

# Alcohol harms and product labelling: What, who and how?



Authors: Angela Attwood, Anna Blackwell, Olivia Maynard - University of Bristol, UK



# Contents:

---

<b>1</b>	<b>Background.....</b>	<b>5</b>
<b>2</b>	<b>Project overview.....</b>	<b>6</b>
2.1	Online public survey.....	6
2.2	Stakeholder interviews.....	6
2.3	Focus groups with drinkers.....	6
2.4	Experimental studies.....	6
<b>3</b>	<b>Findings.....</b>	<b>8</b>
3.1	Current knowledge is poor.....	9
3.1.1	<i>Alcohol content (i.e., units, calories).....</i>	<i>9</i>
3.1.2	<i>Low-risk drinking guidelines.....</i>	<i>10</i>
3.1.3	<i>Health.....</i>	<i>11</i>
3.2	Self-efficacy and response efficacy: Difficult to change or no need to change.....	12
3.3	More than a label.....	14
3.3.1	<i>Beer mats.....</i>	<i>14</i>
3.3.2	<i>Glassware labelling.....</i>	<i>15</i>
3.3.3	<i>Digital glassware.....</i>	<i>15</i>
3.4	Implications for behaviour change interventions.....	16
<b>4</b>	<b>Recommendations.....</b>	<b>17</b>
<b>5</b>	<b>Acknowledgements.....</b>	<b>18</b>
<b>6</b>	<b>References.....</b>	<b>19</b>



# 1 Background

Alcohol consumption is linked to over 200 health conditions and is among the top five risk factors for disease globally (Lim et al., 2012; World Health Organisation, 2014). In 2016, the UK government published the Chief Medical Officers' (CMO) evidence-based low-risk drinking guidelines for alcohol consumption (i.e., no more than 14 units per week, which should be spread over three or more days) (Department of Health, 2016b). However, public knowledge of these guidelines, alcohol content of drinks, related health risks and personal level of consumption is poor (Kerr & Stockwell, 2012; Rosenberg et al., 2017). Inadequate communication of information may be putting people at risk. It is reported that over 10 million UK adults drink above the low-risk drinking guidelines (Health and Social Care Information Centre, 2015). There is evidence indicating that drinkers are generally supportive of initiatives that increase communication about alcohol and related health consequences (Coomber, Jones, Martino, & Miller, 2016; Thomson, Vandenberg, & Fitzgerald, 2012), and that health messages increase conversations about the risks of alcohol consumption (Kaskutas & Graves, 1994).

In 2011, the alcohol industry signed up to a Responsibility Deal in partnership with the UK Government. As part of this deal, the alcohol industry pledged to improve alcohol product labels to provide clear information on unit content, guidelines about drinking and warnings about drinking during pregnancy (Department of Health, 2011). However, these pledges have not been met (Petticrew et al., 2016). For example, a recent report found that only one out of over 300 alcohol products sampled carried up-to-date information on low-risk drinking guidelines (Alcohol Health Alliance UK, 2017). Furthermore, alcohol products (containing >1.2% alcohol by volume) are currently exempt from the EU Regulation (1169/2011) that requires ingredients and nutritional information to be present on food and soft drinks. In 2015, the UK Parliament's European Union Committee (2015) made recommendations for an updated EU Alcohol Strategy that includes mandatory labelling for alcohol products. These labels should include information on ingredients, alcohol strength, and the risk of drinking when pregnant.

A number of recommendations exist regarding best practice for alcohol product labels. First, labels should be clear, simple, direct and evidence-based (Al-hamdani, 2014), covering all the relevant health issues (Anderson et al., 2013) and accompanied by suggestions for action (Eurocare, 2012). Health warning labels should be in prominent positions on products (Wilkinson et al., 2009), in a standard location parallel to the base and separate from other label information (Eurocare, 2012). The warning should cover a set minimum size of the product label, e.g., one third (Anderson et al., 2013) and the message should use a range of saliency features to draw attention, e.g., in capital letters in bold type with a contrasting background (Eurocare, 2012).

The messages should be rotated over time (Eurocare, 2012; Wilkinson et al., 2009) and be linked to other public health campaigns to increase acceptability and understanding of alcohol-related harms (Eurocare, 2012; Thomson et al., 2012; Wilkinson et al., 2009) and delivered using a number of methods beyond product packaging, including displays in shops, supermarkets, pubs and bars (Farke & Veillard, 2011).

Following the success with tobacco product labelling (Hammond, 2011), a number of recommendations have been drawn from the tobacco literature regarding how to optimise message content and delivery. While this provides a useful comparison, we need to be careful when comparing alcohol and tobacco, and further research is required to establish whether similar profiles of "best practice" exist for alcohol product labelling (Wigg & Stafford, 2016). Compared to health warnings, there is also relatively less research investigating how to best present calorie and alcohol unit information. Many people do not understand the number of units in different drinks, which is complicated by different drink strengths and serving sizes. Following a review of the literature on alcohol labelling, Wilkinson et al. (2009) indicated that research is required to better understand public knowledge of alcohol risks, the acceptability, credibility and believability of messages, and the impact of labels on knowledge, intentions and behaviour. Although studies in Australia have shown general support for the concept of labelling (Coomber et al., 2016) and focus groups have explored features of labels that are acceptable to the public (Thomson et al., 2012), this work needs to be extended to optimise message content and delivery and to understand individual differences in responses to messages (particularly among high risk drinking groups).



