Focus On: Standard Alcohol Labels

Introduction

The use of standard product labels to convey health-related information on food and beverages is now widespread in Canada except in the case of alcoholic beverages. This is despite the fact that approximately 80% of the population reports drinking alcohol at least once in the past year, and that there is clear evidence linking drinking with significant harm and cost.\textsuperscript{1,2}

Product labelling has several advantages including that it is a relatively inexpensive way to reach drinkers, it delivers information to users at both points of sale and consumption, and it provides highest
exposure to the heaviest users and thus is a well-targeted intervention.³ Although alcohol labelling is extremely popular with the public⁴ and appears to have gained acceptance as a universal prevention measure for addressing alcohol-related risk in more than 20 countries around the world, a recent review of this topic suggests that alcohol labelling initiatives are still underdeveloped.⁵

Standard alcohol labelling includes three main types of product information: health warnings, nutritional information (e.g., ingredients, allergens and calories) and number of standard drinks in a container. Some labels combine these types of product information. For example, guidelines for low-risk drinking can be paired with information on the number of standard drinks per container, to help consumers better monitor and control their drinking.⁶

**Effectiveness of standard alcohol labels**

Research on the effectiveness of alcohol labels can assess different measures such as awareness of the labels themselves, recall and comprehension of the messages they contain, and changes in beliefs and behaviours resulting from exposure to the labels.⁷ Generally, there is limited high-quality evidence evaluating the effectiveness of various types of alcohol labels, but what is currently known is summarized below.

**Health warning labels**

Most research on the effectiveness of alcohol health warning labels come from evaluations of the United States text-based health warning that was mandated by federal law in 1989 (Figure 1).⁷,⁸ Therefore, the results reported below for the United States alcohol warning labels may not generalize to other countries, and may not apply to more modern image-based warning labels such as those used on tobacco packaging in Canada.⁹ Evaluations of the US alcohol health warning label show that they can increase awareness and convey messages about risks to drinkers, but that on their own have not led to reductions in risky drinking.⁷,¹⁰ That said, alcohol health warning labels have been shown to stimulate conversations about drinking, and may play a role in shifting social norms around alcohol use.⁷,⁹

![GOVERNMENT WARNING: (1) According to the Surgeon General, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects. (2) Consumption of alcoholic beverages impairs your ability to drive a car or operate machinery, and may cause health problems.](image)

Figure 1: Mandated text-based alcohol warning label from the United States

The latest reviews of this topic suggest that, for maximum effect, alcohol health warning labels should be highly visible, easy to understand, speak clearly about the consequences of alcohol consumption, and be coordinated with a range of other proven strategies to have the greatest impact on knowledge, beliefs and behaviour.⁷,⁹,¹⁰ Elements of these suggested practices have been incorporated into the graphic image-based warning labels for tobacco that are currently mandated on cigarette packaging in Canada; however, there are no high-quality empirical studies validating the independent effectiveness of these modern warning labels for reducing smoking.¹¹
Nutrition information labels

Nutrition information labels\textsuperscript{12} convey nutrition and other health-related information (e.g., calories) through standardized labels as part of universal efforts to improve the dietary choices of consumers. The Federal Government (Health Canada) maintains regulatory authority over nutrition labels with standardized labels required on all pre-packaged food for sale in Canada since December 2007.\textsuperscript{13}

No research has been conducted directly relating to the effectiveness of nutrition labels on alcoholic beverage containers; however, some of what has been learned about nutrition labels more generally will likely apply to alcohol. Survey data suggests that over half of the population reports using nutrition labels,\textsuperscript{14} although observational studies of shoppers suggest this figure likely overstates actual use.\textsuperscript{15} Nutrition label use is more common among women, those who say they know more about nutrition, those with higher education and income, and people for whom price is less of a deciding factor in purchases. Nutrition label use is highest among those with health conditions and other factors that necessitate careful dietary choices.\textsuperscript{14,16}

Evidence consistently shows a strong correlation between nutrition label use and healthier diet choices, but it is likely that these factors influence each other so causality is difficult to determine.\textsuperscript{14} Of note, nutrition labels appear to be less effective when people purchase their preferred products, but seem to exert influence on choice when they are asked to make a healthy choice.\textsuperscript{17} Thus, taste, price, convenience and habit play bigger roles than health considerations in day-to-day food choices for most people, most of the time.\textsuperscript{18}

