

# Literature Review Summary

## **Alcohol Formative Audience Assessment**

Prepared by PRR for OHA-PHD

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## **Purpose**

Alcohol use is the third-leading cause of preventable deaths among people in Oregon. Excessive alcohol use—which includes binge drinking, heavy drinking, and alcohol use by people under 21 or pregnant women—can cause or exacerbate heart disease, diabetes, cancer, motor vehicle accidents, and violence.

The Oregon Health Authority – Public Health Division (OHA-PHD) hired PRR, a full-service communications firm, to conduct an assessment to inform the creation of messaging to influence excessive alcohol use behaviors and increase acceptance of alcohol policies to reduce alcohol consumption in Oregon. This assessment will support OHA-PHD’s strategic communications activities to reduce excessive alcohol consumption in the state.

Findings from this literature review will be used as a foundation for subsequent steps in the project, namely:

- Informing the creation of survey questions and “In-the-Moment” online qualitative assessment activities and questions.
- Informing the analysis plan for the data collected through the survey and In-the-Moment questions.
- Informing the creation of initial messages for audience testing.

## **Literature Review Methods**

PRR systematically searched Google, Google Scholar, and websites for the World Health Organization (WHO), Centers for Disease Control and Prevention (CDC), Substance Abuse and Mental Health Services Administration (SAMHSA), and the National Institute on Alcohol Abuse and Alcoholism (NIAAA). This search produced a pool of 203 articles. OHA-PHD simultaneously conducted their own search using the Oregon State Library database, which identified four additional articles.

OHA-PHD assembled an Alcohol Formative Audience Assessment (AFAA) Literature Review Committee to establish criteria to select articles for detailed review. Grounded in the objectives of the AFAA project, the Committee determined all articles selected must address a communications campaign, which influenced knowledge, attitude, beliefs, opinions, and/or perceptions of alcohol behavior and/or policy. Additionally, articles were selected based on primary and secondary criteria as follows:

- Primary Criteria
  - Addresses details of an implemented communications campaign; not solely a policy review

- Captures failed campaigns (i.e. campaigns which had no effect) as well as successful campaigns
- Concerns “drink less” campaigns that focus on behavior modification and/or policy support
  - Do not include “drink less” campaigns that focus on educating servers or on educating parents on creating a safe home environment
- Addresses how communications were used to change/influence policy support
- Addresses knowledge and attitude predictors of policy support
- Published 2012 to present
- Secondary Criteria
  - Concerns U.S.-based communications campaigns
  - Aligns with Health Promotion and Chronic Disease Prevention (HPCDP) Alcohol objectives and policy priorities (2017-2022 HPCDP Strategic Plan)
  - Addresses brief interventions (e.g., “Talk to your doctor”)
  - Addresses social norms messaging (e.g. “Most kids in your class are not drinking”)
  - Includes clinical guidelines on messages for patients (can these be generalized for population)

Articles that had a race or ethnicity emphasis were identified and reviewed individually. These articles were included if they addressed a communications campaign that influenced knowledge, attitude, beliefs, opinions, and/or perceptions of alcohol behavior or policy.

Articles were excluded if they focused on communications that addressed server education, harm reduction like “safe partying,” parental education such as creating “safe homes” (social hosting), or only addressed the evidence base for policy priorities.

Twenty articles met all the criteria and were selected for detailed review. Of these, three of the approved articles to review included policy changes, while the majority focused solely on individual behavior change.

Both the key findings and detailed findings discussed in this literature review summary document are based on the 20 articles reviewed and, while not representative of the entire field of alcohol consumption policy and communications research, reflect the articles that most adhere to OHA-PHD’s interests based on the screening criteria. The following report summarizes findings from this review. These findings and recommendations should be considered in conjunction with more comprehensive evidence summaries, meta-analyses, and reviews of other campaigns.

More specific details about individual articles can be found in the accompanying annotated bibliography.

## Key Findings

### Effectiveness of General Alcohol Reduction Media Campaigns

- Evidence is mixed as to whether media campaigns are effective in reducing alcohol consumption in the general population.
- Messages linking alcohol consumption to long-term health effects such as cancer are particularly effective for changing attitudes, although some evidence suggests that youth audiences might be more convinced by information on short-term health effects.
- Demographic variables do not appear to strongly affect what specific advertising messages and strategies people find most effective.