## 2 Project Overview

**The work presented in this report was conducted by the Tobacco and Alcohol Research Group (TARG) at the University of Bristol (2016-2018) and was funded by the UK's Medical Research Council and Alcohol Change UK.**

We produced a brief animation that overviews the main objectives and outcomes of this work:

<https://www.youtube.com/watch?v=NSUwsWakEo0>

The project comprised a series of studies and related activity (including public engagement events) to investigate attitudes towards, and potential effectiveness of, improved alcohol health communication (broadly) and improved alcohol product labelling (specifically).

The project focused on three key themes:

1. WHAT types of alcohol (labelling) information will improve understanding of alcohol content and harms? What do people currently know?
2. WHO is likely to be impacted by alcohol labelling interventions? Can we tailor information to target key populations most at risk of harm and could there be negative unintended consequences of some alcohol-related health messages?

3. HOW can we present information and use innovative methods of information delivery to maximise effectiveness and reach of health messages about alcohol?

We used a multi-methodological approach and engaged a wide range of individuals across four project phases. Phase 1 ("Knowledge Exchange") involved engaging with consumers (2.1 online public survey) and key stakeholders (2.2 stakeholder interviews) to gather information on alcohol-related knowledge, attitudes and views on health communication strategies. Phase 2 ("Intervention Development") used outcomes from Phase 1 to inform development of materials that could be useful in delivering alcohol-related information, working in collaboration with design and technology partners. Phase 3 ("Intervention Evaluation") involved further engagement with alcohol consumers (2.3 focus groups with drinkers) and stakeholders to gather feedback on the interventions developed in Phase 2, and experimental studies (2.4 experimental studies) to test intervention elements.

### 2.1 Online Public Survey

The survey was designed and hosted on the Qualtrics online survey platform (<http://www.qualtrics.com/>). Participants were recruited through the Prolific crowdsourcing platform (<https://www.prolific.ac/>) and through direct links to the survey, which was advertised using existing networks of the Tobacco and Alcohol Research Group (TARG) and local sites (e.g., libraries and cafes), twitter and Facebook (Table 2.1).

### 2.2 Stakeholder Interviews

Semi-structured interviews were conducted with stakeholders from four key groups: health professionals; academic experts; alcohol policy and licensing representatives (Table 2.1).



### 2.3 Focus Groups with Drinkers

Three focus groups were conducted with adults in Bristol, UK. Participants were recruited based on age (18-39 years and 40+ years) and SES (Table 2.1).

Further details of the recruitment, procedures and analyses can be found in the study protocols: survey <https://osf.io/d8scq/>; interviews <https://osf.io/vzckb/>; focus groups <https://osf.io/krvpx/>

### 2.4 Experimental Studies

Four experimental studies were conducted. These investigated: 1) whether drinking behaviour or alcohol-related knowledge was influenced by the presence of novel calorie / alcoholic unit indicator beer mats (which we developed during Phase 2 of the project); 2) the effect of low calorie / low unit information on perception of taste and liking of alcohol drinks (beer and wine); 3) the effect of drinking from a health warning labelled glass on drinking attitudes and behaviour; and 4) the impact of different unit infographics on ability to calculate unit content of drinks (online study comparing industry standard labels with novel infographics developed during Phase 2 of project). More information on these studies is given in Table. 2.1.

Table 2.1 Methods used across project phases

Dataset	Group	Details
Phase 1	Online public survey	n=1,499 UK adult alcohol drinkers: mean age 38 years (SD=13); 63% female; 11% full-time student; 52% weekly drinkers; Alcohol Use Disorders Identification Test (AUDIT) score: 56% low risk, 34% excess of low risk, 10% harmful/hazardous; household income: 16% £0 - £15,000, 18% £15,001 - £25,000, 36% £25,001+ (30% did not supply data on income)
	Stakeholders interviews	n=1 Senior psychiatrist specialising in drug and alcohol services (male)
		n=1 Senior academic working in health policy (female)
		n=5 Senior members of staff working in public health for local government (female x 3) Senior member of staff working in licensing for local government (male) Specialist in alcohol policy (female)
Phase 3		n=2 Independent brewers (one male, one female)
	Focus groups with drinkers	
	Age 18-39 years	n=9 UK adult alcohol drinkers (6 female)
	Age 40+ years	n=6 UK adult alcohol drinkers (3 female)
	Low SES	n=4 UK adult alcohol drinkers (2 female)
	Experimental Studies	
	Beer mats	n=40 UK adults (47% female), aged 18-37 years (M=22 years, SD=4); weekly alcohol drinkers 2-40 units/week (M=18, SD=11)
	Low calorie/unit information	n=243 UK adult alcohol drinkers (63% female), aged 18-61 years (m=23, SD=7)
	Health warning glassware	n=84 UK adult alcohol drinkers (50% female), aged 18-38 years (M=22 years, SD=4)
	Unit labels	Online study, n=1884

## 3 Findings

### WHAT?

- Clearer integration of alcohol information related to strength – drinkers need to know the low risk guidelines and how much alcohol is in a drink at a given serving size/strength and understand how this accumulates across drinks in order for them to be able to reliably monitor and regulate their own drinking.
- Highlight health risks at all levels of drinking (i.e. so it is not assumed risks only relevant to very high/dependent drinkers) as drinkers do not understand their own risk at their level of drinking.
- Cancer warnings may be particularly effective in encouraging drinkers to think about the health impact of alcohol.