In terms of Canada’s required nutrition labels, about one in three report understanding all the components of current Nutrition Facts tables and many report having particular problems with information that is presented in a quantitative format according to the Strategic Counsel, as cited in National Alcohol Strategy Advisory Committee.\textsuperscript{12} Labels that require calculations also create problems for many consumers.\textsuperscript{14} Finally, research shows public education campaigns offered in conjunction with additional point of sale information can increase awareness, understanding and motivation to use nutrition labels.\textsuperscript{19}

Standard drink labels

Standard drink labels (SDL) clearly indicate the number of drinks contained in alcoholic beverages based on a pre-determined amount of pure alcohol. A standard unit or drink of alcohol in Canada is 13.45g or 17.05mL of pure alcohol which is roughly equivalent to 12oz of 5\% beer, 5oz of 12\% wine and 1.5oz of 40\% spirits. At the present time only Australia and New Zealand require SDLs on alcohol containers (see Table 1).

Experimental research conducted in Australia in the early 1990’s found that, compared to labels showing alcohol by volume (ABV), SDLs significantly improved the ability of drinkers to correctly identify the number of standard drinks in a given container. The superiority of SDLs likely relates to the fact that consumers have to use container size and percentage of alcohol to calculate the number of standard drinks with ABV labels. The research also showed that SDLs labels improved the ability of drinkers to correctly pour a standard drink in glasses of various sizes and with alcohol of varying strength, especially for beer.\textsuperscript{20,21}
This research was replicated in Canada in 2014 where drinkers were asked to identify the number of standard drinks in three bottles of beer, half a bottle of wine or a quarter bottle of spirits of various strength using either ABV labels or SDLs. In all cases except regular (5%) strength beer, drinkers performed significantly better with the SDLs than with the ABV labels.\textsuperscript{6} The exception for regular strength beer is most likely explained by the fact that one bottle is exactly equivalent to one standard drink.

Finally, when drinkers in the second Australian study discussed above were asked which type of label they preferred (ABV or SDL), the majority (67\%) said they preferred the standard drink labels over ABV labels.\textsuperscript{21} Further, when drinkers in the recent Canadian study were asked whether they would support the introduction of SDLs in Canada, a strong majority (82.7\%) said they would.\textsuperscript{6}

**Combined labels**

Two unpublished studies in the United States looked at the impact of providing standard drink information combined with additional health information such as low-risk drinking guidelines, persuasive messages for moderate drinking, and nutrition information to US college students on bar menus.\textsuperscript{22,23} The first study presented drinkers with mock menus from a fictitious bar and asked them to indicate how many drinks they would order if they were going to be there drinking for four hours. The menu varied based on the presence or absence of standard drink information, drinking guidelines, nutrition facts, and a positively framed motivational argument for moderate drinking. All of the experimental variables had weak effects on number of drinks the students said they planned to consume and estimated blood alcohol concentrations (BAC), but there was a significant effect for male drinkers who were exposed to the menu that contained both standard drink and nutrition information (i.e., calories, protein and carbohydrates).\textsuperscript{22}

The second similar study took place in a real life drinking environment (i.e., a bar) and measured three outcomes: number of drinks ordered, actual blood alcohol concentrations (BAC) and drinking intentions.\textsuperscript{23} This study included control groups and findings suggest that drinkers ordering from menus featuring both standard drink information and drinking guidelines intended to drink significantly less alcohol than drinkers exposed to standard drink information on its own. Combining information on standard drinks, drinking guidelines and the persuasive argument for moderate drinking significantly increased alcohol consumption and end of the night BACs when compared to all other experimental groups including the controls.\textsuperscript{23} In conclusion, combining information on standard drinks with drinking guidelines may reduce alcohol consumption among college students, but the addition of persuasive arguments for moderate drinking may actually increase consumption in some young adult drinkers.\textsuperscript{23}

