Strong leadership and sufficient resources are required to support monitoring and reporting efforts (28, 29).

Publicly highlighting rates of specific health and social harms associated with alcohol use can help raise awareness of the need for improved implementation of policies to reduce these harms. Levels of awareness of some serious harms form alcohol, such as elevated risk of some cancers, are low in Canada (179). Low awareness of risks from alcohol has been shown to be associated with reduced public support for evidence-based alcohol policies (180).

Monitoring and Reporting Domain Scoring

Our assessment of monitoring and reporting policies in the 10 provincial and three territorial jurisdictions is based on how well they reflect these three main areas: the comprehensiveness and accessibility of the reporting mechanisms and whether they are supported through designated funds and an identified leader.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: MONITORING AND REPORTING

The following policies represent the current gold standard best practices for policies related to alcohol monitoring and reporting. To get top marks a jurisdiction needed to have implemented the following policies and practices:

1. Comprehensiveness of reporting mechanisms (up to 4 points): Funding or support is provided by jurisdictions to conduct systematic tracking of key alcohol-related indicators at the provincial or territorial levels including: per capita alcohol consumption, alcohol-related hospitalisations, deaths and crimes.

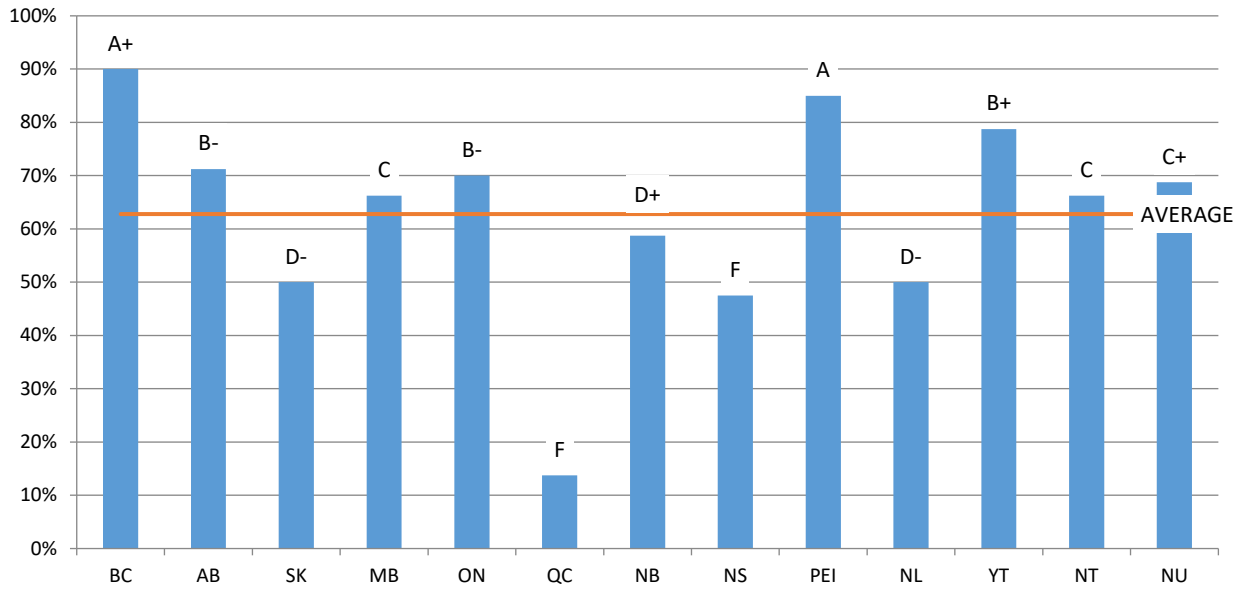
2. Accessibility of reporting (up to 4 points): Reporting on alcohol consumption, alcohol-related hospitalisations, deaths and crime is made available to the public at least every two to three years through a centralized system.

3. Leadership and support (up to 2 points): Jurisdictions have an identified leader responsible for monitoring alcohol harm and key indicators and specific funding or staff resources to support alcohol monitoring are available.

Monitoring and Reporting Domain Results

Many jurisdictions scored well overall on their policies and practices related to systematic monitoring and reporting of alcohol-related indicators with BC (90.0%, A+), PE (85.0%, A), and YT (78.8%, B+) scoring the highest. Scores for the other jurisdictions ranged between 71.3% (B-) to 47.5% (F) with QC scoring lowest with just 13.8% (F). The average score for this domain across all jurisdictions was 62.8% (C-), which is the highest average score of all the 11 domains, see Figure 33.

Figure 33: Monitoring and Reporting: Domain Scores by Province and Territory, 2017



Comprehensiveness of reporting mechanisms

Eleven out of the 13 jurisdictions either had comprehensive reporting systems in place or were providing funding or other resources to track key indicators such as per capita alcohol consumption, alcohol-related hospitalisations and emergency department visits, deaths and crimes and attained scores ranging between 75.0%-100.0% on this indicator. NL scored 50.0% on this indicator as they do not track or provide support for systematic tracking of alcohol-related deaths and crimes. QC scored lowest on this indicator (25.0%) as they currently only track data on per capita alcohol consumption, see Figure 34.

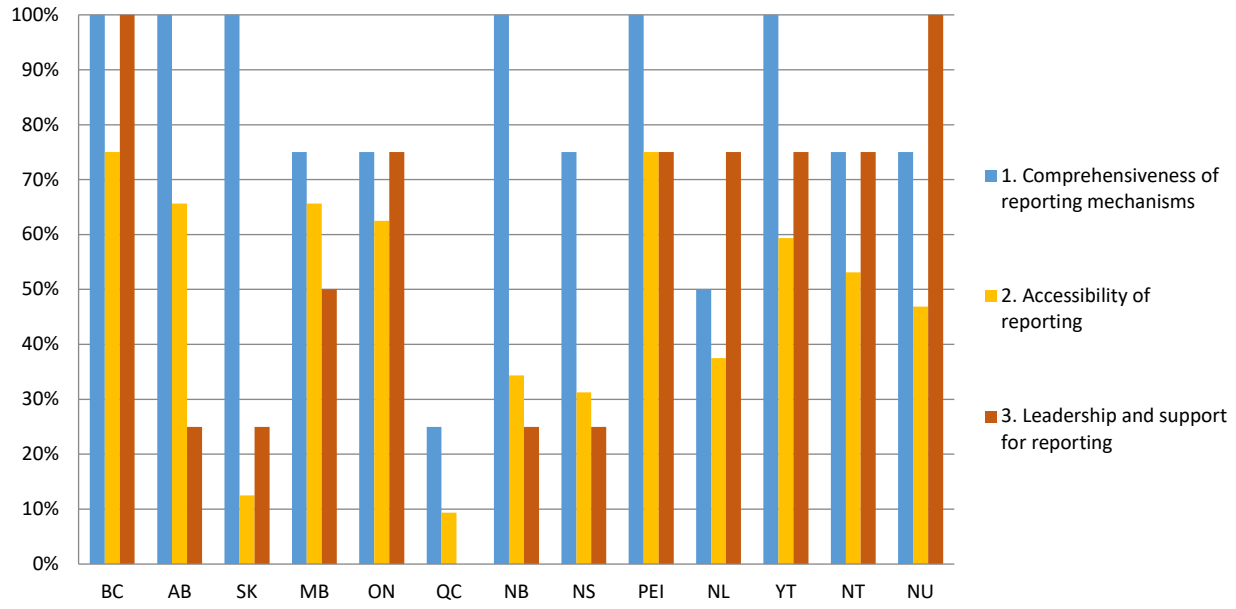
Accessibility of reporting

None of the provinces and territories received a perfect score on the overall accessibility of their monitoring and reporting data with BC and PE both attaining 75.0% of the optimum followed by AB and ON at 65.6% for this indicator. QC and SK scored lowest with 9.4% and 12.5% respectively. None of the jurisdictions have a centralized reporting system although BC and PE provide support for tracking key data and NS conducts their own tracking all at fairly regular intervals. Of the two jurisdictions with the lowest scores on this indicator, SK currently only conducts internal reporting across different government ministries at unspecified intervals and while QC does have some public reporting of their monitoring data, it did not cover the key alcohol indicators identified in this assessment and was not done on a regular basis.

Leadership and support

More than half of the jurisdictions showed evidence of some form of funding or staff support for monitoring and reporting efforts with BC and NU scoring full marks on this indicator. ON, PE, NL, YT and NT all scored 75.0% of the optimum for the resources available for supporting alcohol monitoring although BC, NU and MB were the only jurisdictions with identifiable leaders (such as a designated authority, agency or committee) responsible for these initiatives. In QC there was no evidence of dedicated funding or leadership for monitoring and reporting on alcohol-related harms resulting in the only score of zero for this indicator, see Figure 34.

Figure 34: Monitoring and Reporting: Indicator Scores by Province and Territory, 2017



Monitoring and Reporting: 2012 vs 2017 comparison

Based on the evidence which identifies monitoring and reporting as an important component to facilitate evidence-based policies and feedback from stakeholders, the Monitoring and Reporting domain was added to the list of policy areas assessed in 2017. It is therefore not possible to draw comparisons with the extent of implementation of best practices in 2012.

MONITORING AND REPORTING: PROMISING PRACTICES

- Eleven of the 13 jurisdictions have either comprehensive systems in place to track key alcohol-related indicators such as per capita consumption, hospitalisations, deaths and crime or were providing funding for other agencies to collect these data.
- Both BC and PE have public reporting of alcohol indicator data that is made available at regular intervals.
- BC and NU both have specific ministries or departments in charge of data tracking with designated funding in place to support these efforts.
- A national internet resource is being established in early 2019 by the Canadian institute for Substance Use Research and the Canadian Centre on Substance use and Addiction funded by Health Canada that will track annual rates of alcohol-related health and crime harms and costs for all jurisdictions.

MONITORING AND REPORTING: AREAS FOR IMPROVEMENT

- NL and QC had the weakest reporting mechanisms in place with little or no evidence of key alcohol-related indicators being tracked and with QC's tracking currently limited to per capita consumption.
- SK only reports internally on key indicators such as per capita consumption, hospitalisations, deaths and crime with no public reporting available presently.
- No jurisdiction implements a fully centralized alcohol indicator reporting system. Reporting of alcohol harm indicators is mostly fragmented and incomplete.

11. Health and Safety Messaging

Health and Safety Messaging Domain Evidence

Providing accurate and timely information on alcohol-related risks is an important component of a comprehensive strategy on alcohol. Increasing awareness of health and safety risks of alcohol consumption through warning labels and signs can be considered helpful in creating a climate of opinion in which more effective alcohol policies could be implemented (181).

Warning labels on alcohol containers and point of sale warning signs are considered a good policy practice because of their potential to raise awareness of alcohol as a health issue and to support the adoption of other more directly effective policies. As an isolated strategy, there is limited evidence of effectiveness for warning labels (15, 16, 31, 182). Almost all published research is from the 1980s in the U.S. focusing on the introduction of small labels on containers and signs in bars advising of risks from alcohol for pregnant mothers, drivers, risks of dependence and some serious diseases. These labels and signs increased conversations about the health risks of alcohol (183) and were associated with slightly reduced likelihood of drinking and driving (184). Warning labels and signs in bars also have a unique advantage as a medium for communicating health information about

alcohol; they are most frequently seen and remembered by the heaviest drinkers (185).

Warning labels and signs may be an important tool for raising awareness of alcohol as a risk factor for chronic diseases and other harms, and serve a basic consumer right, to be informed (186, 187). There is limited public awareness of the growing evidence linking even low levels of alcohol consumption with increased risk of cancer (188-190). Research on message content indicates that unambiguous information on the effect of alcohol consumption on liver cancer increased negative perceptions of the product (189-191). Warning labels about cancer were found to increase participants' intentions to drink less (191, 192) and reduce their drinking speed (193). However, a small scale study in UK found that posters and other responsible drinking messages were poorly attended to in bar environments (194). Vague "Drink responsibly" messages may also be used to promote drinking rather than to raise awareness of the negative consequences (103, 189, 195).