### WHO?

- Drinking-to-cope motives were higher among risky drinkers, and self-medication to relieve stress may be a barrier to behaviour change.
- Heavier consumers show substantially lower confidence in their ability to change suggesting health messages should be supplemented with achievable advice on how to reduce intake.
- Substantial proportions of weekly consumers have low belief that reducing alcohol consumption will improve their own health.

### HOW?

- Among some drinkers, the low-risk drinking guidelines could be seen as a “target” to be reached. For those drinking markedly above the recommended 14 alcoholic units, reduction may not be attempted if the drinker identifies 14 units as unachievable. The message that any reduction is beneficial in reducing risk (particularly among drinkers consuming above 14 units/week) is important.





### 3.1 Current knowledge is poor

The public survey findings supported previous reports that public knowledge of alcohol content and harms is poor. This identified a potential role for alcohol labelling as a health education tool. There was also good public support for better alcohol-related information, including labelling, and the consumers' right to information about the products they buy was a consistent theme identified in this project.

#### 3.1.1 Alcohol content (i.e, units, calories)

On average, survey respondents overestimated the number of calories in alcoholic drinks (mean error: +78 calories, SD = 83). However, the variation was large indicating that people are poor at understanding the calorie content of drinks. Similarly, people tended to overestimate the unit content of alcoholic drinks. The data were skewed by very large estimates, again indicating a general poor understanding of units. Knowledge of units varied across focus group participants but very few talked about using units to monitor their drinking.

In our survey, we asked about people's perceptions of low calorie and low unit drinks to understand how drinkers may respond to an increase in these alternatives on the market. Around half of respondents agreed (strongly/somewhat agree) that low calorie

drinks are healthier than standard alternatives (52%) compared to 43% agreement for low unit drinks. In contrast, 43% agreed that low calorie and low unit drinks would be less tasty. This may result in lower overall consumption if individuals choose to buy them, but given that taste was rated as the most important factor when choosing how much to drink, drinkers may not opt for them. To understand whether these beliefs alone influence taste ratings, we conducted an experimental study investigating whether low calorie/low unit information influences liking and likelihood of choosing to buy. Two hundred and forty-three participants were given a sample of wine and beer and asked to rate them. All participants received the same drinks but were told they had been given either 'low calorie', 'low unit' or 'standard calorie/unit' options (further details can be found on the study protocol <http://OSF.IO/HM7XP>.)

*I actually think the way units are calculated is very good, I just don't think people are aware of how many they should be drinking ... I think it is a good system because it takes into account volume and percentage, but no one really knows what units are.*

*Male focus group participant (aged 18-39)*

For both beer and wine, participants rated their expectations of liking higher in the standard drink condition. This supports previous reports that "healthier" alcoholic drinks are perceived as less palatable, however this effect was mainly driven by low liking expectations of the low unit drink rather than the low calorie drink (see Table 3.1). These data suggest that, at least in terms of maximizing expectations of liking, there may be advantage in promoting "healthier" drinks as low calorie, as opposed to low unit, alternatives.

Table 3.1 Mean (standard deviation) expectation of liking beer and wine (mm on 10 mm scale) in the three information conditions

	Beer	Wine
Standard information	6.2 (2.0)	6.1 (1.0)
Low calorie information	5.8 (1.8)	6.0 (1.9)
Low unit information	5.1 (2.3)	5.3 (2.1)
One-way ANOVA statistics	$F(2,141) = 3.3, p = .038$	$F(2,182) = 3.3, p = .041$

### 3.1.2 Low-risk drinking guidelines

There was wide variation in estimates of the weekly guideline amount among survey respondents, which differed for men (M=13.0) and women (M=10.2). Mean values suggested that participants on average underestimated what these were but given the wide variation and the evidence of poor understanding of units generally, these data suggest that at a population level, units are still poorly understood. Only 22% and 25% of the survey sample correctly identified the correct guideline amount of 14 units for men and women respectively and only 11% were correct for both.

The focus groups highlighted a key issue that even when people knew about the low-risk drinking guidelines, they had very poor understanding of what these drinking levels meant in terms of risk to health. The low risk guideline amount of 14 units per week was determined based on evidence that drinking at, or above, this level would negate any protective effects of alcohol, and equate to a 1 in 100 chance of dying of an alcohol-related condition, which is a similar risk to other regular activities such as driving (Department of Health, 2016a). This information, including how this risk increases non-linearly once the 14-unit low risk guideline amount is exceeded, has not reached consumers and without this the alcohol units lack meaning and context for most drinkers.

In our online experiment (Blackwell, Drax, Attwood, Munafò, & Maynard, 2018), participants were presented with one of four ways of presenting alcohol strength information on drink labels (see Figure 3.1) and then asked to estimate how many of a range of different drinks they could consume before reaching 14 units.

Accuracy was poorest, as well as the slowest, in the condition showing industry standard (Responsibility Deal) labels, which suggests that these labels are particularly difficult for consumers to use, despite the intention to provide 'labels with clear unit content' (Department of Health, 2011).

*I think another problem is that ... I don't know anything about why alcohol is bad for me, I just know it is. So, I don't really care about units because people are telling me I should have a certain amount, but I don't know why; so, I'm just kind of like, oh it's fine it doesn't really matter anyway. Whereas if I did know, like I know smoking's bad for me and I feel guilty when I smoke, whereas I don't feel guilty when I drink. It just seems like it's fine even though I know it's bad.*

*Female focus group participant (aged 18-39)*

We observed increased accuracy when participants were shown novel labels based on existing food labelling (Food Label Equivalent) and pie chart designs.