One additional 2009 study brought together 44 college students in six focus groups to discuss knowledge and use of Australia’s SDLs labels.\textsuperscript{24} Students showed a good understanding of the concept of standard drinks, were aware of the labels on containers, and used the labels when buying alcohol. However, they mainly used the labels to identify drinks with the most alcohol and lowest cost so they could drink less liquid, get intoxicated faster, and spend less money. Some students did identify situations where they would use SDLs to make safer choices with alcohol, but only when prompted to do so.\textsuperscript{24} This finding was corroborated in a 2014 Canadian study where the researchers found that 46\% of participants said they would use SDLs to identify the least expensive alcohol.\textsuperscript{6} However, in this study, significantly more participants said they would use the labels to help a friend stay below the legal BAC level (74\%), or to stay within Canada’s low-risk drinking guidelines (68\%).\textsuperscript{6}
The results of studies to date suggest that in the case of standard drink labels it will be important to monitor possible unintended consequences related to young adults’ use of the labels. However, it is also important to emphasize the majority of drinkers indicate that they would use standard drink labels to assist others or themselves to make healthier drinking choices and reduce alcohol-related harm. This finding is highly relevant because, while a higher proportion of young adults report regularly engaging in risky drinking, adults over the age of 25 currently account for approximately 85% of all risky drinking occasions in Canada.25 Thus, if SDLs in combination with low-risk drinking guidelines are shown to significantly reduce risky drinking patterns for adults over the age of 25, the net effect across the population will very likely be positive.

**Current standard alcohol labelling policies internationally**

Table 1 shows the status of known alcohol labelling initiatives as of February 2015.18,26,27

**Table 1: Overview of labelling policies and programs**

<table>
<thead>
<tr>
<th></th>
<th>Alcohol content % by volume</th>
<th>Mandatory health warning</th>
<th>List of ingredients</th>
<th>List of allergens/additives</th>
<th>Calories per serving</th>
<th>Standard drinks per container</th>
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Focus On: Standard alcohol labelling

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<th>Alcohol content % by volume</th>
<th>Mandatory health warning</th>
<th>List of ingredients</th>
<th>List of allergens/additives</th>
<th>Calories per serving</th>
<th>Standard drinks per container</th>
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n/a – not available

\(^a\) Alcohol health warning labels are only mandated in the Yukon and Northwest Territories in Canada. For more information see: [http://www.ylc.yk.ca/pdf/warning_label_initiative.pdf](http://www.ylc.yk.ca/pdf/warning_label_initiative.pdf) and [http://www.fin.gov.nt.ca/liquor/social-responsibility/](http://www.fin.gov.nt.ca/liquor/social-responsibility/)

\(^b\) For mixed and non-standardized drinks only.

\(^c\) For sweet alcoholic drinks only (i.e., alco-pops).

\(^d\) See discussion below for information on the voluntary industry labelling initiative in the UK (Drinkaware).

Several points are apparent from Table 1. First, a sizable subset of countries require some form of alcohol labelling. Second, alcohol by volume (ABV) labels are the most common form of required labels even though research shows many drinkers using this information have problems keeping track of the amount of alcohol they drink.\(^6\) Third, a majority of countries currently require some form of health warning and also some form of nutritional information on labels such as ingredients or additives/allergens. Fourth, no country from Table 1 requires calories to be listed on alcohol containers despite the World Health Organization labelling obesity as a global epidemic.\(^28\) Finally, at the present time, only Australia and New Zealand currently require SDLs on alcoholic beverages.

**Overview of select current or proposed standard alcohol labelling initiatives**

Several interesting initiatives are underway to enhance the use of standard alcohol labels to encourage low-risk drinking and reduce the harm and costs of alcohol. The Portman Group, an alcohol industry consortium in the UK, has published guidelines for SDLs (or unit labelling)\(^29\) and an alcohol labelling toolkit for alcohol producers.\(^31\) Also, under the Public Health Responsibility Deal, over 80 companies, including some of the largest alcohol producers in the UK, entered into a voluntary agreement with the government to have at least 80% of their products on the shelf carry the standard Drinkaware label by December 2013.\(^31\) The Drinkaware label contains information on UK drinking guidelines, standard drinks, a warning about drinking during pregnancy, and the Drinkaware URL where drinkers can go for more information about low-risk drinking (Figure 2). While no objective evaluation of compliance with the Public Health Deal alcohol labelling pledge has been published to date, it is widely believed that not all companies who expressed interest in the Drinkaware label were able to meet the

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**Figure 2: Sample Drinkaware label (UK)**

© Portman Group
80% pledge by the end of 2013. This outcome may highlight weaknesses inherent in using a voluntary approach to standard alcohol labelling. Although the Drinkaware label was developed by the alcohol industry, it provides one of the best examples of a combined label in existence at this time, so it is included as a potential example for public health.