Health and Safety Messaging Domain Scoring

Our assessment of health and safety messaging in the 10 provincial and three territorial jurisdictions is based on how well they reflect the following areas: implementation of mandatory health messaging on alcohol containers as a manufacturer requirement; the quality of the label components; the status and quality of health and safety messaging for both on- and off-premise outlets; and the media types through which health and safety messaging is put forward by liquor control boards.

GOLD STANDARD BEST PRACTICE POLICY INDICATORS: HEALTH AND SAFETY MESSAGING

The following policies represent the current gold standard best practices for health and safety messaging. To get top marks a jurisdiction needed to have implemented the following policies and practices:

1. The status of enhanced alcohol labelling (up to 2 points): Mandatory (i.e. legislated) enhanced alcohol labels that include health and safety warning messages, standard drink information, and low-risk drinking guidelines are required at point of manufacture.

2. The quality of enhanced label components (up to 1 points): Enhanced label components are prominently placed on the packaging, include a variety of clear and concise health and safety-oriented messages that are regularly rotated and are accompanied by graphics.

3. The status of alcohol health and safety messaging (off-premise) (up to 1 points): There are mandatory (i.e. legislated) health and safety messaging requirements for off-premise retail outlets.

4. The status of alcohol health and safety messaging (on-premise) (up to 1 points): There are mandatory (i.e. legislated) health and safety messaging requirements for all on-premise licensed establishments.

5. The quality of the off-premise alcohol and safety messaging (up to 2 points): The health and

safety messaging in off-premise locations includes a variety of alcohol-related health and safety topics (e.g. drinking while pregnant or planning to become pregnant and risk of FASD; impaired driving and acute injury risks; impacts and risks of underage drinking; lower-risk drinking information; and risk of chronic disease or long term health impacts), has clearly stated health messages and is accompanied by relevant graphics.

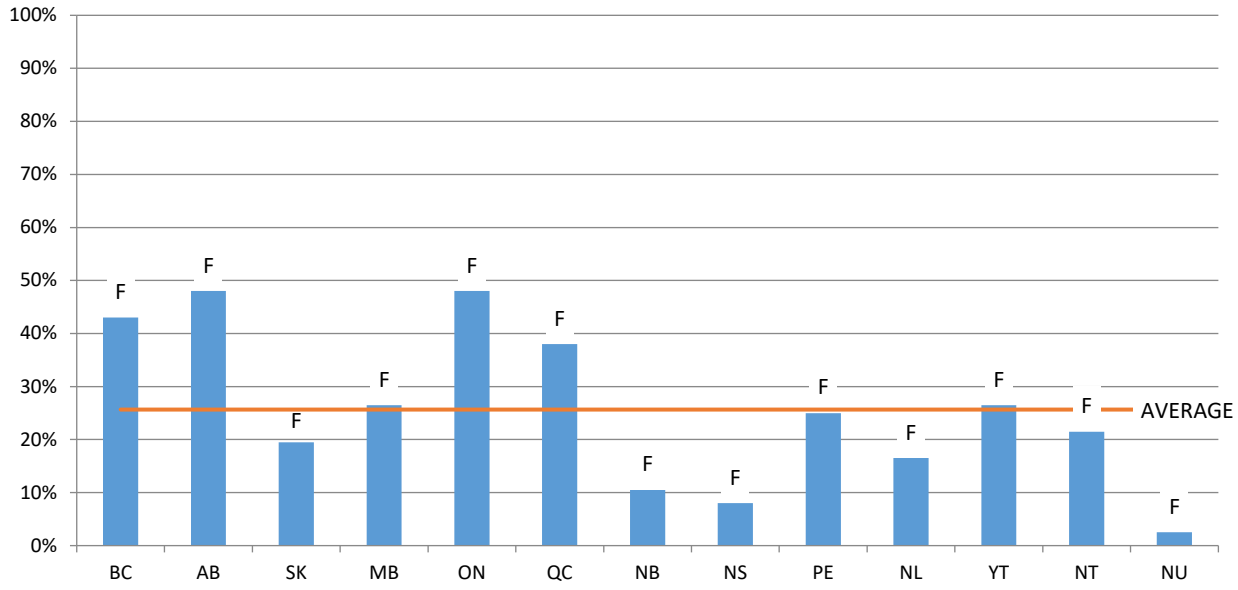
6. The quality of the on-premise alcohol health and safety messaging (up to 2 points): The health and safety messaging in on-premise locations includes a variety of alcohol-related health and safety topics (e.g. drinking while pregnant or planning to become pregnant and risk of FASD; impaired driving and acute injury risks; impacts and risks of underage drinking; lower-risk drinking information; and risk of chronic disease or long term health impacts), has clearly stated health messages and is accompanied by relevant graphics.

7. Media platforms for health and safety messaging used by liquor control boards (up to 1 points): A diverse range of suitable media platforms are used for communicating health and safety messaging by liquor control boards including posters, pamphlets, billboards, online content (websites), print advertising, TV/radio advertisements and social media (Twitter, Facebook, Instagram etc.).

Health and Safety Messaging Domain Results

Overall scores were very low in the Health and Safety Messaging domain with no jurisdiction achieving a grade higher than an F grade. AB and ON had the highest scores (48.0%) followed by BC with 43.0% and NU, NS, and NB the bottom with scores ranging from 2.5% to 10.5% for this domain. There is much unrealised potential across jurisdiction for informing consumers of the risks associated with alcohol use through packaging labels, point of sale messaging and dissemination via relevant media channels. The average score for this domain across all jurisdictions was 25.7% (F), which was the lowest average score of all of the domains, see Figure 35.

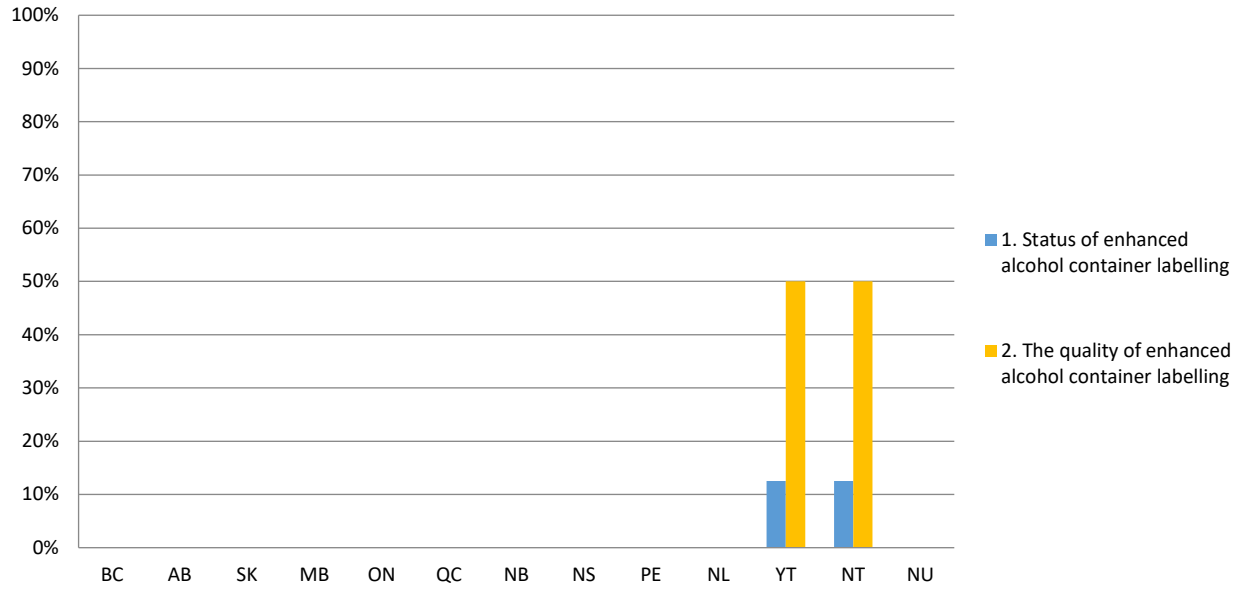
Figure 35: Health and Safety Messaging: Domain Scores by Province and Territory, 2017



Status and quality of enhanced alcohol labelling

Only two of the 13 jurisdictions (YT and NT) had some form of warning labels on alcohol containers. YT and NT both voluntarily have liquor staff apply relatively small text-only warning labels to containers in-store. Despite this initiative their scores for this indicator were both still low (12.5%) due to the fact that their enhanced alcohol labels are applied at the store level and are not a regulated requirement of the manufacturer label. Both YT and NT earned 50.0% for the quality of their existing alcohol labels due to the design and content of the labels falling short of best practices. They lost points for not having a variety of messages on their warning labels and the lack of graphics, see Figure 36. In late 2017 YT participated in a Health Canada-funded study to test new rotating enhanced evidence-informed labels that were relatively larger in size, included simple graphics and had standard drink information, low-risk drinking guideline information and cancer risk information. However, due to pressure from the alcohol industry, implementation of the new labels was interrupted with each of the three labels only being applied for a relatively short period of time (196).

Figure 36: Health and Safety Messaging: Indicator Scores by Province and Territory, 2017 (Figure 1 of 2)



Note: Only YT and NT have enhanced alcohol container labelling.

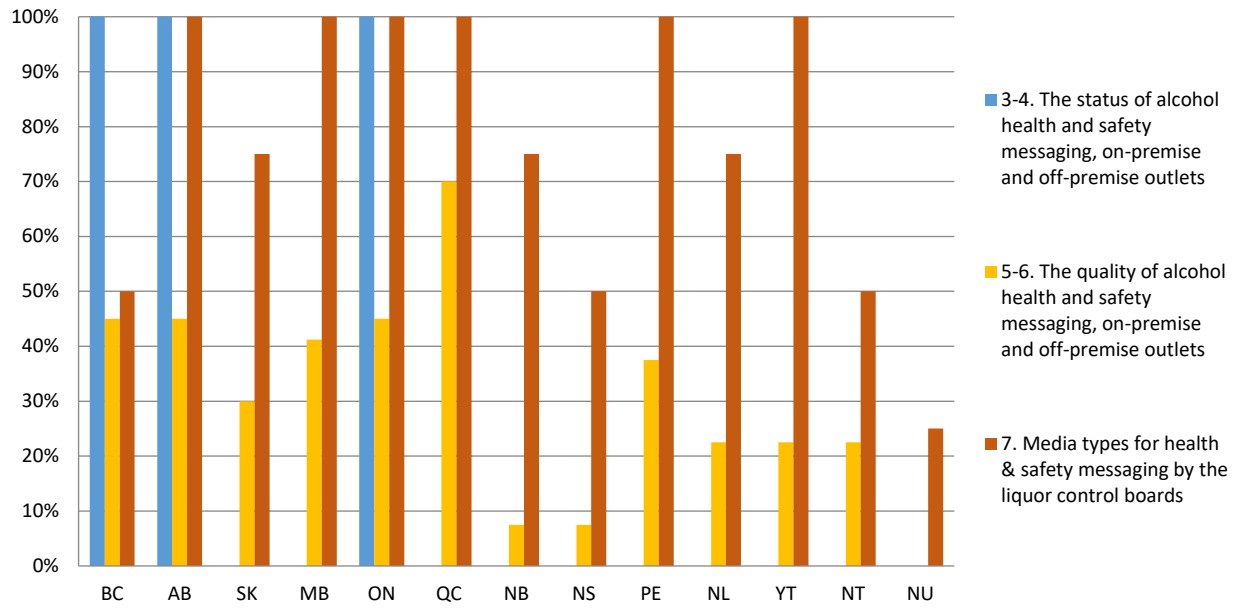
Status and quality of on- and off-premise alcohol health and safety messaging

BC, ON and AB were the only jurisdictions to achieve 100.0% scores on their health and safety messaging requirements in off-premise liquor stores and on-premise licensed establishments. However, in AB the requirements are not mandated by legislation but are a matter of policy enforced by Alberta Gaming, Liquor and Cannabis (AGLC). All other jurisdictions scored zero on this indicator. While in some jurisdictions the liquor control boards produced a number of warning signs and posters for impaired driving, underage drinking and risk of birth defects, the range and quality of messaging was not high overall. QC obtained the highest score on this indicator at 70.0% and BC, AB and ON achieved the next highest scores at only 45.0%. NU, NB and NS had the lowest scores ranging from zero to 7.5% with very limited messaging only around ID checks for minors, see Figure 37. Even in jurisdictions that had developed materials addressing a range of relevant issues, the lack of legislation mandating their display greatly limits the potential effectiveness of these resources.