Figure 3.1 Example alcohol strength/unit labels for white wine (ABV 11.5%)

### 3.1.3 Health

In the survey, drinkers linked alcohol to several health-related conditions including liver disease, depression and harm to unborn children (all rated around 8/10 when asked the extent to which alcohol played a role). In contrast, people were less confident that alcohol played a role in cancer and fertility problems (rating around 5/10). In support, when presented with example health warnings, both cancer and fertility warnings were rated highest in terms of providing new information.

Approximately 40% agreed that a cancer warning would make them and others drink less (Table 3.2), which was among the highest on that outcome (along with liver disease and driving accidents). Only one-fifth of the survey sample reported often thinking about the health effects of drinking. Discussion of health consequences among focus group participants concentrated on short-term outcomes, particularly hangover and there was a lack of certainty around longer term impacts. Focus group participants also shared beliefs about the health benefits of drinking (e.g., for heart health) and there was discussion around the confusing mixed messages regarding the relative harms or benefits of drinking. Some focus group participants commented on the difference between alcohol

and tobacco, with the former considered less harmful, and acceptable in moderation; therefore, not requiring the same severity of messaging. Participants frequently talked about the value of messages being delivered in an informative, non-judgemental tone, which was also raised by many stakeholders, who discussed the importance of public acceptability for labelling effectiveness.

*...the end goal is 'don't smoke' ... it's really bad for you and I don't know if the end goal is 'don't drink'? Maybe that obviously I have a certain bias there but you're trying to get people to be more sensible with their drinking ... 'cause drinking in moderation I think is fine whereas smoking in moderation is still bad for you.*

*Female focus group participant (low SES group)*

*Table 3.2 Proportions of participants reporting that they agree that each warning presents new information, are valid ("I believe it to be true"), would make them or others drink less*

	New information	Believe it true	Me drink less	Others drink less
Liver disease	23%	92%	41%	38%
Reduce fertility	36%	73%	28%	34%
Cause dependence	22%	87%	29%	28%
Driving accidents	22%	93%	42%	43%
Cancer	37%	68%	40%	39%
Mental health	37%	76%	34%	29%
Harm foetus	23%	89%	39%	51%
Cause injury	21%	82%	25%	21%

### 3.1.3 Health cont:-

Despite low proportions of drinkers reporting these warnings offered new information (column 1, Table 3.2) and high proportions agreeing that the information was believable (column 2, Table 3.2), relatively low proportions (25% – 42%, depending on message) agreed that this information would make them drink less. This suggests a disparity between knowledge and behaviour, which may be in part due to the belief that only very high consumers are at risk of this negative health outcomes. These findings support a role for labelling (and broader communication strategies) in improving knowledge and encouraging individuals to give greater consideration of health consequences of drinking. However, inclusion of relative risk information for all drinkers should be part of this message.

Expert stakeholders outlined the importance of providing clear, consistent and salient information on alcohol labels to support understanding across the broad sociodemographic profile of drinkers.

Stakeholders discussed the relative value of strategies used for other types of product labelling, such as traffic light food labelling, and a wide range of health warnings alongside graphic images found in tobacco labelling. However, concern was expressed over the use of green labels that could suggest some level of alcohol consumption is “safe”. There was debate in stakeholder opinion regarding the benefits of having a focused message (e.g., linking alcohol and increased cancer risk) or a broad coverage of messages. In the focus groups, different types of messages resonated with different drinkers and increasing coverage would offer a more comprehensive public health information strategy

*I suppose the messages are part of, changing the culture rather than directly changing people’s behaviour immediately.*

*Policy and licensing expert*

### 3.2 Self-efficacy and response efficacy: Difficult to change or no need to change

The belief in one’s ability to achieve a goal (self-efficacy) is an important factor in motivating behavior change. That is, if people don’t think they are able to change their behaviour, they are less likely to try or succeed. High risk drinkers (i.e., those consuming above the low-risk drinking guidelines) were less likely to have confidence in their ability to change, with less than one-third (27%) reporting they were confident (very/extremely) that they could reduce their alcohol consumption (compared to 52% of weekly drinkers consuming 14 units or less per week) (Figure 3.2).