A second recent labelling initiative of interest is the requirement to add nutritional information about alcoholic drinks to restaurant menus in the United States. Based on a final ruling released by the US Food and Drug Administration (USFDA) in December 2014, restaurants with more than 20 outlets are required to provide calorie counts with the drinks listed on their regular menus.\textsuperscript{32} Wine lists are exempt from the requirement and the new rules are designed to avoid placing too much of a burden on restaurants or alcohol producers. For example, all combinations of mixed drinks won't have to be labeled at bars, unless they are listed on a menu, and the USFDA is allowing restaurants to use estimates of calories and ranges of calories without listing the exact amount in every different drink. This means that producers may not have to pay to have their product’s nutritional content analyzed.

In a related move, in 2013, the US Treasury Department, which also oversees alcohol labelling regulations, changed regulations to allow beer, wine and spirits companies to apply voluntary labels conveying serving size, servings per container, calories, carbohydrates, protein and fat per serving. It is expected that companies selling low calorie and low carbohydrate products will use the labels to promote their products. The Treasury Department has indicated it will monitor producers carefully to ensure the labels are not being used inappropriately to promote alcohol consumption.

The topic of placing nutritional information for alcoholic beverages on restaurant menus is also currently being debated in Ontario. In February 2015, The Making Healthier Choices Act, which contains provisions similar to the USFDA ruling discussed above, passed a second reading in the Legislature. If passed, the Bill will require chain restaurants and food service premises (e.g., convenience stores) with more than 20 outlets in Ontario to post calories for items listed in their menus including alcoholic beverages. The proposed law will require food service operators to post contextual information to help educate patrons about their daily caloric requirements, and also authorize public health inspectors to enforce menu labelling requirements.\textsuperscript{33}

**Current Canadian Research on Standard Alcohol Labels**

A national research initiative on alcohol labelling is currently taking place in Canada under the National Alcohol Strategy (NAS) first published in 2007. The NAS includes recommendations for the development of national guidelines for low-risk drinking (released in November 2011), and on standard drink labels (SDLs) for beverage alcohol containers. The National Alcohol Strategy Advisory Committee, made up of a cross section of alcohol stakeholders including researchers, alcohol industry and public health, recently released a report providing an overview of standard drink labelling tailored to the Canadian context. The report recommends adding SDLs to containers, providing consumer education on low-risk drinking guidelines and other topics, and the creation of a web resource to enhance the ability of consumers to make healthier drinking choices.\textsuperscript{12}

Public Health Ontario (PHO) is currently collaborating with researchers and public health experts from across Canada to investigate the effectiveness of a combined standard drink and low-risk alcohol drinking guidelines label on drinkers’ ability to:

- recognize the amount of alcohol in a Canadian standard drink, and identify the number of standard drinks in standard beer, wine and spirit products; and
• correctly determine the number of drinks one would have to consume to reach the national low-risk drinking guidelines.  

This PHO-led study is also examining rating and ranking assessments of effectiveness on different alcohol health warning label pictures and messages. Although findings from this study have not yet been published, preliminary analyses suggest that placing standard drink information and drinking guidelines on alcoholic beverage containers improves drinkers’ ability to correctly identify the amount of alcohol in a Canadian standard drink, and better assists them in identifying the number of standard drinks in beverage containers compared with standard ABV labels. Results also suggest the majority of consumers support the inclusion of more health/nutrition information on alcohol containers. In addition, a majority of participants also stated that placing information on drinking guidelines and standard drinks on labels would assist them in making healthier drinking choices. 

**Conclusion**

The use of standard alcohol labels to convey health-related warnings and information is growing internationally with several significant labelling initiatives currently underway in Canada. While evidence for the effectiveness of standard alcohol labels for reducing risky drinking and alcohol-related harm is still preliminary, there appears to be good support for more health-related information on alcoholic beverage containers from the majority of drinkers. As current and future initiatives progress, high-quality evaluations should be conducted to determine which labels are most useful for reducing risky drinking across the population and among population subgroups. This is particularly important for standard drink and nutritional labels as these interventions have not been rigorously evaluated in countries already requiring them.

**Resources**

  InformationByTopic: "Alcohol policy" Title
- Public Health Ontario Events Page: [http://www.publichealthontario.ca/en/LearningAndDevelopment/Events/Pages/default.aspx](http://www.publichealthontario.ca/en/LearningAndDevelopment/Events/Pages/default.aspx)

**References**


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