

## The Efficacy of Warning Labels on Alcohol Containers for Fetal Alcohol Spectrum Disorder Prevention

Kirsten Morrison, BA<sup>a,b</sup>; Lindsay Wolfson, MPH<sup>a,c</sup>; Kelly Harding, PhD<sup>a,b</sup>

<sup>a</sup>Canada FASD Research Network, Canada

<sup>b</sup>Laurentian University, Sudbury, ON, Canada

<sup>c</sup>Centre of Excellence for Women's Health, Vancouver, BC, Canada

### KEY MESSAGES

Alcohol warning labels are mandatory in several countries around the world, but when used as a singular FASD prevention strategy, may be unable to catalyze change in alcohol use during pregnancy. Alcohol warning labels should be used in conjunction with other approaches as part of a comprehensive FASD prevention strategy to better promote behavioural change.

### Issue:

Fetal Alcohol Spectrum Disorder (FASD) is a significant public health issue that has resulted in the development of a variety of strategies for prevention, including alcohol warning labels. While some countries, such as the United States, France, and Mexico, have legislated mandatory warning labels on alcohol containers or in alcohol advertising, in other countries, companies have voluntarily included health warning labels on alcohol containers. The evidence for the efficacy of alcohol warning labels is mixed, with a large proportion of studies suggesting that independent of additional FASD prevention efforts, warning labels are often ineffective in promoting change in alcohol use [1-6].

**The purpose of this issue paper is to explore the effectiveness of alcohol warning labels as an FASD prevention strategy and to offer ideas to increase the potential use and impact of warning labels.**

### Background:

Alcohol warning labels are a low-cost, population level prevention and health promotion approach designed to briefly warn about the harms of drinking alcohol [3, 7]. The United States was the first country to implement health warning labels in 1989, legislating that all alcoholic beverage containers include the risks of drinking while pregnant, drinking and driving, and drinking while operating heavy machinery [8, 9]. Although few countries mandate health

warnings specifically for the risks of alcohol use in pregnancy, several countries require that general warning labels be included in alcohol advertisements or on alcohol containers [10]. Even where warning labels are not mandated, companies in other countries may voluntarily provide warning labels on alcohol containers or in advertisements [11]. However, mixed evidence on the efficacy of warning labels as an FASD prevention strategy remains. The following table describes the existing international messaging and imagery related to warning labels.

**Table 1: Examples of Pregnancy-Related International Alcohol Warning Labels**

Country	Sample Warning Label	
Australia/New Zealand*	<p>“It is safest not to drink while pregnant” or ‘pregnant lady’ pictogram developed by <a href="http://Drinkwise Australia">Drinkwise Australia</a> [12].</p>	
France	<p>Labels for beverages containing more than 1.2% ABV (alcohol by volume) must include the text “Consumption of alcohol beverages during pregnancy, even in small amounts, can have serious consequences for the child’s health” or a pictogram. The warning label must appear in the same visual field as the alcohol content indication [12, 13].</p>	
Germany*	<p>This warning label was created by the <a href="#">Northern Bavaria FASD Network</a> as part of a campaign for mandatory alcohol warning labels in Germany. This pictogram shows a woman using refusal skills, possibly a clearer and more empowering approach than having an x across the image of a pregnant woman drinking.</p>	
Indonesia	<p>“Those under age 21 and pregnant women should not drink” [12].</p>	
Japan	<p>May include one of three labels, including “Drinking alcohol during pregnancy and nursing may adversely affect the development of your foetus or infant” [12].</p>	
Mexico	<p>In addition to a standard health label, beverages with an ABV of 6% or higher must include one of three pictograms, including one on the risk of alcohol use in pregnancy. Labels may voluntarily include the statement, “For more information, visit <a href="http://www.conadic.salud.gob.mx">www.conadic.salud.gob.mx</a>, where there is information on the harmful use of alcohol” [9, 12].</p>	

South Africa	Alcohol containers must include at least one of seven health messages, including “Drinking during pregnancy can be harmful to your unborn baby” [12].	
Turkey	Alcohol containers must include the text “Alcohol is not your friend” and three pictograms, including one against drinking alcohol in pregnancy [12].	
Turkmenistan	Alcohol containers containing 1.5% ABV or higher must include a warning that takes up 20% or more of the beverage container stating “Alcohol beverages harm your health! Alcohol beverages are contraindicated for those below age 21, pregnant and breastfeeding women, and those with diseases of the central nervous system, kidneys, liver, and other digestive organs.”	
United States	A health warning label stating, “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” [9, 12].	