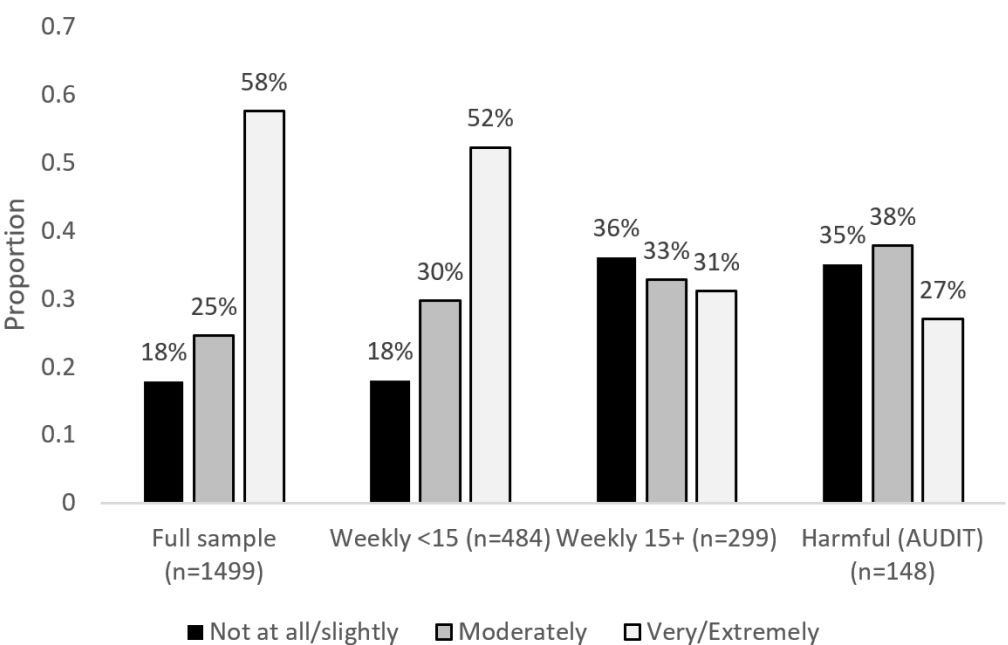


Figure 3.2  
Proportion of sample reporting confidence (self-efficacy) in being able to reduce their alcohol consumption in full sample and by drink status. Five-point scale (not at all to extremely) grouped in three response bins (not at all/slightly, moderately, very/extremely).

### 3.2 Self-efficacy and response efficacy: Difficult to change or no need to change cont:-

While health communication strategies should target people most at risk of alcohol-related harms (i.e., heavier consumers), these messages may be relatively ineffective in this group due to low self-efficacy, which in turn may lead to avoidance of the alcohol-related health messages. It is therefore important that labelling sits within a broader alcohol control strategy that supplements delivery of basic harm information with tangible advice on how to implement and sustain behavior change that heavier consumers perceive to be achievable.

Another important factor influencing behaviour change is the belief that changing behaviour will be beneficial (response efficacy). In the survey, we asked drinkers the extent to which they believed reducing alcohol consumption would improve their health (Figure 3.3). In the full sample, over half (56%) believed reduction would have little or no health benefit. As this may not be a valid concern for people who drink infrequently, we extracted

data broken down by drinking status. However, this proportion did not change substantially even when considering drinkers exposed to alcohol on a weekly basis: 55% and 41% for drinkers consuming within and above the low-risk drinking guidelines respectively. This suggests that a substantial proportion of regular alcohol consumers do not feel that alcohol has meaningful impacts on their health. Furthermore, stakeholders discussed the general propensity for drinkers to underestimate the amount they drink, which relates to difficulty understanding alcohol content across different and/or multiple drinks and monitoring personal consumption, as well as a lack of understanding of the health risks associated with drinking and even denial about amount consumed. There needs to be greater clarity around the health impact of all levels of alcohol consumption and messages should be designed to help drinkers understand the impact of their personal alcohol consumption.

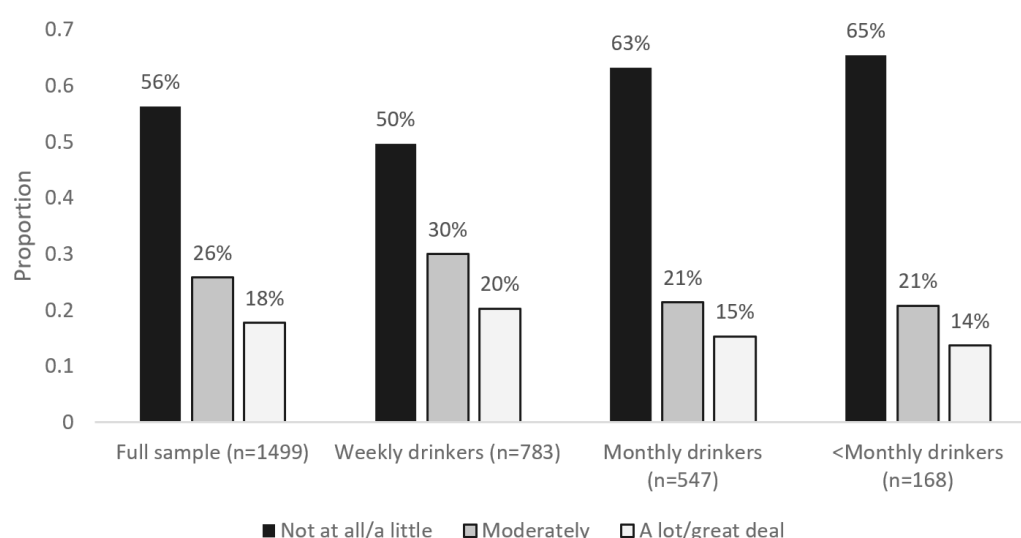


Figure 3.3.  
Proportion of survey respondents reporting reducing their alcohol consumption would improve their health, in full sample and by consumption frequency.

Five point scale (not at all to extremely) grouped into three response bins (not at all/a little, moderately, a lot/a great deal)

As one of the aims of labelling would be to inform people of the low-risk drinking guidelines, we queried how easy people felt it would be to drink within these guidelines. Focus group participants discussed the meaningfulness of the 14-unit guideline amount; some drinkers challenged the value of having a single cut off point for all drinkers who varied in age, weight and lifestyle, and felt that a scale of risk would be more useful. There is a potential unintended consequence that if some drinkers feel that

it is unachievable to drink within the guidelines amount, then they may be inclined to ignore these and not monitor intake. The survey showed that nearly half of people in the high risk (i.e., drinking 15 units or more per week) or harmful (i.e., high AUDIT - Alcohol Use Disorders Identifier Test) groups reported they would have difficulty maintaining this level of consumption, suggesting there would be low levels of compliance even if the low-risk drinking guidelines were better understood.