Main media platforms for health and safety messaging used by liquor control boards

Six of the 13 jurisdictions received 100.0% indicator scores (AB, MB, ON, QC, PE, and YT) for the range of media platforms used by the liquor control boards to promote health and safety messaging. SK, NB, and NL also demonstrated a fairly broad and comprehensive range of media platforms in which to deliver health and safety messages, all scoring 75.0%. The lowest scores on this indicator were half marks for BC, NS and NT and only 25.0% for NU with a limited number of media platforms being used to promote health and safety messaging, see Figure 37.

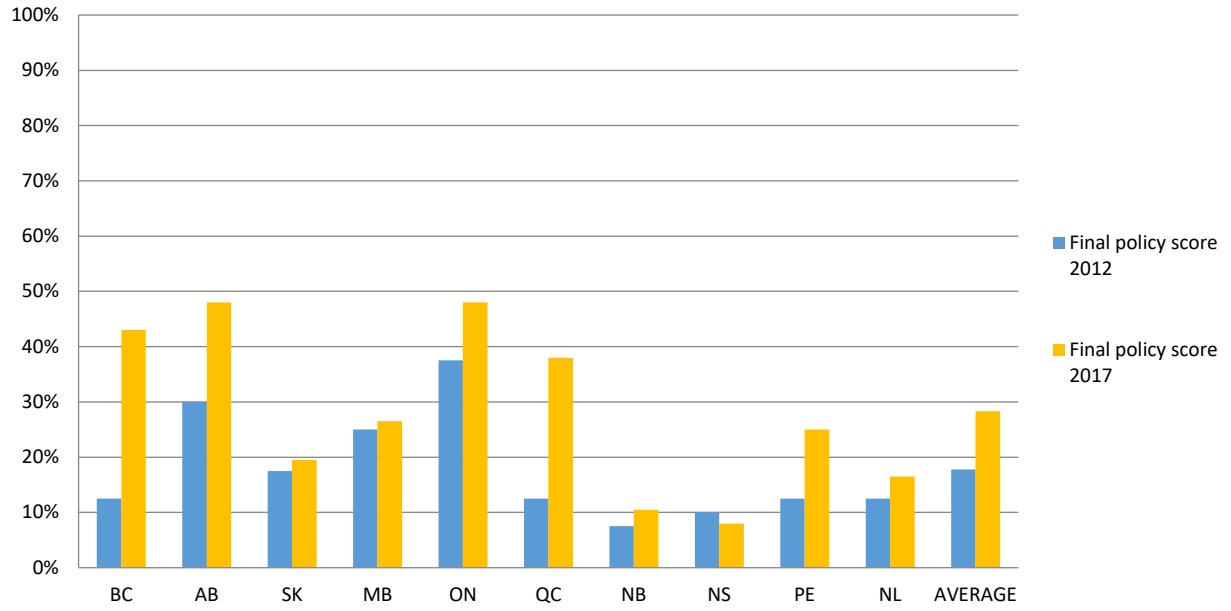
Figure 37: Health and Safety Messaging: Indicator Scores by Province and Territory, 2017 (Figure 2 of 2)



Health and Safety Messaging: 2012 vs 2017 comparison

While there were some changes to domain indicators being measured in 2012 compared to 2017 for the provinces, overall the jurisdictions showed some improvements over time although none attained even half of the optimal score in either 2012 or 2017. BC improved their scores mainly due to the implementation of mandatory on and off-premise warning signs and AB did the same (although not legislated). QC's score went up overall since 2012 due to the high quality messaging at on and off-premise outlets, particularly around the health effects of alcohol. QC also uses a wide range of media to promote health and safety messaging. PE was also able to improve their score in 2017 by implementing health and safety campaigns that make use of a broad range of media platforms, see Figure 38.

Figure 38: Health and Safety Messaging: Domain Scores by Province, 2012 vs 2017



Note: policy indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

HEALTH AND SAFETY MESSAGING: PROMISING PRACTICES

- YT and NT have implemented a form of enhanced alcohol labeling to convey alcohol-related health and safety information although the label components could be improved by ensuring the messages on the labels are rotating with varied health messages, are prominent, and include supportive graphics.
- YT demonstrated leadership by participating in the study testing enhanced labels that included best practice design components with messaging that included risk of cancer, low-risk drinking guidelines and standard drink information.
- BC and ON have legislation requiring mandatory warning signs be placed in both off-premise stores as well as on-premise establishments. AB also has a policy requiring licensees to display signage in on and off-premise outlets although this is not legislated.
- QC has a variety of strong alcohol warning signs covering FASD, chronic disease, and the Canadian LRDGs that includes clear health messages and graphics.
- Almost half of the jurisdictions (AB, MB, ON, QC, PE, and YT) had a broad and comprehensive range of media platforms in which they use to deliver health and safety messaging including posters, pamphlets, websites and social media.

HEALTH AND SAFETY MESSAGING: AREAS FOR IMPROVEMENT

- Enhanced alcohol warning labels on alcohol containers are non-existent in 11 out of 13 Canadian jurisdictions. The labels being applied in two territories do not meet best practices and are applied as a matter of policy in-store as opposed to being a legislated manufacturer requirement.

- There is currently a lack of legislated safeguards that jurisdictions can use against alcohol industry interference in health and safety messaging as evidenced by the outcome of the labeling study in YT.

- Ten of the 13 jurisdictions did not have any type of mandatory requirements for placement of alcohol warning signs in locations where liquor is purchased such as off-premise stores and on-premise establishments. The mandatory warning signs for alcohol and pregnancy implemented in NS were only a "periodic" requirement and eventually scrapped due to public pushback about the type of messaging included in the signs.

- The quality of alcohol warning signs produced by the liquor control boards in the majority of jurisdictions was not strong with NB and NS having the lowest scores in this area especially in the variety, clarity and strength of the messaging.

- BC, NT and especially NU should work to expand the range of media platforms in which to deliver high quality health and safety messaging. For example, the implementing health and safety messages on radio/TV to ensure a broad audience.

OVERALL RESULTS

Provincial and Territorial Comparisons: 2017

While exemplary policies were identified among provincial and territorial practices across most domains, the above findings point to substantial unrealized potential for reducing alcohol-related harm in Canada through the implementation of effective alcohol policies. The national policy implementation score of 43.8% indicates that Canadian jurisdictions collectively are achieving less than half their potential to reduce alcohol-related harm.

The national policy implementation score of 43.8% (F) across all jurisdictions contrasts with an overall best current practice score of 86.6% (A) that was achieved collectively when best current practices across the whole country were taken for each indicator within each policy domain. This comparison shows that current practices and policies have been evaluated against broadly realistic and achievable standards since most are in place in at least one jurisdiction across the country, see Table 4 and 5.

Table 4: Best Current Practice Score by Domain for 2017

Domain	Best Current Practice Score
Pricing and Taxation	82.4%
Physical Availability	95.0%
Impaired Driving Countermeasures	95.0%
Marketing and Advertising Controls	100.0%
Minimum Legal Drinking Age	60.0%
Screening, Brief Intervention and Referral	69.0%
Liquor Law Enforcement	97.5%
Control System	80.0%
Alcohol Strategy	100.0%
Monitoring and Reporting	90.0%
Health and Safety Messaging	75.0%
Overall Best Current Practice Score	**86.6%**

Table 5: Total Policy Implementation Scores by Jurisdiction for 2012, 2017 and Adjusted 2017

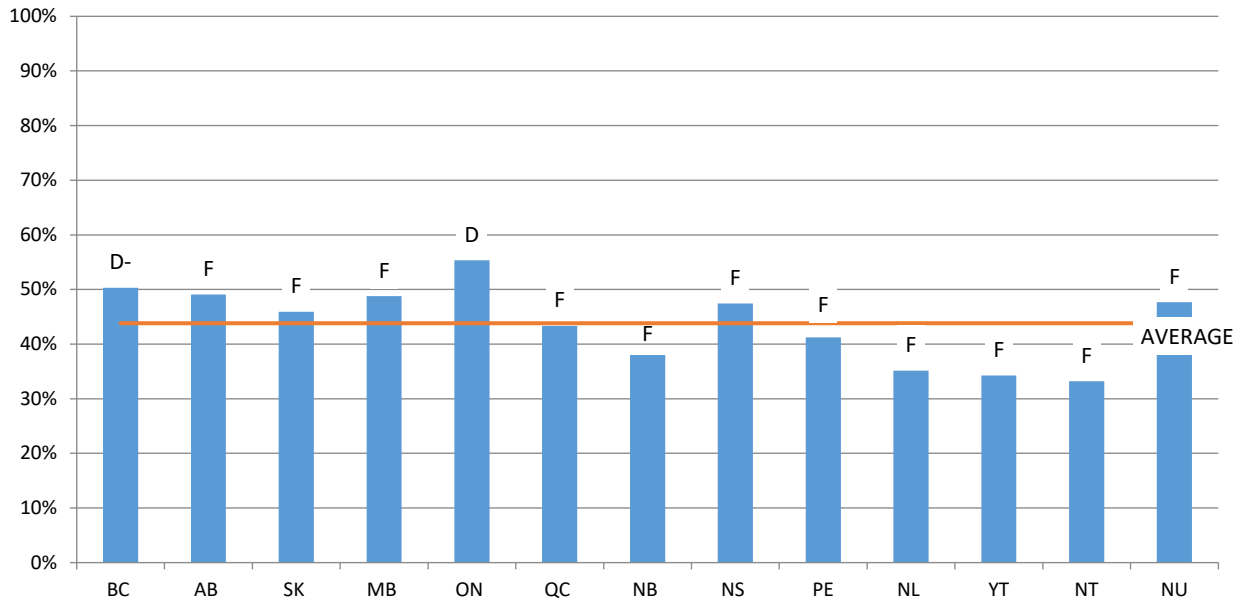
Jurisdiction	Total Policy Implementation Score		
	2012	2017	Adjusted 2017[1]
BC	53.4%	50.3%	58.1%
AB	47.4%	49.1%	56.7%
SK	50.7%	45.9%	53.0%
MB	45.7%	48.8%	56.3%
ON	55.9%	55.3%	63.9%
QC	36.2%	43.3%	50.1%
NB	46.2%	38.0%	43.9%
NS	51.4%	47.4%	54.8%
PE	41.0%	41.2%	47.6%
NL	44.2%	35.2%	40.6%
YT	n/a	34.3%	39.6%
NT	n/a	33.2%	38.4%
NU	n/a	47.7%	54.7%
Average	47.2%	43.8%	50.6%

[1] Scores adjusted based on the overall best current practice score of 86.6%

Scores by jurisdiction

Overall, ON, BC, MB, and NS received the highest scores across all 11 policy domains while YT, NT and NL received the lowest scores. Comparing average scores across jurisdictions, there was limited variation with scores ranging from 33.2% (F) for NT, 34.3% (F) for YT, and 35.2% (F) for NL, and to the highest score of 55.2% for ON (D), see Figure 39. However, there were some promising higher scores for some jurisdictions within particular domains. For example, NB received 80.0% (A-) on Impaired Driving Countermeasures; SK scored 90.0% (A) for Liquor Law Enforcement; AB and NU received 80.0% (A-) and 90.0% (A+) respectively for their Alcohol Strategies; and BC received 90.0% (A+) for their Monitoring and Reporting of alcohol indicators, see Appendix D.