\*Finalized warning label is pending

**Evidence:**

**1. Universal Alcohol Warning Labels**

Universal alcohol warning labels are warning labels that address the overall risk of alcohol use rather than focusing on a specific health risk, such as drinking and driving, cancer, or FASD. Despite evidence suggesting that there is little measurable change in alcohol use related to the introduction of warning labels [6], the majority of this work has been conducted in the United States, where warning labels are risk-specific [5]. In comparison, research on universal alcohol warning labels has indicated that general warnings are more believable, convincing, and personally relevant to individuals compared to risk-specific warning labels. This difference may be a result of how general warning labels are framed, compared to risk-specific warning labels which may be more negative in their messaging [2, 5]. Universal warning labels may include standard drink sizes, a strategy that has been effective in improving consumers’ awareness of their consumption and self-monitoring of their alcohol intake [14].

**2. Translating Evidence from the Use of Warning Labels on Cigarettes**

The success of tobacco warning labels was a motivator for the inclusion of warning labels on alcohol containers [6]. Although important strategies have been shared across the two fields, warning labels on alcohol containers have not had the same effect as warning labels on tobacco products [1, 4, 14-16]. This difference in efficacy may be because of the larger warning size and the specificity of health effects listed on the tobacco label, or the supplemental material inside the cigarette package [6]. In instances where strategies were effective, they did not have the same positive effect across all population groups. For example, in the United States, implementation of the *American Alcohol Beverage Warning Label Act* resulted in a demonstrated decrease in alcohol use among low-risk drinkers, but did not have the same effect among heavier drinkers [3].

### 3. Promoting Change in Drinking

Independent of other prevention strategies, alcohol warning labels are not likely to directly lead to a change in the consumption of alcohol. However, combined with additional awareness raising and other prevention strategies, warning labels can act as a catalyst for change in drinking patterns by promoting conversations about alcohol use and discouraging risky alcohol use [1]. Moreover, the increase in exposure to alcohol warning labels can increase public knowledge about the risks of consuming alcohol when pregnant and can help shift social norms [3, 13, 17]. Increased awareness may not result in behaviour change, especially amongst high-risk drinkers, where targeted approaches may be necessary to facilitate change. Therefore, it may be useful to use warning labels as one component of a comprehensive FASD prevention strategy [3].

### 4. Consumers' Engagement with Warning Labels

For warning labels on alcohol products to be effective, the consumer must be in contact with the alcohol container. At bars, parties, restaurants, and other establishments where alcohol is served, people rarely drink directly from the container, rendering the labels less effective [17]. Where individuals are in direct contact with the alcohol container, the small size of warning labels does not often allow for nuanced prevention messaging [10, 18]. As a result, warning labels that use pictures rather than those that are text-based are more likely to be noticed [6].

Warning labels are also limited in what can be conveyed and may have the unintended consequence of increasing guilt on the part of pregnant women who drink alcohol, causing stress that they may have harmed their fetus before confirmation of the pregnancy [3]. This guilt, as well as stigma, directed to pregnant women who drink may particularly be induced when the combined prevention efforts do not convey clear messages about the risks [3, 16]. It is therefore important that accompanying or synchronized prevention messaging indicates how and where women can seek additional non-judgmental support to have a healthy pregnancy.

### Recommendations:

- Alcohol warning labels should be used in combination with other prevention strategies, including posters, informational pamphlets, and engagement with health and social service providers [2, 3, 6, 19].
- In addition to warning labels on bottles, warning messaging or signage should be included in alcohol advertising – and should be highly visible – in licensed venues.
- Warning labels on alcohol containers should focus on design and content to achieve the best results [9]. Design elements include increased size and graphic images versus text-based messaging.
- Warning labels wording should be written in a neutral tone and be informative so as to not cause unintended stress or denial [2, 3].
- Warning labels should include a pictogram of a standard drink size to better facilitate reflection and self-monitoring of alcohol use [14].
- The informational material that is synchronized with warning labels on alcohol containers should be evidence based and use non-stigmatizing messaging. Using

resources, such as [Language Matters... Talking about Fetal Alcohol Spectrum Disorder](#), can help frame included messaging [20].

- Health and social service providers should be well prepared to welcome and assist women who are prompted to seek support as a result of a warning label so that their support can be harm reducing, non-stigmatizing, and trauma informed [19].

### **Conclusion:**

Warning labels are but one component of a comprehensive FASD prevention strategy. On their own, warning labels may not lead to stopping or reducing alcohol use, but when combined with other preventive strategies, warning labels can increase awareness about alcohol use in pregnancy and discourage risky alcohol use.