**Yeah 'cause you just think 'Well I'm not hitting that; I'm like above that but I mean is it really, like when's that become a problem'... 'cause 14 does seem quite low... you'd be like 'Right so if 14 seems like quite a safe line ... Is 20 bad? ... Is 30 bad?'**

*Female focus group participant (aged 18-39)*

### 3.3 More than a label

Feedback from stakeholder interviews consistently emphasised the need to place label changes within broader alcohol-related health campaigns to maximise effectiveness and reach. In support, findings from our public focus groups and survey indicated that while labels have an important role to play, they would have limitations. Some people reported they would avoid health warnings, while others said that they would pay little attention to them or may not see them when being served drinks in glasses.

Furthermore, as changes to product labels requires changes to legislation this would be relatively slow to implement. Therefore, we explored novel avenues of information delivery that would circumvent these issues. These included health warning glassware, digital glassware, health warning stickers and a suite of health information beer mats. We engaged with our network and adopted existing warnings from Eurocare (European Alcohol Policy Alliance).

#### 3.3.1 Beer Mats

Our beer mats present the number of calories or units across multiple drinks in the context of daily or weekly guideline amounts (Figure 3.4). We tested the mats in a pilot study in which participants consumed beer in groups (of 2-5 participants). Groups were randomised to drink in the presence of our novel mats, or regular (control) beer mats. We measured alcohol craving, alcohol consumption as well as responses to these mats.

We found evidence of lower craving in the presence of novel beer mats compared to regular mats: (MD = -6.2, SED = 2.7,  $t(38) = 2.3$ ,  $p = 0.03$ , CI 95% -11.7 to -0.6).

In addition, the majority of participants agreed that the mats were effective at providing calorie/unit information (93%); they had learnt something from the mats (95%); the mats had real world benefits (88%); and should be available in bars and public houses (65%).

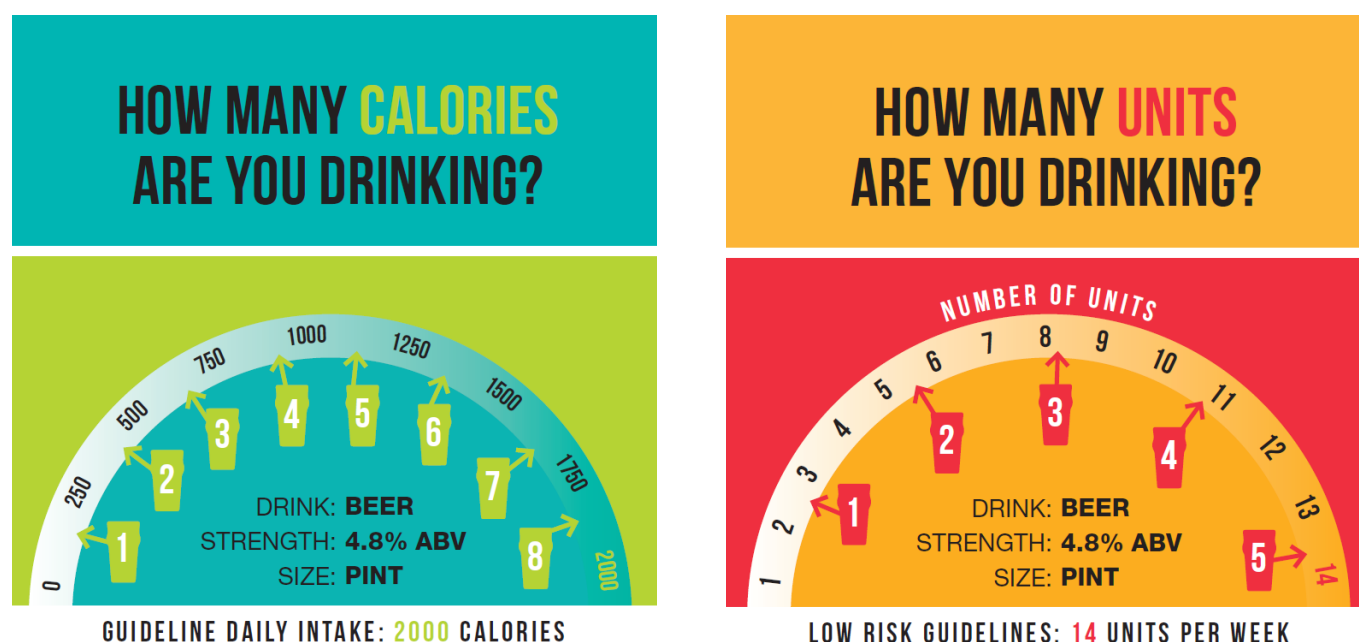


Figure 3.4 Example unit and calorie beer mats for different strength beers

The novel beer mats have been discussed in the trade magazine, Morning Advertiser, as well as the BBC Bristol Radio Breakfast Show, Points West news and Sunday Politics West (April-May 2018).

We produced a short animation providing further information on these beer mats: <https://www.youtube.com/watch?v=ZMUqWskiPIU>

### 3.3.2 Glassware labelling

Adding health messages to glassware is another potential approach to address the lack of product labels in some contexts. We recruited 84 participants to receive an alcoholic drink in a labelled (Figure 3.5) or a matched size blank (control) glass. The health warning displayed was a cancer warning that has been adapted from Eurocare's (2012) library of health warnings labels with their permission.