Figure 39: Total Policy Implementation Scores by Jurisdiction, 2017



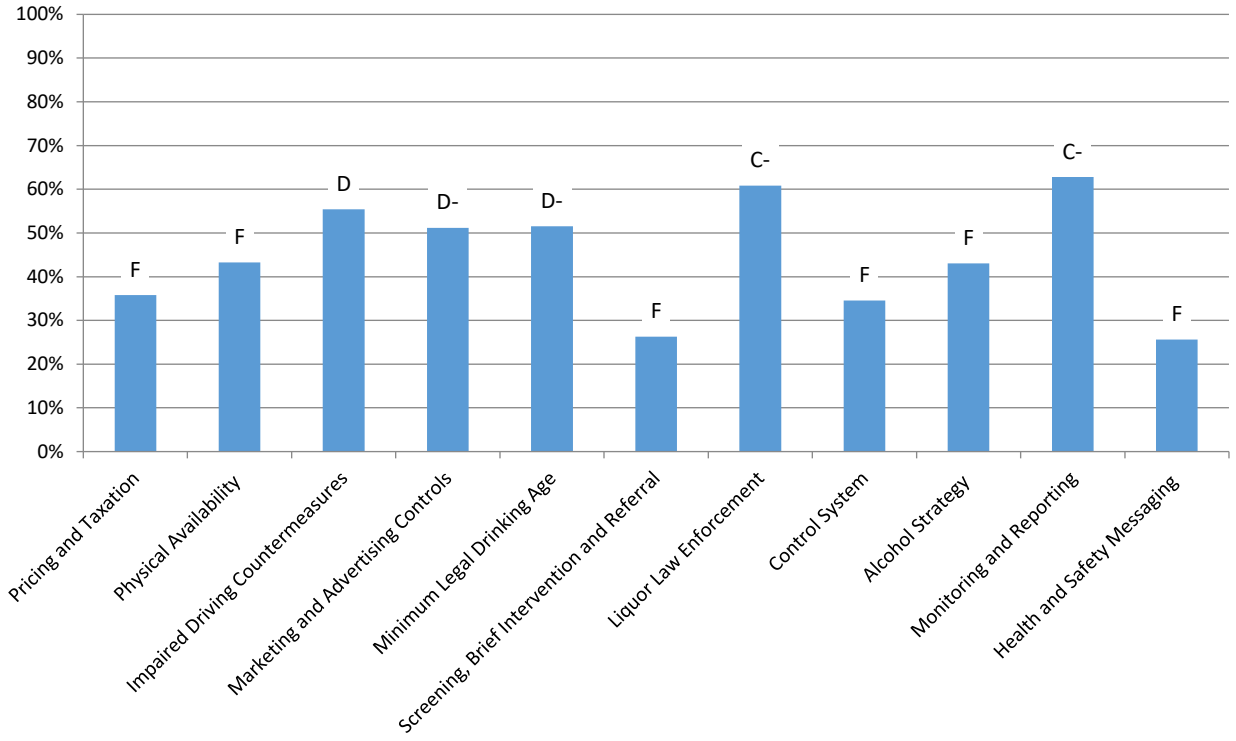
Scores by domain

Liquor Law Enforcement (60.9%, C+) and Monitoring and Reporting (62.8%, C-) were the two domains with the highest average scores out of the 11 policy domains. The domains with the lowest average scores across were the SBIR (26.3%, F) and Health and Safety Messaging (25.7%, F), see Figure 40 and Appendix D.

Within some policy domains, the scores achieved by the different jurisdictions varied widely. Some of the domains made up of the broadest range in jurisdictional scores included: Alcohol Strategy (10.0% to 90.0%); Monitoring and Reporting (13.8% to 90.0%); Impaired Driving Countermeasures (5.0% to 80.0%); Marketing and Advertising Controls (0% to 75.0%). This variation underscores the considerable scope for improvement, and also the opportunity for jurisdictions with higher scores to serve as models for other jurisdictions to strengthen their alcohol policies.

Of particular concern, the policy domain with the largest potential impact on public health and safety in Canada, Pricing and Taxation, was one of the weakest domains scoring an average of just 35.8% (F) across the 13 jurisdictions. The four policy domains with the most potential for reducing alcohol-related harm received an F (Pricing and Taxation, 35.8%), F (Physical Availability, 43.3%), D (Impaired Driving Countermeasures, 55.4%) and D- (Marketing and Advertising Controls, 51.2%), see Figure 40 and Appendix D.

Figure 40: Average Policy Domain Scores, all Jurisdictions, 2017

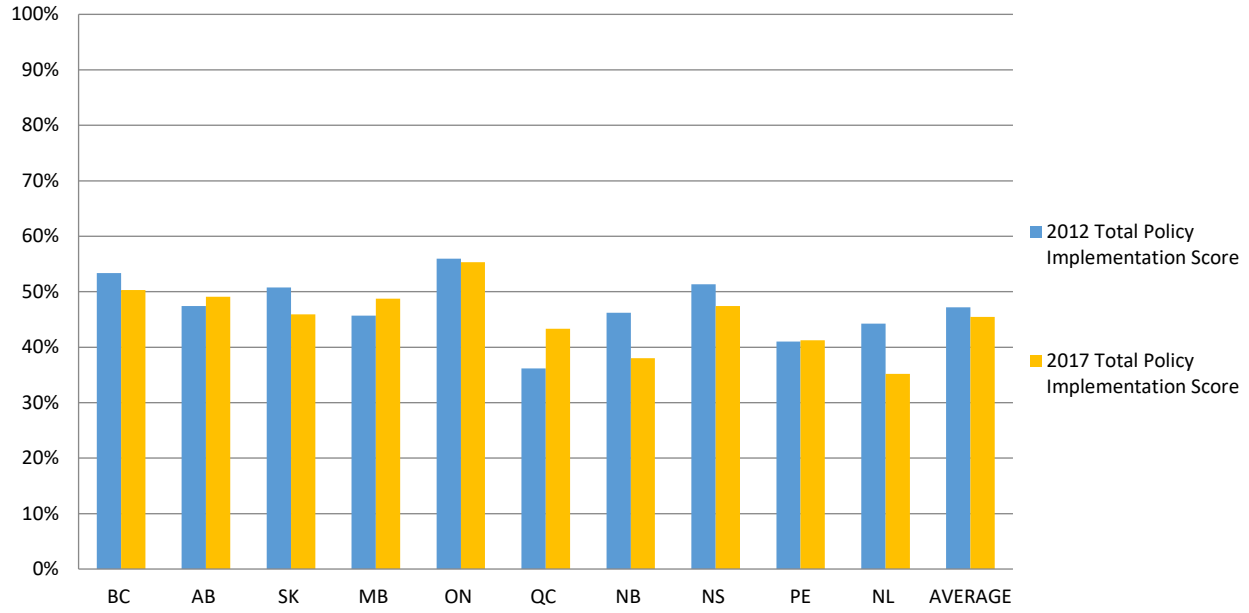


Provincial Comparisons: 2012 vs 2017

This report builds on the analysis of provincial alcohol policy implementation previously conducted in 2012 and reported in 2013. The current report includes a number of modifications in the criteria for scoring policy implementation and also includes a modified domain, namely Liquor Law Enforcement, and a new domain – Monitoring and Reporting. We regard these modifications as improvements that reflect emerging findings from more recently published research. It is still useful, however, to make broad comparisons for the total percent scores achieved by the provinces in each equivalent domain in 2012 vs 2017 (the territories were not included in the 2012 exercise) as each reflects the extent of best practices achieved in the respective year.

As one can see in Figure 41, the average score across the 10 provinces has dropped slightly from 47.2% to 45.5%. Further, the average scores were lower in 2017 than in 2012 for six provinces (BC, SK, ON, NB, NS, and NL). In contrast, AB, MB, QC, and PEI had higher average scores in 2017 than in 2012. The largest reduction in total policy score was in NL (44.2% to 35.2%), followed closely by NB (46.2% to 38.0%). QC had the largest increase in total policy implementation score between 2012 and 2017 (36.2% to 43.3%). These changes indicate that there is substantial room for improvement. Jurisdictions with a lower score can gain some insights about how to strengthen their alcohol policies by looking to those jurisdictions with higher scores.

Figure 41: Total Policy Implementation Scores, Provinces Only, 2012 vs 2017



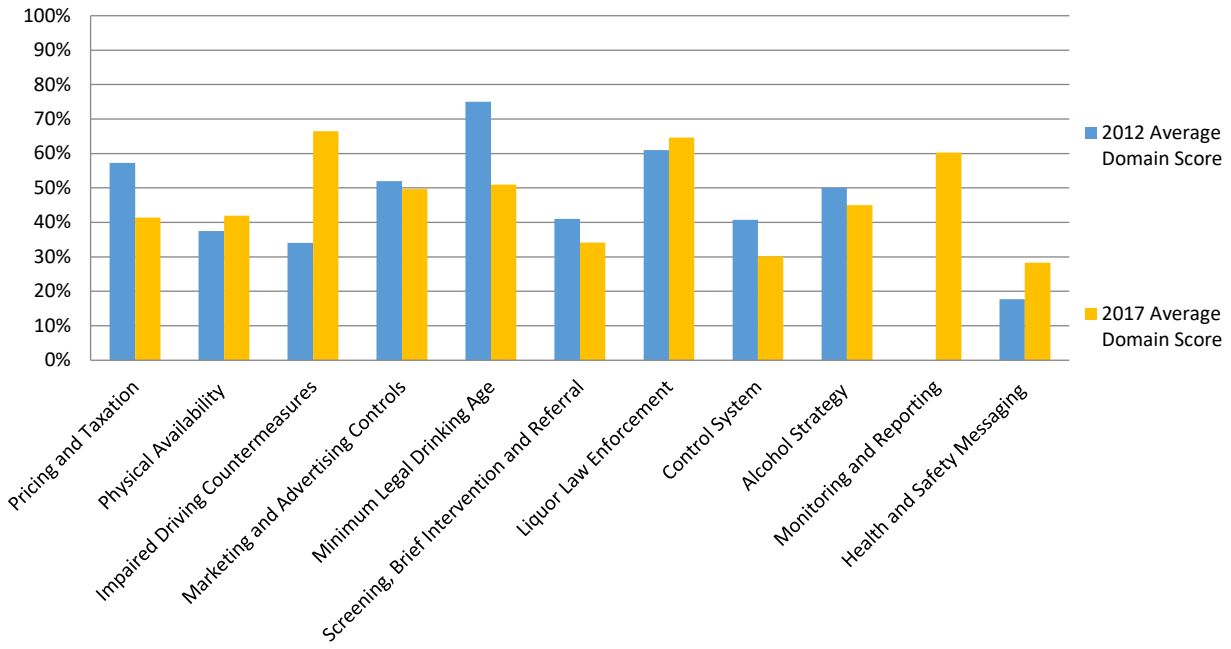
Note: specific indicators may have changed between 2012 and 2017 thus scores reflect best practices at the time of data collection

Figure 42 below compares the average scores for the 10 provinces by domain for 2012 and 2017. The scores were lower for six domains and higher for four. The most dramatic deterioration in scores was for Minimum Legal Drinking Age (75.0% to 51.0%), followed by Pricing and Taxation (57.3% to 41.4%), type of Control System (40.8% to 31.1%), Screening, Brief Interventions and Referrals (41.0% to 34.1%), and Alcohol Strategy (50.0% to 40.0%). It is important to note that the indicators for the Minimum Age domain were modified between 2012 and 2017 so the scores reflect best practices at the time of data collection.

The most dramatic improvement in domain scores between 2012 and 2017 was for Impaired Driving Countermeasures (from 34.1% to 66.5%). The increases in the other three domains were more modest: Physical Availability (37.5% to 42.0%); Liquor Law Enforcement (61.0% to 64.7%); and Health Messaging (17.8% to 28.3%). It is important to note that the indicators for the Liquor Law Enforcement domain were modified between 2012 and 2017 so the scores reflect best practices at the time of data collection.