### Effectiveness of Social Norms Campaigns in College Settings

- Evidence is mixed as to whether social norms campaigns are effective in reducing alcohol consumption in college settings.
- Students are more influenced by their friends' drinking behavior than by the general student population's drinking behavior.
- Students are more influenced by what their peers think about drinking (injunctive norms) than how much their peers actually drink (descriptive norms).
- Effectiveness of social norms campaigns in a college setting appears to be mediated by environmental factors such as the amount of alcohol marketing on campus and density of local alcohol outlets. Evidence suggests that, when alcohol is more salient and more accessible, social norms campaigns become less effective.
- Social norms campaigns are generally more persuasive to women and to lighter drinkers.

### Factors Affecting Policy Support

- People tend to be most supportive of alcohol control policies that are the least intrusive, such as labeling requirements or advertising restrictions. However, these are often the least effective at actually curbing consumption.
- Women and lighter drinkers tend to be more supportive of alcohol control policies than other demographic groups.

### Role of News Media Coverage

- News stories linking alcohol overuse and abuse to immediate negative outcomes such as car crashes lead people to rate drinking as more harmful and to support alcohol control measures more strongly.<sup>1</sup>

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<sup>1</sup> None of the articles included in this review examine the relationship between policy support and exposure to news coverage about chronic health outcomes.

## Considerations Regarding Key Demographic Groups

- Health programs to reduce alcohol consumption among Indigenous populations are more successful when they directly involve community members and incorporate Indigenous culture.
- Youth are not necessarily opposed to all alcohol control policy measures, but they tend not to view themselves as the people engaging in problematic behaviors. They favor policies that do not restrict their personal freedom to make choices about their own alcohol consumption.

## Recommendations

### Considerations for OHA-PHD's Assessment Next Steps

1. Test which alcohol control policies, of those that are proven to effectively reduce consumption, are perceived as non-intrusive or the least intrusive. These are the "low hanging fruit" and should be considered for implementation.
2. Test messages for adults that focus on long-term health effects (such as cancer) comparing efficacy against messages about short-term health effects.
3. Test whether long-term health impacts could motivate young people, or if campaigns focused at younger populations should focus on short-term health effects.
4. Test messages for students that focus on their friends' attitudes towards drinking rather than on the drinking behavior and/or attitudes of the broader student population.
5. Test scare tactics and other ways of linking drinking to negative outcomes.
6. Test messages that allow people (especially youth) to recognize their own drinking behavior as sometimes unhealthy, rather than more extreme messages that can lead people to view themselves as not engaging in problematic drinking behaviors.
7. Confirm that social norms messaging is less persuasive to men than women.
8. Confirm that, for youth and adults, the more that someone drinks, the less persuaded they are by social norms messaging.

### Considerations for Future Campaign and Messaging Development

1. Media campaigns alone should not be relied on to effectively reduce alcohol consumption. Media campaigns work best in conjunction with community outreach and interventions, which also provide a means to involve the public in demanding policy or environmental change.
2. While PRR was only approved to review three articles containing policy support as a dependent variable (including only one with an experimental design), several findings

lead us to extrapolate that people may be more supportive of policies when they understand the harms of alcohol:

- a) Knowledge of the link between alcohol and cancer was correlated with policy support.
- b) People are more supportive of less invasive policies (e.g. labeling and, advertising restrictions).  
Reading articles about catastrophic, short-term consequences of alcohol (e.g., crime and car crashes) leads people to be more supportive of *enforcing* alcohol control policies, but does not lead them to be more supportive of *instating new* alcohol control policies.

### Considerations for Possible Further Assessments

1. Test what makes social norms marketing campaigns more or less effective in college settings.
2. Test ways of appealing to or influencing what peers think about drinking (injunctive norms), rather than how much peers drink (descriptive norms).
3. Validate that the effectiveness of messages does not vary based on demographic variables.
4. Test whether knowledge of alcohol-related harms (especially cancer and catastrophic car crashes) lead to increased policy support.
5. Test how policy-related messaging can help the public put invasiveness in perspective. For example, messaging could focus on less invasive policies in order to garner support and/or discuss how the benefit of a proposed policy far outweighs any minor inconvenience.

## Detailed Findings

### Effectiveness of General Alcohol Reduction Media Campaigns

Researchers evaluated the effectiveness of alcohol reduction media campaigns and examined possible factors impacting the effectiveness of specific campaigns.