We found evidence that participants randomised to drink from glasses marked with the cancer health warning reported higher health concerns associated with alcohol consumption (MD = 16.9, SE = 3.2,  $p < .001$ , CI 95% 10.5 to 23.4). There was no evidence that marked glasses influenced amount consumed of a single drink (MD = 3.4 ml, SE = 29.3,  $p = 0.91$ , CI 95% -54.9 to 61.7) or alcohol craving (MD = 0, SE = 1.8,  $p = 1.0$ , CI 95% -3.6 to 3.6).

There was generally good views on the glassware with 70% and 69% reporting some level of agreement (i.e. rating 51 or over on 100 point visual analogue scale) that the glasses are a good idea and would make them think about the health consequences of alcohol (respectively). Around 43% showed some agreement that the glasses would make them think about reducing their own consumption and 52% showed some agreement that they would

make an effective intervention. In addition, in the survey, over half (54%) of drinkers said that they would read information that was shown on glassware.



Figure 3.5  
Health warning glassware

### 3.3.3 Digital glassware

Innovative technologies are flooding the marketplace, and this offers a unique opportunity for novel avenues of information delivery and interactive monitoring of drinking by consumers. Smart glasses are coming on to the market that track fluid consumption and this technology can be exploited to develop digital glassware that can passively track drinking behaviour. This information could be linked to apps that help drinkers track drinking over time and maintain targets of low risk drinking. This technology is still in development, but we produced prototype examples of what a digital glass may look like for discussion at public focus groups.

There was general agreement among participants that apps had potential for monitoring consumption, although there was discussion around whether people drinking at higher levels would choose to do this, being of greater interest to those who are already health conscious. Some participants also questioned whether smart glasses would be too expensive.

We produced a short animation to explain the potential of digital glassware: <https://www.youtube.com/watch?v=bmgkd3aUP>



### 3.4 Implications for behaviour change interventions

Firstly, any proposals for alcohol labelling interventions should consider the purpose and goals of labelling interventions. We propose a phased approach that addresses short, medium and long term outcomes:

- i) Address public knowledge at population level: The provision of information would improve health literacy and increase consumer knowledge and related harms, which could increase conversation around alcohol as harmful product (e.g., start with less contentious info and delivery – unit and calorie beer mats)’
- ii) Impact on beliefs around personal risk at individual level: Impact on consumers’ attitudes towards own drinking behaviour and relative health impacts of drinking.
- iii) Reduce consumption of alcohol (at individual and population level): Encourage consumers to reduce their alcohol consumption and measure objective change.

Secondly, label content and formatting (e.g., use of images, message framing, specificity) should be based on evidence that addresses these goals accordingly. Currently there is a lack of research in the alcohol field and this research needs to be done so that we develop labels that have evidence of efficacy that also take account of potential unintended consequences. While we can learn from tobacco research, alcohol is a different product, consumed by different people in different ways, and there are arguably different goals to labelling.





## 4 Recommendations

- Labels should have a prominent place on the bottle. They should provide clear, consistent and salient information to maximise exposure and understanding across the broad sociodemographic profile of drinkers.
- Calorie and unit information should be placed within the context of recommended amounts (i.e. low risk guidelines).
- While labels should be as clear and simple as possible, we have to acknowledge there is complexity in calculating units. Failure to provide integrated information (e.g. calories/units per drink across drink strengths/serving sizes/multiple servings, alongside recommended low risk guidelines) has added to the low understanding and efficacy of units to-date. It is imperative that we develop clear and easy-to-use systems and infographics to help drinkers understand their own intake so that they can monitor and regulate their drinking effectively.
- Overall, when rating health warning information, there was low agreement that the information was “new” and high agreement that it was “believable”. Despite this relatively few drinkers said this information would make them drink less, suggesting that this information alone is unlikely to change behavior among many drinkers. Therefore, improving public understanding of alcohol as a potentially harmful product at low and moderate levels of consumption is essential to address the erroneous belief that harms are only relevant to a small proportion of drinkers.
- There should be a clear message that any level of decreased consumption reduces the risk of ill-health to address perceptions that 14 units per week is unachievable, or the potential for 14 units to be viewed as a target to achieve if currently drinking less.
- In addition to helping drinkers understand their own personal level of consumption, labels should present information about the relative risks to health at given levels of consumption. This is vital to tackle the common belief that harms are only relevant to a small proportion of drinkers (i.e. high chronic consumers).
- Alcohol labelling should be implemented within a broader alcohol control strategy that:
  - i) includes other methods of delivery such as beer mats and marked glassware to maximise the reach and effectiveness of health messages;
  - ii) supplements delivery of basic harm information with tangible advice on how to implement and sustain behaviour change that heavier consumers perceive to be achievable in order to reduce message avoidance.
- Labels should have a clear purpose (e.g. to increase knowledge or reduce intake). Consideration of target groups should be made and a suite of labels may be required to address different motivations around drinking in different target groups. This will be important to inform message content, format and also how effectiveness is evaluated.
- Label content and formatting must be evidence-based. Lessons can be learnt from other product labelling initiatives and research (such as tobacco and food), but alcohol label content and formatting should be based on evidence that similar strategies are effective for alcohol. For example, members of our public focus group mentioned that graphic images depicting disease would lead to avoidance of health warnings (this has been cited as best practice for tobacco products).
- Legislative changes should make labelling mandatory and not self-regulated by the industry; however, effects on small business such as local microbreweries need to be carefully considered.