Of the domains considered to have the greatest impacts at the population level - namely alcohol pricing and taxation policies, controls on physical availability, impaired driving countermeasures and controls on alcohol marketing and advertising - only one, impaired driving countermeasures, showed an improved average score in 2017 in comparison to 2012.

Figure 42: Average Policy Domain Scores, Provinces Only, 2012 vs 2017



Note: specific indicators may have changed between 2012 and 2017 thus scores reflect best practices as defined at the time of data collection

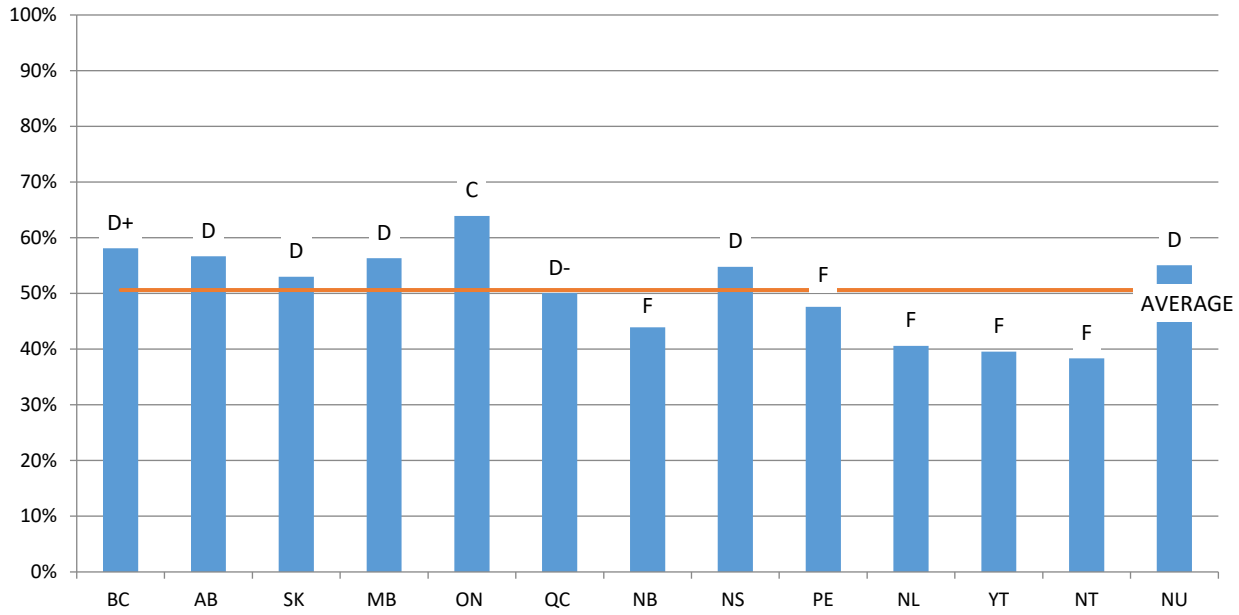
Total Policy Implementation Scores Compared with Best Current Practices in Canada

When best current practices were analyzed across all domains and jurisdictions, the collective best current practice score was 86.6% (Grade A), see Table 4. This underscores the feasibility of a greatly improved Canada-wide response to the reduction of alcohol-related harm since much of what is being recommended has already been implemented in at least one jurisdiction in Canada. In other words, if a jurisdiction was to implement all the best practices identified it would receive an A Grade.

In the Figure 43 below we present adjusted total policy implementation scores achieved for each province and territory calculated on the basis of the percentage achieved of the overall best current practices identified somewhere in Canada. ON led the way in 2017 with a Grade C (63.9%), followed by BC (58.1%) and AB (56.7%) with D+ and D grades respectively. Six provinces still scored less than 50% (Grade F). It is important to note that these assessments were conducted before recent deregulatory changes to alcohol policy in ON.

As explained in the Methods section and Appendix A, these adjusted total policy implementation scores are all slightly uplifted from those provided earlier by a factor of 1.15. The purpose of this adjustment is to present a practical assessment of alcohol policy implementation against a standard of the overall best current practices achieved collectively on every indicator across all jurisdictions in Canada. The earlier unadjusted scores can be viewed as more “pure” or theoretical standards that were developed from the international research literature on alcohol policies and public health.

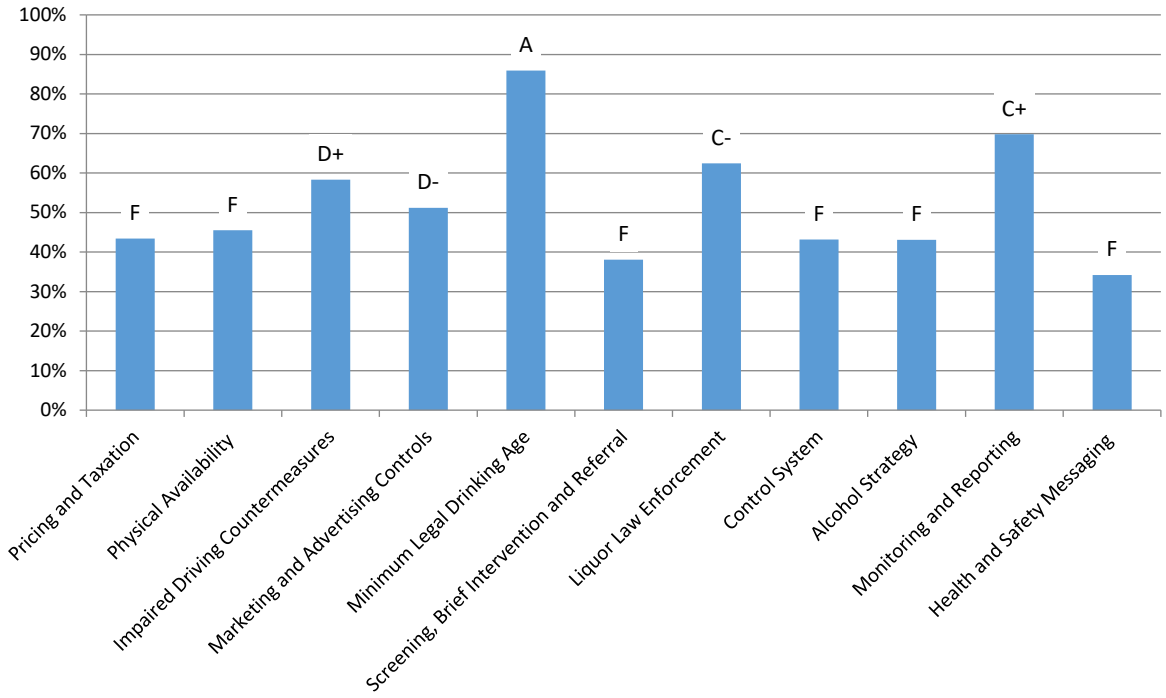
Figure 43: Adjusted Total Policy Implementation Score* by Province and Territory, 2017



*As assessed against best current practice in Canada

Adjusted average policy domain scores across all Canadian jurisdictions are presented below in Figure 44 for each of the 11 policy domains assessed, scored to reflect the average performance across all provinces and territories against best current practices in that domain. These scores varied quite substantially across the different policy domains with Minimum Legal Drinking Age achieving a Grade A (85.9%) being the highest and Health and Safety Messaging with a Grade F (34.2%) the lowest. Monitoring and Reporting on alcohol-related harms (69.8%) and Liquor Law Enforcement (62.4%) were the next highest scoring domains with Grades C+ and C- respectively. A total of six policy domains were scored below 50% (Grade F). The adjusted average policy domain score across all jurisdictions was 50.6% (Grade D-) of overall best current practice.

Figure 44: Adjusted Average Policy Domain Scores* across all Canadian jurisdictions, 2017



*As assessed against best current practice in Canada

DISCUSSION

This project's focus is on the health and safety issues associated with the sale, distribution and consumption of alcoholic beverages. As noted at the outset of this report, extensive international and national research identifies alcohol policies, regulations and control practices as being central to reducing the harm and costs from alcohol. Eleven evidence informed policy domains were identified and each province and territory was rated on these domains and their various indicators. This final section provides advice on how alcohol policies across provinces and territories can be strengthened and notes some possible next steps.

Despite some relatively high scores for several domains for some provinces and territories, there remains substantial room for improvement. Much more emphasis needs to be placed on effective evidence-based policies. All decisions on alcohol policy need to be weighed against the evidence and a precautionary perspective. In light of the harm from alcohol, collaborative and comprehensive action is warranted.

Context: An erosion of controls

In recent decades there has been erosion of control in several areas, including, for example, advertising and marketing of alcohol (197), privatisation of alcohol outlets (19), and other increases in physical availability – such as longer hours, and use of discount pricing to stimulate sales. In contrast, there has been positive progress on drinking and driving countermeasures.

One consequence of an increasing role of the private sector in the retail sale of alcohol has been the loss of some previously accessible and reliable alcohol market data e.g. pricing information and sales data. Private owners have a greater interest in increasing alcohol consumption and lobbying for weaker controls; this makes it increasingly difficult to regulate alcohol in the broader interests of health, safety and social well-being.

Strengthening the response to alcohol-related harm

As noted previously in this report, Canadian provinces and territories are realizing, on average, less than half of the potential of a comprehensive implementation of ideal alcohol control policies. This is due to a combination of not having policies in some areas, inadequate policies in others, and not having well-resourced enforcement or implementation of policies or regulations.

Government alcohol regulators and retailers have a central role in the ideal policy model, and their place needs to be retained and strengthened, not eroded. The scope of their social responsibility functions also needs to be expanded and strengthened. In all of the eleven areas, provinces and territories can learn from each other, and from jurisdictions outside Canada, about how to implement strong and more comprehensive policies.

A coherent and collaborative response

In order to reduce the harm from alcohol and attendant costs, a coordinated, coherent and collaborative response is encouraged. Policies and regulations need to be complementary, not contradictory. For example, warning signs advising of the risks associated with alcohol use should not be undermined by advertising of inexpensive alcohol. A coordinated response involving

enhanced policies across all eleven domains will have a greater health and safety benefit than a few strong policies in some areas combined with policies that erode controls and encourage high-risk consumption in others (16). More consistent and reinforcing policies across all domains will provide a supportive environment to enhance health outcomes for the total population, including those who wish to adopt healthy behaviours by reducing their alcohol consumption, and those who are in recovery from dependence on alcohol.

It is essential to have a provincial or territorial strategy on alcohol that provides guidance in developing and implementing a coordinated and coherent response. Governments and NGOs working on health and safety issues are encouraged to work together on the issue of alcohol (20). These recommendations and those in the previous section hopefully provide a resource for developing detailed action plans.

LIMITATIONS

All information and data requested under this project is potentially accessible by way of government reports, legislation and regulations or may be requested under the Freedom of Information and Protection of Privacy Act. However, not all data was readily available. In the cases where data were not readily available in the public domain, the information was sought from representatives from the appropriate ministries or departments. In some cases the RCs were not able to obtain the data using either of these strategies. In this case the missing information was requested during the data verification process. All indicator data was validated by representative from the appropriate ministries, with the exception of data provided to the Ontario regulator. Policies and practices change over time and those described in this report were verified as accurate at the time of data validation (as of February 28th, 2018 and September 16th, 2017 for impaired driving laws). It should be noted that policies and practices may have since changed.

Comparisons between the 2012 and 2017 policy scores should be made with caution. The indicators upon which the assessments were made in each year were changed to align with new evidence. However, the policy scores in each year represent the extent to which best practices were achieved as assessed in a given year.

Scores represent the degree to which a gold standard best practice is established in a given jurisdiction by way of legislation, regulation or policy. This should not be interpreted as being synonymous with the degree to which a policy is implemented in practice or enforced in a jurisdiction. For example, a jurisdiction may score 100% for having a mandatory responsible beverage service (RBS) program, does not mean this jurisdiction has a 100% compliance rate with this program.