- Findings are mixed as to the effectiveness of media campaigns. Some evidence suggests that media campaigns result in a small but measurable effect on alcohol consumption behavior overall (Snyder, et al., 2004), while other studies have failed to find evidence that media campaigns are effective (Ontario Agency for Health Protection and Promotion, 2015; Yadav & Kobayashi, 2015).
- Demographic variables do not appear to strongly affect what advertising messages and strategies people rate as most motivating (Wakefield, et al., 2017).
- The following messages and strategies were found to be more effective:

- Linking alcohol to long-term health risks, particularly cancer (Buykx, Gilligan, Ward, Kippen, & Chapman, 2015; Wakefield, et al., 2017).
- Definitions of alcohol poisoning and safe drinking guidelines (Middlesex-London Health Unit, 2001; Wakefield, et al., 2017).
- Focusing on short-term health risks for a youth audience (Middlesex-London Health Unit, 2001).
- Eye-catching images (Middlesex-London Health Unit, 2001).
- Shocking statements (Middlesex-London Health Unit, 2001).
- Explaining why it is important to change behavior (Wakefield, et al., 2017).
- Web-based interventions (Ontario Agency for Health Protection and Promotion, 2015).
- Personalized feedback (Ontario Agency for Health Protection and Promotion, 2015).
- Including an enforcement component along with a media campaign (Snyder, et al., 2004).
- Negative tone (Wakefield, et al., 2017).
- Explicit portrayal of drinking (Wakefield, et al., 2017).
- Culturally neutral when trying to appeal to a broad population (Wakefield, et al., 2017).<sup>2</sup>
- Studies also identified ineffective messages and strategies:
  - Unrealistic scenarios (Middlesex-London Health Unit, 2001).
  - Inadvertently appealing scenarios (Middlesex-London Health Unit, 2001).
  - Inappropriate tone, e.g. using a sarcastic tone for a serious topic (Middlesex-London Health Unit, 2001).
  - Confusing messages (Russell, Clapp, & DeJong, 2005).

### Effectiveness of Social Norms Campaigns in College Settings

Social norms campaigns are based on the idea that individual behavior is influenced by perceptions about the behavior of other people. These campaigns aim to change behavior by correcting misperceptions about the behavior of peers, and have been used in college settings to reduce unsafe consumption of alcohol. Ten of the 20 studies included in this review examined the influence of social norms and the effectiveness of social norms campaigns on alcohol consumption behavior. Note that all ten of these studies focused on college students,

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<sup>2</sup> Wakefield et al. examined what messages and strategies were most broadly effective, rather than looking in depth at what is most effective for any particular demographic group. Research with Indigenous populations has indicated that cultural elements can be effective in reaching specific groups (see *Considerations Regarding Key Demographic Groups*).

with campaign tactics including phone-call-based interventions, posters in dorms, and campus events, so these results do not necessarily generalize to the broader adult population.

- Studies validate that individual behavior is indeed related to perceptions of others' drinking behavior and attitudes towards drinking, with interesting qualifications (Paek & Hove, 2012; Polonec, Major, & Atwood, 2006).
  - Friends' drinking behavior is a stronger influence than what they think of as "most other" students' drinking behavior. Evidence also suggests that students use the behavior of their friends to estimate the behavior of their broader peer group (Polonec, Major, & Atwood, 2006).
  - Individual drinking behavior is more strongly predicted by perceptions of peers' disapproval of heavy drinking than by perceptions of peers' drinking behavior (Paek & Hove, 2012).
- Some studies show conditional evidence that social norm campaigns affect behavior (DeJong, et al., 2006; Paek & Hove, 2012; Scribner, et al., 2011; Turner, Perkins, & Bauerle, 2008).
- Other studies show no evidence that social norms campaigns affect behavior (Ontario Agency for Health Protection and Promotion, 2015; Thombs, Dotterer, Olds, Sharp, & Raub, 2004; Wechsler, et al., 2003; Werch, et al., 2000).
  - Even if social norms campaigns are successful in changing perceptions of norms, this does not necessarily translate into actual behavior change (Ontario Agency for Health Protection and Promotion, 2015).
- Students often do not find social norms campaign statistics about how much their peers drink to be credible or align with their own experiences, which can lead them to disregard the campaigns (DeJong, et al., 2006; Polonec, Major, & Atwood, 2006; Russell, Clapp, & DeJong, 2005; Thombs, Dotterer, Olds, Sharp, & Raub, 2004).
- Other factors can mediate the effectiveness of social norms campaigns:
  - Amount of alcohol marketing and promotions on campus; campaigns perform better on campuses with less alcohol marketing and promotions (Paek & Hove, 2012).
  - On-premise alcohol outlet density; campaigns perform better on campuses with lower outlet density (Scribner, et al., 2011).
  - Gender; campaigns perform better among females than males (Polonec, Major, & Atwood, 2006; Russell, Clapp, & DeJong, 2005; Thombs, Dotterer, Olds, Sharp, & Raub, 2004).
  - Personal alcohol consumption habits; campaigns perform better among lighter drinkers (Polonec, Major, & Atwood, 2006; Thombs, Dotterer, Olds, Sharp, & Raub, 2004; Werch, et al., 2000).