## 5 Acknowledgements

---

**This work was funded by the Medical Research Council (Public Health Intervention Development Award; reference: MR/N027450/1) and Alcohol Change UK (reference: SG 15/16 222).**

**We would like to thank all of the people who contributed their time as participants in this research.**

---

## 6 References

- Al-hamdani, M. (2014). The case for stringent alcohol warning labels: lessons from the tobacco control experience. *J Public Health Policy*, 35(1), 65-74. doi: 10.1057/jphp.2013.47
- Alcohol Health Alliance UK. (2017). Right to know: Are alcohol labels giving consumers the information they need? Retrieved 01 December, 2017, from <http://ahauk.org/wp-content/uploads/2017/08/Right-to-Know-AHA-August-2017.pdf>
- Anderson, W., Gilmore, S. I., Bauld, L., Bellis, M., Brown, K. A., Drummond, C., . . . Parsons, H. (2013). Health First: An evidence-based alcohol strategy for the UK. Stirling, UK.
- Blackwell, Anna K. M., Drax, Katie, Attwood, Angela S., Munafò, Marcus R., & Maynard, Olivia M. (2018). Informing drinkers: Can current UK alcohol labels be improved? *Drug and Alcohol Dependence*. doi: <https://doi.org/10.1016/j.drugalcdep.2018.07.032>
- Coomber, K., Jones, S. C., Martino, F., & Miller, P. G. (2016). Predictors of awareness of standard drink labelling and drinking guidelines to reduce negative health effects among Australian drinkers. *Drug and Alcohol Review*. doi: 10.1111/dar.12383
- Department of Health. (2011). Public Health Responsibility Deal: Alcohol Pledges. Retrieved 01 September, 2017, from <https://responsibilitydeal.dh.gov.uk/alcohol-pledges/>
- Department of Health. (2016a). UK Chief Medical Officers' Alcohol Guidelines Review: Summary of the proposed new guidelines. Retrieved 01/05/2016, from [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/489795/summary.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/489795/summary.pdf)
- Department of Health. (2016b). UK Chief Medical Officers' Low Risk Drinking Guidelines Retrieved 08 November, 2017, from <https://www.gov.uk/government/publications/alcohol-consumption-advice-on-low-risk-drinking>
- Eurocare. (2012). Eurocare library of health warning labels. 01/03/2017, from [http://www.eurocare.org/resources/eurocare\\_papers\\_and\\_publications](http://www.eurocare.org/resources/eurocare_papers_and_publications)
- European Union Committee. (2015). A new EU Alcohol Strategy? Retrieved 01 June, 2017, from <http://www.publications.parliament.uk/pa/ld201415/ldselect/ldcom/123/12302.htm>
- Farke, W., & Veillard, P. (2011). Factsheet - Health warning labels on alcoholic beverages.
- Hammond, D. (2011). Health warning messages on tobacco products: a review. *Tob Control*, 20(5), 327-337. doi: 10.1136/tc.2010.037630
- Health and Social Care Information Centre. (2015). Health Survey for England 2014: Chapter 8 Adult alcohol consumption. from <http://digital.nhs.uk/catalogue/PUB19295>
- Kaskutas, Lee Ann, & Graves, Karen. (1994). Relationship between cumulative exposure to health messages and awareness and behavior-related drinking during pregnancy. *American Journal of Health Promotion*, 9(2), 115-124. doi: 10.4278/0890-1171-9.2.115
- Kerr, W. C., & Stockwell, T. (2012). Understanding standard drinks and drinking guidelines. *Drug and Alcohol Review*, 31, 200-205. doi: 10.1111/j.1465-3362.2011.00374.x
- Lim, Stephen S., Vos, Theo, Flaxman, Abraham D., Danaei, Goodarz, Shibuya, Kenji, Adair-Rohani, Heather, . . . Ezzati, Majid. (2012). A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*, 380(9859), 2224-2260. doi: [https://doi.org/10.1016/S0140-6736\(12\)61766-8](https://doi.org/10.1016/S0140-6736(12)61766-8)
- Petticrew, M., Douglas, N., Knai, C., Durand, M. A., Eastmure, E., & Mays, N. (2016). Health information on alcoholic beverage containers: has the alcohol industry's pledge in England to improve labelling been met? *Addiction*, 111(1), 51-55. doi: 10.1111/add.13094
- Rosenberg, Gillian, Bauld, Linda, Hooper, Lucie, Buykx, Penny, Holmes, John, & Vohra, Jyotsna. (2017). New national alcohol guidelines in the UK: public awareness, understanding and behavioural intentions. *Journal of Public Health*, 1-8. doi: 10.1093/pubmed/idx126
- Thomson, L. M., Vandenberg, B., & Fitzgerald, J. L. (2012). An exploratory study of drinkers views of health information and warning labels on alcohol containers. *Drug Alcohol Rev*, 31(2), 240-247. doi: 10.1111/j.1465-3362.2011.00343.x
- Wigg, S., & Stafford, L. D. (2016). Health warnings on alcoholic beverages: Perceptions of the health risks and intentions towards alcohol consumption. *PLoS ONE*, 11 (4), e0153027.
- Wilkinson, C., Allsop, S., D., Cail, Chikritzh, T., Daube, M., Kirby, G., & Mattik, R. . (2009). Alcohol warning labels: Evidence of the impact on alcohol consumption amongst women of childbearing age. from [https://www.foodstandards.gov.au/about/ips/foilog/documents/Curtin%20University%20of%20Technology\\_Alcohol%20Warning%20Labels.pdf](https://www.foodstandards.gov.au/about/ips/foilog/documents/Curtin%20University%20of%20Technology_Alcohol%20Warning%20Labels.pdf)
- World Health Organisation. (2014). Global status report on alcohol and health. Luxembourg