CONCLUSIONS

Canada is a world leader in many aspects of effective tobacco control, including implementing by-laws and provincial legislation that restrict smoking, well-funded cessation programs, pricing, and taxation of tobacco products, and policies that restrict sales to minors, to mention a few. Also, many Canadian jurisdictions are devoting resources, and providing coordinated action in an effort to reduce the high toll of unhealthy eating and a lack of physical activity on overall morbidity and mortality. Provincial organisations and NGOs are collaborating to reduce the harm and costs from both of these risk factors.

However, there is significantly less attention paid to alcohol, particularly in light of the immense health and social harm and cost associated with drinking. Attention to alcohol mostly consists of brief appearances in the media when there is a drinking and driving tragedy, or a business perspective when further potential privatisation of alcohol outlets is discussed. Given alcohol's status as a leading risk factor for ill-health, injury and disability in North America (74) we suggest that at least equal attention should be devoted to the reduction of alcohol-related harm and associated economic costs.

It is important to acknowledge that all provinces and territories implement strong policies or practices in at least one domain. It is striking that if all the best current Canadian alcohol policies and practices were universally implemented, a score of 87% (Grade A) rather than the 42% (Grade F) would be obtained for 2017. This shows that our evaluation criteria were not unrealistic or infeasible as 86.6% of the recommended best practices are already being implanted in at least one jurisdiction. More troubling, this work documents an erosion of control systems and effective policies in recent years as well as an increasing tendency to treat alcohol as an ordinary commodity. "Modernization" initiatives have largely ignored the significant and growing extent of alcohol's impacts on health, safety, social well-being, and economic costs. The entry of alcohol into grocery stores, increasing efforts to improve market efficiency and customer convenience, and a continuing failure to alert consumers to health and safety risks or restrict lifestyle advertising through new digital media are examples of this trend and contrary to how other substances, such as tobacco, are regulated. In order to reverse this trajectory, we recommend that provincial and territorial authorities, working with NGOs and other stakeholders, collaborate to strengthen the full range of policies highlighted in this report.

This report highlights examples of Canadian best practices and points to future opportunities where further actions can be undertaken, and which policies can be modified or enhanced in order to reduce alcohol-related harm. Subsequent communications aim to provide provinces and territories with specific information and recommendations. This report also provides concrete suggestions on how more effective inter-sector and inter-jurisdictional collaborations and knowledge exchange can facilitate policy development. Finally, this report points to the importance of continued surveillance of the Canadian alcohol policy context and ongoing evaluation of policies and practices.

RECOMMENDATIONS FOR PROVINCES AND TERRITORIES

We present a series of specific recommendations in each of the identified alcohol policy domains, along with some general, overarching recommendations. These build on strong policies and practices that are already in place in many provinces and territories in Canada. We also identify below some jurisdictions as best current practice leaders where appropriate, though some of these obtained scores that were still short of the ideal best practices recommended in this report. In certain cases asterisks were used to indicate which jurisdictions have implemented the recommended policies in the table below.

Recommendations for Provinces and Territories

Direct Policy Domain Recommendations	Best Current Practice Leaders
1. Pricing and Taxation	
• Implement a minimum price of at least $3.50/standard drink for on-premise sales* and at least $1.75/standard drink for off-premise sales**, index minimum prices to jurisdiction specific inflation*** and exclude loopholes such as volume discounts; and	*BC, **NL, ***ON
• Set minimum alcohol prices according to alcohol content.	MB
2. Physical Availability of Alcohol	
• Set in regulation maximum trading hours from 11am to 8pm for off-premise outlets* and 11am to 1am the next day for on-premise establishments** with no extensions permitted; and	*NB, **ON and PE
• Set upper limits on the density of both on-premise and off-premise liquor outlets based on population.	SK and QC
3. Impaired Driving Countermeasures	
• Implement graduated licensing programs along with zero BAC limits for new drivers to continue for three years beyond program-completion;	SK, MB, ON, QC, NB, PE, and NL
• Have increased penalties when alcohol is detected in combination with other drugs;	ON
• Require successful completion of ignition interlock programs as a condition of re-licensing for all alcohol-related *Criminal Code* impaired-driving offenders	BC, AB, SK, MB, ON, NB, PE, and NL
• Introduce mandatory vehicle impoundment for all drivers with a .05% BAC; and	AB, SK, and NL
• Have administrative licensing suspensions for at least 3 days for the first 0.05% offence and 7 days for the second.	BC, AB, SK, MB, ON, NB, NS, PE, and NL

Direct Policy Domain Recommendations	Best Current Practice Leaders
4. Marketing and Advertising Controls	
• Implement comprehensive restrictions covering placement, quantity, and content of ads as well as sponsorship restrictions for all media;	None
• Implement an independent complaint system and penalties that escalate with the frequency and severity of the violation;	QC
• Have independent monitoring and enforcement of alcohol advertising and marketing, including pre-screening of ads; and	QC and NU
• Require government liquor regulators and/or government retailers to use social media platforms to present evidence-based health and safety messages related to alcohol.	AB
5. Minimum Legal Drinking Age (MLDA)	
• Implement a minimum legal drinking age of at least 19 years, without exception; and	BC, SK, ON, NS, NL, and NT
• Consider graduated drinking policies with age-based alcohol restrictions, similar to graduated driver's licensing programs (e.g., age-based restrictions on strength and number of drinks to be served up to 21 years).	None
6. Screening, Brief Intervention and Referral (SBIR)	
• Implement SBIR practice guidelines endorsed by a credible professional association (e.g. the College of Family Physicians of Canada);	BC, AB, ON, QC, and NS
• Fund online or in-person SBIR programs or services; and	ON, NS, and PE
• Encourage and monitor SBIR implementation by physicians.	None
7. Liquor Law Enforcement	
• Implement Risk-Based Licensing and Enforcement programs for all liquor outlets informed by outlet and licensee characteristics as well as data on violent and impaired driving offences, especially targeting high-risk premises;	SK and QC
• Employ at least 1 liquor inspector per 300 outlets;	AB, SK, MB, NS, YT, and NT
• Implement Mystery Shopper and police inspection programs with publicly reported penalties escalating with frequency and severity of offences; and	SK, ON, and QC
• Mandate evidence-based Responsible Beverage Service Training for all venues and levels of staff.	BC, AB, and PE

Indirect Policy Domains Recommendations	Best Current Practice Leaders
8. Alcohol Control System	
• Maintain a government-owned and run retail network for off-premise outlets* that reports to a ministry with a mandate to protect health and safety**;	*NS and NU **BC
• Include the protection of public health and safety as a stated objective of the control system;	YT and NU
• Legislate earmarked funds to support harm reduction and health promotion initiatives;	MB, QC, and NU
• Discontinue plans for privatisation of retail alcohol sales; and	None
• Phase out online ordering, liquor delivery services and ferment on premises.	NT and NU
9. Provincial and Territorial Alcohol Strategy	
• Create an alcohol-specific strategy incorporating a full range of evidence-based interventions and policies;	AB
• The alcohol strategy should be developed independently from the alcohol industry, be government-endorsed, and reviewed at least every five years;	AB and NU
• Fund a lead organisation with a public health and safety mandate to facilitate implementation of the strategy; and	None
• Fund on-going independent monitoring of the strategy's implementation.	None
10. Monitoring and Reporting	
• Fund the tracking and public reporting of key alcohol-related harm indicators annually through a centralized system with an identified lead agency; and	BC
• Track indicators that include: per capita consumption; alcohol-related hospital admissions and deaths, and alcohol-related crime.	BC, AB, SK, MB, ON, NB, PE, and YT
11. Health and Safety Messaging	
• Require prominent placement of alcohol labels that include rotating health and safety messages, standard drink information and Low-Risk Drinking Guidelines; and	YT and NT
• Require health and safety messaging at all on and off-premise outlets* supported by other suitable media platforms**.	*BC and ON ** AB, MB, ON, and QC

General Recommendations

We would like to highlight the following general recommendations that emerge from this careful assessment of current alcohol policy implementation in Canadian provinces and territories.

1. Given the substantial and increasing harm from alcohol use, all provinces and territories should give greater priority to funding and implementing effective alcohol policies.
2. Following some European countries, liquor regulation should be located within ministries directly concerned with health and safety rather than with finance and economic development.
3. The recent trend to treat alcohol as an ordinary commodity to be sold alongside food and other grocery items should be reconsidered as this leads to greater consumption and related harm.
4. All provinces and territories are encouraged to learn from each other's experiences with successful implementation of effective alcohol policies.
5. There needs to be concerted action involving government, NGOs and other stakeholders in implementing a combination of population level policies and more focused interventions for priority populations.
6. Greater investment in public education about the risks of alcohol, including the comparative risks of alcohol and other substances, is needed to create a more supportive climate for enacting effective policies. This can be achieved with initiatives such as mandatory warning labels on all alcohol containers and clear and consistent public health messaging on a range of health topics.
7. Careful documentation of policy changes and regular monitoring and evaluation of public health and safety outcomes are needed to inform future policy development.

We hope that the detailed specification of best practices in alcohol policy implementation identified in this document across 11 key alcohol policy domains will help Canadian jurisdictions to improve health and safety outcomes associated with the use of alcohol. To achieve the best results and greatest improvement in these outcomes, it is recommended that action is taken to improve practice across all 11 policy domains. Priority recommendations for specific action in each policy domain to improve public health and safety outcomes for Canadians around the use of alcohol are provided at the beginning of this report in the Executive Summary.

GLOSSARY

Alcohol regulator:	The alcohol regulator is a government authority that oversees the licensing and enforcement of specific alcohol licensees.
Alcohol retailer:	The alcohol Retailers purchase alcohol from the wholesaler, or in some cases directly from the manufacturer, for sale to the consumer. The consumer may be an individual or a licensee (e.g. restaurant, bar etc.). In most cases the government is the dominant retailer of alcohol and sells beer, wine and spirits through their network of government liquor stores.
Agency stores (also called rural franchises or vendors):	In rural areas where it is not economically viable for the government retailer to establish retail outlets, agency stores are established.
Blood alcohol concentration:	Blood alcohol concentration, or BAC, is the amount of alcohol found in the blood. For example, a BAC of .05%, means there is 50 milligrams of alcohol in 100 millitres of blood. In Canada, the Criminal Code BAC limit is .08%. This is the level at which Criminal Code impaired driving charges can be laid. Additionally, almost every province and territory in Canada has administrative laws for drivers whose BACs are .05% and over.
Delisted product:	A delisted product is one that has been removed from sale by a retailer due to reasons such as the poor retail performance or the retailer plans to permanently reduce the stock of the item.
Duty-free stores:	These outlets are located at land borders or airports and sell goods free of certain duty and taxes normally levied on goods sold in Canada. The Canada Border Services Agency (CBSA) licenses duty-free operators, which sell goods to travelers leaving Canada. Duty free shops must also be licensed by the board, commission or agency that is authorized by the laws of the province/territory to sell or to authorize the sale of alcohol in that province/territory.
Farmer's market sales:	In some jurisdictions alcohol produced by local manufacturers can be sold at Farmer's Markets. This is usually permitted under an extension of the manufacturer's licence or manufacturer's retail licence.
Federal impaired driving offender:	Federal impaired driving offender is someone who has incurred a conviction for a drinking and driving offence under the federal *Criminal Code*. Often, provincial administrative sanctions are linked to *Criminal Code* offences. For example, provincial provisions may link the remedial measures requirement and/or interlock requirements to a *Criminal Code* conviction. In practice, the two systems work together, Highway Traffic Act initiatives in the provinces are prompted by a *Criminal Code* conviction.