## References:

1. Agostinelli, G. and J.W. Grube, *Alcohol Counter-Advertising and the Media. A review of recent research.* Alcohol Research & Health, 2002. **26**(1): p. 15 - 21.
2. Annuziata, A., Agnoli, L., Vecchio, R., Charters, S., Mariana, A., *Health warnings on wine labels: a discrete choice analysis of Italian and French Generation Y consumers.* Wine Economics and Policy, 2019. **8**: p. 81 - 90.
3. Thomas, G., G. Gonneau, N. Poole, and J. Cook, *The effectiveness of alcohol warning labels in the prevention of Fetal Alcohol Spectrum Disorder: A brief review.* The International Journal of Alcohol and Drug Research, 2014. **3**(1): p. 91 - 103.
4. Thomas, M., *Alcohol warning labels - do they work?*, S.P. Section, Editor. 2012, Parliament of Australia.
5. Hassan, L. and E. Shiu, *A systematic review of the efficacy of alcohol warning labels: Insights from qualitative and quantitative research in the new millennium.* Journal of Social Marketing, 2018. **8**(3).
6. Stockwell, T.A., *A review of research into the impacts of alcohol warning labels on attitudes and behaviour.* 2006, Centre for Addictions Research of BC, University of Victoria: Victoria, BC.
7. Dumas, A., S. Toutain, C. Hill, and L. Simmat-Durant, *Warning about drinking during pregnancy: Lessons from the French experience.* Reproductive Health, 2018. **15**(20).
8. Dresser, J., R. Starling, W.G. Woodall, P. Stanghetta, and P.A. May, *Field trial of alcohol-server training for prevention of fetal alcohol syndrome.* Journal of Studies on Alcohol and Drugs, 2011. **72**(3): p. 490 - 496.
9. Institute of Alcohol Studies, *International evidence and best practice of alcohol labelling.* n.d.
10. Bell, E., N. Zizzo, and E. Racine, *Caution! Warning labels about alcohol and pregnancy: Unintended consequences and questionable effectiveness.* The American Journal of Bioethics, 2015(3): p. 18 - 20.
11. Wilkinson, C. and R. Room, *Warnings on alcohol containers and advertisements: International experience and evidence on effects.* Drug and Alcohol Review, 2009(4): p. 426 - 435.
12. International Alliance for Responsible Drinking. *Health Warning Label Requirements.* n.d.; Available from: <http://www.iard.org/resources/health-warning-labeling-requirements/>.
13. World Health Organization Regional Office for Europe, *Alcohol labelling: A discussion document on policy options.* 2017, World Health Organization: Copenhagen, Denmark.
14. Blackwell, A.K.M., K. Drax, A.S. Attwood, M.R. Munafo, and O.M. Maynard, *Informing drinkers: Can current UK alcohol labels be improved?* Drug and Alcohol Dependence, 2018. **192**(1): p. 163 - 170.
15. Dossou, G., K. Gallopel-Morvan, and J.F. Diouf, *The effectiveness of current French health warnings displayed on alcohol advertisements and alcoholic beverages.* European Journal of Public Health, 2017. **27**(4): p. 699 - 704.
16. Tinawi, G., T. Gray, T. Knight, C. Glass, N. Domanski, N. Wilson, . . . G. Thomson, *Highly deficient alcohol health warning labels in a high-income country with a voluntary system.* Drug and Alcohol Review, 2018. **37**(5): p. 616 - 626.
17. Barry, K.L., R. Caetano, G. Chang, M.C. DeJoseph, L.A. Miller, M.J. O'Connor, . . . National Task Force on Fetal Alcohol Syndrome and Fetal Alcohol Effect, *Reducing alcohol-exposed pregnancies: A report of the National Task Force on Fetal Alcohol Syndrome and Fetal Alcohol Effect.* 2009, Centers for Disease Control and Prevention: Atlanta, GA.
18. Anderson, P., D. Chisholm, and D.C. Fuhr, *Effectiveness and cost-effectiveness of policies and programmes to reduce the harm caused by alcohol.* The Lancet, 2009. **373**(2234 - 2246).
19. Nathoo, T., N. Poole, L. Wolfson, R. Schmidt, N. Hemsing, and K. Gelb, *Doorways to conversation: Brief intervention on substance use with girls and women.* 2018, Centre of Excellence for Women's Health: Vancouver, BC.
20. Canada FASD Research Network, *Language Matters... Talking about Fetal Alcohol Spectrum Disorder.* 2019, Canada FASD Research Network.