Ferment on premise outlets (Ubrew/Uvin):	These outlets provide access to equipment and ingredients for customers to make their own beer or wine.
Grocery sales:	Store within a store: these are retailers (typically private wine stores) that are located inside a grocery store as a separate kiosk. Grocery aisle sales: some jurisdictions have grocery store retail licenses that allow for a grocer to sell alcohol in designated grocery aisles of the store.
High-risk drinking:	Defined as drinking more than the recommended daily or weekly limits as outlined in the Low-Risk Drinking Guidelines (198).
Ignition interlock:	An ignition interlock is a small breath-testing device that is connected to the engine of a vehicle to prevent the vehicle from being operated if the driver has a BAC that is above a pre-determined level (usually .02%)(199).
Indexed minimum unit pricing (iMUP):	A complimentary set of pricing measures that include setting a floor price below which alcohol cannot be sold and ensuring that this floor price is set precisely according to the alcohol content of the beverage and updated according to inflation on an annual basis. This suite of alcohol pricing measures effectively creates a minimum price per unit of alcohol (e.g. a minimum price per standard drink).
Liquor delivery services:	Alcohol sales from an off-premise retail store or manufacturer that are delivered to private residences
Mystery Shopper program:	Mystery Shopper programs involve visits to retail outlets by unidentified shoppers in order to verify compliance with provincial liquor laws, including the legal drinking age.
Off-premise outlets:	Retail outlets where alcohol is sold for consumption offsite including government-run liquor stores, privately-owned liquor stores, agency stores, manufacturer on-site stores, off-sale outlets, ferment on premise outlets, duty-free outlets, grocery store outlets and wine stores.
Off-sale endorsements/outlets:	An off-sale endorsement is an addition to a liquor sales licence that allow the sale of alcohol in closed containers for consumption away from an on- premise licensed establishment.
Online sales:	Liquor sales made through websites, QR codes or apps.
On-premise outlets:	Licensed establishments where alcohol is sold for consumption onsite such as restaurants, bars, pubs, casinos and stadiums.
Overall alcohol consumption:	Overall consumption is typically measured as litres of pure ethanol per person aged 15 and older.

Policy domain:	Refers to a group of related or similar strategies, interventions or practices employed by governments that are intended to reduce the harm from alcohol at the population level. For example, physical availability policy domain may include policies that restriction physical availability of alcohol by way of limiting hours of sale, days of sale, or the placement of outlets
Policy indicator:	Refers to a measure that was developed in order to assess a policy domain. A Policy indicator reflects a policy that has been mandated at the provincial level and is included in legislation or provincial regulations.
Practice indicator:	Refers to a measure that was developed in order to assess a policy domain. Practice indicators reflect a direct outcome from either the presence or the absence of a policy.
Provincial abbreviations:	AB: Alberta; BC: British Columbia; MB: Manitoba; NB: New Brunswick; NS: Nova Scotia; NL: Newfoundland and Labrador; ON: Ontario; PEI: Prince Edward Island; QC: Quebec; and SK: Saskatchewan.
Risk-based licensing and enforcement:	Using a risk-based approach to issuing and regulating liquor sales licenses by taking into account the type of licence, location, past history and level of experience of licensee and frequency and/or severity of incidents/liquor law violations.
Special occasion permits:	Event-specific licenses required for serving alcohol outside of a residence, private place or licensed establishment or selling alcohol outside of a licensed establishment (also referred to as Special Event Permits in some jurisdictions).
Standard drink:	A standard drink is defined as 17.05 ml of ethanol and is approximately equal to a 142 ml (5 oz) glass of 12% strength wine, 43 ml (1.5 oz) shot of 40% strength spirits or a 341 ml (12 oz) bottle of 5% strength beer, cider or cooler (200).
Territorial abbreviations:	NT: Northwest Territories; NU: Nunavut; and YT: Yukon.

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APPENDIX A: Domain Scoring and Weighting Calculations

The following example illustrates how the various policy implementation scores are calculated using hypothetical data.

Step 1: Calculating the unweighted domain score

For each of the 11 policy domains, individual indicator scores were summed to obtain a total unweighted domain score out of a maximum of 10 points. For example, the Alcohol Strategy domain is made up of three indicators worth 2, 4 and 4 points each respectively. In the hypothetical example below, a jurisdiction achieved scores of 1, 1 and 3.5 respectively in each indicator resulting in a total unweighted domain score of 5.5 out of 10 points or 55%.

Example for Provincial/Territorial Alcohol Strategy

Indicator 1: Main focus of the provincial or territorial strategy (out of 2)	**Indicator 2:** Range of evidence-based alcohol policy recommendations within the strategy (out of 4)	**Indicator 3:** Implementation of the provincial or territorial strategy (out of 4.0)	**Unweighted Domain Score** (out of 10) Ind.1 + Ind. 2+ Ind. 3
1	1	3.5	= 1 + 1 + 3.5 = 5.5/10 = 55%

Step 2: Weighting the total unweighted domain scores to calculate the policy domain score

Next, each domain is given a specific **weight** according to how important this domain was considered to be in comparison with the 10 other policy domains, see Table 2. The Provincial/Territorial Alcohol Strategy domain, for example, is given a weight of 20 (Table 2 in the Methods lists all these weights and how they are calculated). This weight reflects the consensus ratings for a) its potential to *facilitate* effective alcohol policies (4/5) and the *scope* (5/5) or ability of those policies to reach the populations affected by alcohol related harm. The exact weight is calculated by multiplying these two ratings together i.e. 4x5=20. The weight therefore corresponds to the maximum possible score for a policy domain. When the weight has been applied to the raw score for the domain, this results in the policy domain score. In the hypothetical example below, the policy domain score for Provincial/Territorial Alcohol Strategy is 5.5x20 i.e. 11.

Unweighted Score (out of 10)	**Maximum Possible Score** (=Weight) Facilitation (=4) x Scope (=5)	**Policy Domain Score** (Unweighted Score x Weight)
5.5	20	(5.5/10) x 20 = 11 11 out of 20

Step 3: Calculating the Total Policy Implementation Score

The total policy implementation score was calculated for each jurisdiction by summing together the 11 policy domain scores. In the hypothetical example below, the total policy implementation score is 108 out of maximum possible score of 174 or 62%.

Domain	Policy Domain Scores	
Direct domains		
1. Pricing and taxation	15/25	60%
2. Physical availability of alcohol	12/16	75%
3. Impaired driving countermeasures	10/15	67%
4. Marketing and advertising controls	9/15	60%
5. Minimum legal drinking age	6/12	50%
6. Brief intervention (SBIR)	5/9	56%
7. Liquor law enforcement	4/9	44%
Indirect domains		
8. Alcohol Control system	15/25	60%
9. Provincial/territorial alcohol strategy	11/20	55%
10. Monitoring and reporting	12/16	75%
11. Health and safety messaging	9/12	75%
Total Policy Implementation Score	**= 108/174**	**62%**

Step 4: Calculating the Adjusted Total Policy Domain Scores

A best current practice score was calculated by summing the best scores achieved for every indicator in each policy domain across all 13 jurisdictions. This represents the maximum score that is currently being achieved if we take the best current practices for each indicator across all the jurisdictions. The overall best current practice score was 87%.

The total policy implementation scores for each jurisdiction were scaled up by a factor of 100%/87% or 1.15 to create adjusted total policy implementation scores expressed as a percentage of the overall best current practice score.

Step 5: Calculating Adjusted Average Policy Domain Scores

A similar adjustment was also made to the average policy domain scores so that they were expressed as a percentage of the overall best current practices in Canada. To illustrate how this was calculated, we use the example of the Impaired Driving Countermeasures policy domain. The average score obtained across all provinces and territories was 55%, while the overall best current practice score for that domain was 95%. We therefore adjusted the average policy domain score across all jurisdictions for Impaired Driving Countermeasures (55%) by dividing it by 95% which results in an adjusted average policy domain score of 58%. Again, the purpose of this adjustment is to compare the average performance across all Canadian jurisdictions with the collective best practices currently being achieved.

APPENDIX B: Provincial and Territorial Policy Domain and Indicator Scoring Rubric

APPENDIX C: Gold Standard Best Practice Alcohol Policy Framework

1. PRICING AND TAXATION

1. Indexed Minimum Unit Pricing (iMUP) for alcohol sold from off-premise outlets: There are minimum prices for all beverage types sold in liquor stores and these are set according to a formula that ties the minimum price directly to the volume of alcohol in a drink, are set at a minimum of $1.71/standard drink, are automatically indexed annually to provincial/territorial inflation rates, and are not undermined by pricing loopholes that would allow products to be sold at cheaper rates. Implementing all of these components of iMUP effectively sets a minimum unit price for alcohol that increases with the cost of living and represents the ideal policy.

2. iMUP for alcohol sold from on-premise outlets: There are minimum prices for all beverage types sold through licensed establishments and these are set according to a formula that ties the minimum price directly to the volume of alcohol contained in a beverage, are set at a minimum of $3.42/ standard drink, are automatically indexed annually to provincial/territorial inflation rates, and are not undermined by pricing loopholes that would allow products to be sold at cheaper rates. Implementing all of these components of iMUP effectively sets a minimum unit price for alcohol that increases with the cost of living and represents the ideal policy.

3. General pricing indicators: Overall average price levels for alcohol sold by both on- and off-premise establishments are sufficiently high and have kept pace with inflation over the past 5 years. Actual prices of common high and low strength products sold from off-premise outlets are set to reflect alcohol content and are at minimum $1.71/ standard drink and are taxed at a higher rate than other goods.

2. PHYSICAL AVAILABILITY

1. Regulations pertaining to outlet placement and safety: Jurisdictions have legislated powers in place that allow the province, territory or municipality to limit the density of outlets by way of restrictions on outlet placement and/or the number of outlets (absolute number or per capita limit) as well as established policies to enhance safety in and around these outlets.

2. Practice indicator: outlet density (off-premise): Jurisdictions have an off-premise outlet density that is less than 2 outlets per 10,000 capita 15 years and older.

3. Practice indicator: outlet density (on-premise): Jurisdictions have an off-premise outlet density that is less than 15 outlets per 10,000 capita 15 years and older.

4. Hours of operation: Jurisdictions have hours of operation set by regulation, without exception, that limit and standardize access to alcohol. Hours of operation for off-premise outlets do not open before 11am and do not stay open after 8pm and for on-premise outlets do not open before 11am and do not stay open after 1am the following day.

5. Regulations pertaining to on-premise availability: Jurisdictions have regulations for the provision of alcohol in on-premise establishments which prohibit tastings and sampling, permit recorking of unfinished wine and place limits on the number of drinks served per customer at one time.

3. IMPAIRED DRIVING COUNTERMEASURES

1. Graduated Licensing Program (new drivers): There are graduated licensing programs (GLP) as well as all the recommended components of those programs, such as a minimum age of at least 16 years to enter into the GLP; a minimum of two stages lasting 12 months and 24 months respectively; and that new drivers be subject to a night time driving ban.

2. Zero tolerance policies for new drivers: There are zero tolerance limits for GLP drivers that include prohibition on being positive for alcohol or any illicit drugs and the .00% BAC limits for alcohol are extended beyond the GLP for a minimum of three years.

3. Licence suspensions and revocations: There are sanctions that are significant enough to serve as a deterrent against impaired driving such as laws that include Short-Term roadside .05% BAC Administrative Licensing Suspension (ALS) Programs with a minimum 3-day ALS and mandatory or discretionary vehicle impoundment for first occurrence as well as the ALS being recorded on the driver abstract or record for at least three years. There is a licence reinstatement fee, minimum 3-year look-back period for repeat occurrences and a minimum 7-day ALS for a second occurrence.

4. Modified or increased penalties when presence of a drug is detected in addition to alcohol: Penalties are increased or modified accordingly when a drug is detected in addition to alcohol.

5. Interlock Programs for Federal Impaired Driving Offenders: There is an established alcohol interlock program in conjunction with licence suspensions as part of a comprehensive approach to dealing with impaired driving offenders. Jurisdictions require successful completion of provincial or territorial interlock program prior to relicensing for all alcohol-related *Criminal Code* offences and those convicted of impaired driving causing death or bodily harm are not eligible for a reduced “hard” suspension.

4. MARKETING AND ADVERTISING CONTROLS

1. Alcohol marketing and advertising regulations: There are content restrictions beyond those imposed by the Canadian Radio-Television and Communications (CRTC) Commission, with restrictions specifically to protect priority populations in addition to youth, such as women, girls and minority groups. There are also restrictions on: the physical location of ads (e.g. ads cannot be placed near schools, substance use treatment centres, community centres, etc.); quantity of ads (ad bans or volume restrictions, e.g. limit on the proportion of commercial space or air time used for alcohol advertising); advertising of price[10] (e.g. policies restricting the advertisement of "cheap" drink specials or 2 for 1 deals); and restrictions on sponsorship that prevent exposure to youth and direct targeting of youth or young adults. Alcohol marketing and advertising regulations also cover additional media types including: web/mobile phones, print media, signage and promotional items. Regulations apply across all advertisers including: government-owned or private off-premise outlets, ferment on premise (FOP) outlets, all manufacturers, on-premise licensees and special occasion permit (SOP) holders.

2. Enforcement of advertising and marketing regulations: There is a specific authority responsible for enforcement of alcohol marketing and advertising regulations that is independent from the alcohol industry and alcohol sales. There is a pre-screening system independent from the alcohol industry in place to ensure advertising and marketing adheres to regulations with an independent complaint system to address violations effectively (the alcohol industry cannot be responsible for monitoring ads for compliance with regulations, nor can they be part of the complaint system or system for delivering penalties for violations; these would represent conflicts of interest). Penalties exist that are commensurate with violations and escalate with the frequency and severity of the violation.

3. Practice Indicator - Focus of the liquor board's social media presence: Liquor boards have a high proportion of social media posts dedicated to health and safety messaging as opposed to a sole focus on alcohol-promotion posts.

5. MINIMUM LEGAL DRINKING AGE

1a. Level of legal drinking age: The minimum legal drinking age is set at 21 years of age.

1b-c. Legislation supporting the MLDA: Supportive legislation prohibits the sale of alcohol to those below the minimum legal drinking age, but also the purchase of alcohol by these individuals. Social hosting laws[11] do not extend beyond the private residence.

[10] Restrictions on advertising below minimum price were not assessed in this policy domain. These policies were evaluated under the Pricing and Taxation policy domain.

[11] Social hosting laws permit the consumption of alcohol by an individual who is under the minimum legal drinking age provided the alcohol is provided by a spouse, parent or guardian.

6. SCREENING, BRIEF INTERVENTION AND REFERRAL

1. SBIR practice guidelines: Authoritative SBIR practice guidelines exist at the jurisdiction level and/or the College of Family Physicians of Canada SBIR tool has been endorsed by a credible provincial or territory professional association (e.g. MD, nurses, psychologists).

2. Access to SBIR tools or services: Provincially- or territorially-funded services or programs, either online or in the health care setting, exist for people to assess their drinking habits, receive brief advice about their drinking, and obtain referral information for further support if needed.

3. Implementation of SBIR: Adults 18 years and older are routinely asked about their alcohol use by their doctor or other clinical staff at the place they regularly seek care. Jurisdictions track or support tracking of SBIR implementation.

7. LIQUOR LAW ENFORCEMENT

1. Status of Risk-based Licensing and Enforcement (RBLE) Programs: Jurisdictions have implemented risk-based licensing and enforcement programs, which aim to identify establishments that pose increased risks to public safety in order to inform licence conditions and enforcement activities. RBLE programs need to be in place for both on-premise establishments and off-premise outlets. The jurisdiction must also implement a police inspection program for on-premise establishments and a Mystery Shopper program (to enforce minimum legal drinking age) for off-premise outlets.

2. Quality of RBLE programs: RBLE programs include consideration of risks posed by the type of outlet, the past record of the licence holder and data on past reported incidents for both on- and off-premise outlets to determine licence conditions and inform enforcement activities. RBLE programs cover all liquor outlets and special occasion permits, with frequent (at least annual) compliance and follow-up (within 3 months) checks for liquor law violations for both on- and off-premise and at least one alcohol inspector per 300 outlets for both types of outlets. Mystery Shopper programs and police inspection programs are in place for off-premise and on-premise licenses respectively.

3. Penalties: Jurisdictions have penalties in place for service to minors and intoxicated persons and penalties are commensurate with the violation, escalate with the frequency and severity of the violation, are tracked and publicly reported.

4. Training Programs Policy Status: Jurisdictions' responsible beverage programs are mandatory for all licensed venues (including Special Occasion Permits) and outlets. They must also be required for all levels of staff including volunteers and have a recertification period of no longer than two years.

8. ALCOHOL CONTROL SYSTEM

1. Type of off-premise retailing system: All off-premise liquor outlets are publicly owned and managed with no private stores.

2. Alcohol sales beyond on-premise and off-premise outlets: Liquor regulations do not permit any sales beyond traditional on and off-premise channels, such as online sales, liquor delivery services, ferment on premise outlets, or ferment at home kits.

3. Relative emphasis on product promotion vs health and safety: There is legislated earmarked funds to support harm prevention initiatives and/or promote health and safety messaging. Protection of public health and/or safety must be explicitly stated as an objective of the alcohol control system (both for the retailer and the regulator).

4. Ministry overseeing alcohol retail and control: The alcohol retailer and regulator are both overseen by a ministry that primarily focuses on health and/or public safety. In addition, there is full separation between the government retailer (i.e. alcohol distributor) and regulator (i.e. policy, licensing and control).

9. ALCOHOL STRATEGY

1. Main focus of the provincial or territorial strategy: Jurisdictions have an alcohol-specific strategy document.

2. Range of evidence-based policy recommendations within the strategy: The strategy includes a wide range of population level evidence-based alcohol control interventions and policies including: pricing; physical availability; impaired driving countermeasures; marketing and advertising controls; minimum legal drinking age; screening, brief intervention and referral programs; and enforcement.

3. Implementation of the provincial or territorial strategy: There is dedicated funding to support the strategy that includes at least one alcohol specific policy recommendation[12] and there is an identified leader to facilitate implementation of the strategy. The strategy was developed free from alcohol industry input, has been updated no more than five years ago and includes rigorous mechanisms in place to monitor the implementation and effectiveness of the alcohol strategy[13].

[12] Note: Strategies that did not include alcohol specific recommendations were not assessed on implementation and received a score of zero for this indicator.

[13] Note: It was beyond the scope of this project to assess implementation of each provincial or territorial strategy, we therefore assessed the rigor with which each jurisdiction monitors the implementation of their respective strategies.

10. MONITORING AND REPORTING

1. Comprehensiveness of reporting mechanisms: Funding or support is provided by jurisdictions to conduct systematic tracking of key alcohol-related indicators at the provincial or territorial levels including: per capita alcohol consumption, alcohol-related hospitalisations, deaths and crimes.

2. Accessibility of reporting: Reporting on alcohol consumption, alcohol-related hospitalisations, deaths and crime is made available to the public at least every two to three years through a centralized system.

3. Leadership and support: Jurisdictions have an identified leader responsible for monitoring alcohol harm and key indicators and specific funding or staff resources to support alcohol monitoring are available.

11. HEALTH AND SAFETY MESSAGING

1. The status of enhanced alcohol labelling: Mandatory (i.e. legislated) enhanced alcohol labels that include health and safety warning messages, standard drink information, and low-risk drinking guidelines are required at point of manufacture.

2. The quality of enhanced label components: Enhanced label components are prominently placed on the packaging, include a variety of clear and concise health and safety-oriented messages that are regularly rotated and are accompanied by graphics.

3. The status of alcohol health and safety messaging (off-premise): There are mandatory (i.e. legislated) health and safety messaging requirements for off-premise retail outlets.

4. The status of alcohol health and safety messaging (on-premise): There are mandatory (i.e. legislated) health and safety messaging requirements for all on-premise licensed establishments.

5. The quality of the off-premise alcohol and safety messaging: The health and safety messaging in off-premise locations includes a variety of alcohol-related health and safety topics (e.g. drinking while pregnant or planning to become pregnant and risk of FASD; impaired driving and acute injury risks; impacts and risks of underage drinking; lower-risk drinking information; and risk of chronic disease or long term health impacts), has clearly stated health messages and is accompanied by relevant graphics.

6. The quality of the on-premise alcohol health and safety messaging: The health and safety messaging in on-premise locations includes a variety of alcohol-related health and safety topics (e.g. drinking while pregnant or planning to become pregnant and risk of FASD; impaired driving and acute injury risks; impacts and risks of underage drinking; lower-risk drinking information; and risk of chronic disease or long term health impacts), has clearly stated health messages and is accompanied by relevant graphics.

7. Media platforms for health and safety messaging used by liquor control boards: A diverse range of suitable media platforms are used for communicating health and safety messaging by liquor control boards including posters, pamphlets, billboards, online content (websites), print advertising, TV/radio advertisements and social media (Twitter, Facebook, Instagram etc.).

APPENDIX D: Policy Implementation Scores by Jurisdiction and Domain, 2017

Province/ Territory	Pricing and Taxation	Physical Availability	Impaired Driving	Marketing and Advertising	MLDA	SBIR	Liquor law Enforcement	Control System	Alcohol Strategy	Monitoring and Reporting	Health Messaging	2017 Total Policy Implementation Score
BC	28.1%	52.5%	62.5%	59.2%	60.0%	36.2%	58.3%	42.5%	40.0%	90.0%	43.0%	50.3%
AB	16.2%	52.5%	65.0%	63.3%	40.0%	54.0%	72.1%	17.5%	80.0%	71.3%	48.0%	49.1%
SK	52.3%	45.0%	67.5%	51.7%	60.0%	18.9%	90.0%	17.5%	50.0%	50.0%	19.5%	45.9%
MB	56.1%	52.5%	57.5%	66.7%	30.0%	7.9%	75.0%	43.8%	40.0%	66.3%	26.5%	48.8%
ON	47.0%	57.5%	72.5%	67.5%	60.0%	67.3%	62.5%	30.0%	55.0%	70.0%	48.0%	55.3%
QC	27.0%	45.0%	40.0%	75.0%	40.0%	50.1%	69.5%	47.5%	50.0%	13.8%	38.0%	43.3%
NB	50.1%	27.5%	80.0%	40.0%	50.0%	4.2%	37.9%	35.0%	10.0%	58.8%	10.5%	38.0%
NS	49.2%	37.5%	70.0%	36.7%	60.0%	63.9%	68.8%	30.0%	65.0%	47.5%	8.0%	47.4%
PE	47.7%	35.0%	80.0%	36.7%	50.0%	35.9%	50.0%	17.5%	10.0%	85.0%	25.0%	41.2%
NL	40.9%	15.0%	70.0%	0.0%	60.0%	2.8%	62.5%	20.0%	50.0%	50.0%	16.5%	35.2%
YT	22.5%	22.5%	20.0%	51.7%	50.0%	0.0%	51.3%	45.0%	10.0%	78.8%	26.5%	34.3%
NT	15.8%	47.5%	30.0%	48.3%	60.0%	0.0%	44.2%	32.5%	10.0%	66.3%	21.5%	33.2%
NU	12.5%	72.5%	5.0%	68.3%	50.0%	0.0%	49.2%	70.0%	90.0%	68.8%	2.5%	47.7%
Average	35.8%	43.3%	55.4%	51.2%	51.5%	26.3%	60.9%	34.5%	43.1%	62.8%	25.7%	
Min score	12.5%	15.0%	5.0%	0.0%	30.0%	0.0%	37.9%	17.5%	10.0%	13.8%	2.5%	
Max score	56.1%	72.5%	80.0%	75.0%	60.0%	67.3%	90.0%	70.0%	90.0%	90.0%	48.0%	
National Policy Implementation Score												43.8%
Best Current Practice Scores	82.4%	95.0%	95.0%	100.0%	60.0%	69.0%	97.5%	80.0%	100.0%	90.0%	75.0%	86.6%