- Race; campaigns perform better among white students than Latinx students (Russell, Clapp, & DeJong, 2005).
- Class year; campaigns perform better among freshmen than seniors (Thombs, Dotterer, Olds, Sharp, & Raub, 2004).

## Factors Affecting Policy Support

Two studies investigated what factors affect support for various alcohol control policies. Both individual characteristics (of the study participants) and characteristics of the policies themselves were shown to have an impact.

- Levels of popular support for particular policies to reduce alcohol consumption do not necessarily correlate with the effectiveness of those policies. Support is often highest for less intrusive policies with limited effectiveness, such as labeling regulations (Lancaster, Ritter, & Matthew-Simmons, 2013).
- More popular policies:
  - Adults (Buykx, Gilligan, Ward, Kippen, & Chapman, 2015):
    - Advertising or labeling regulations.
  - Youth (Lancaster, Ritter, & Matthew-Simmons, 2013):
    - Severe penalties for drinking and driving.
    - Enforcement of laws against service to drunk patrons.
    - Labeling regulations.
- Less popular policies:
  - Adults (Buykx, Gilligan, Ward, Kippen, & Chapman, 2015):
    - Pricing regulation.
    - Increased taxation.
    - Availability restrictions.
  - Youth (Lancaster, Ritter, & Matthew-Simmons, 2013):
    - Raising legal drinking age.
    - Increasing the price of alcohol.
    - Reducing hours of operation for pubs and clubs.
    - Reducing number of outlets that sell alcohol.
- Several individual characteristics were associated with higher support for alcohol control policies:
  - Female (Buykx, Gilligan, Ward, Kippen, & Chapman, 2015; Lancaster, Ritter, & Matthew-Simmons, 2013).
  - Lower personal alcohol consumption (Buykx, Gilligan, Ward, Kippen, & Chapman, 2015; Lancaster, Ritter, & Matthew-Simmons, 2013).
  - Older adults (Buykx, Gilligan, Ward, Kippen, & Chapman, 2015).
  - Below drinking age (Lancaster, Ritter, & Matthew-Simmons, 2013).
  - College-educated (Buykx, Gilligan, Ward, Kippen, & Chapman, 2015).

- Non-smoking (Buykx, Gilligan, Ward, Kippen, & Chapman, 2015).
- Less positive attitudes towards the consumption of alcohol (Lancaster, Ritter, & Matthew-Simmons, 2013).
- Live in rural area (Lancaster, Ritter, & Matthew-Simmons, 2013).

## Role of News Media Coverage

Several studies analyzed the state of news coverage of alcohol issues and alcohol control policies, and the role of such news coverage in influencing attitudes. The media stories discussed in these studies primarily concerned the negative consequences of individual overuse and abuse, rather than the costs associated with widespread moderate drinking at the population level.

- In media appearances, neither advocates nor critics of policy-level prevention discussed alcohol as a problem at the population level.
  - Advocates for pricing regulations typically did not frame the alcohol problem in terms of over-consumption at the population level, and critics presented the problem as created by specific groups and attitudes rather than structural issues (Hilton, Wood, Patterson, & Katikireddi, 2014).
  - Critics' primary arguments against pricing regulations were that they would be ineffective, punish responsible drinkers, punish the poor, harm businesses, lead to illicit alcohol trading, and be illegal in and of themselves (Hilton, Wood, Patterson, & Katikireddi, 2014).
- Increased news coverage of binge drinking was shown to be associated with increases in the introduction of anti-binge-drinking legislation, but it is inconclusive whether the news coverage and/or introduced legislation cause people to perceive binge drinking as more harmful (Yanovitsky & Stryker, 2001).
- Media coverage specifically of drunk driving was associated with greater perceived harmfulness of binge drinking (Yanovitsky & Stryker, 2001).
  - Relatedly, reading news stories that mentioned alcohol's role in a violent crime, crash, or other injury made readers more supportive of enforcing existing alcohol control policies, although it did not make them more supportive of creating new laws (Slater, Hayes, Goodall, & Ewoldsen, 2012).

## Considerations Regarding Key Demographic Groups

Some research specifically focused on at-risk demographic groups.

### Indigenous Populations

- Evidence suggests that public health projects can be effective at increasing awareness and reducing alcohol consumption among Indigenous populations when these projects are designed and conducted in collaboration with the Native or Indigenous populations they are meant to serve (Jainabulladeen, et al., 2015) or incorporate Indigenous cultural values (Ontario Agency for Health Protection and Promotion, 2015).
- One study found no statistically significant differences in behaviors or attitudes between Aboriginal respondents and the rest of the survey sample, though this is likely due to the small number of Aboriginal respondents (n = 50) (Lancaster, Ritter, & Matthew-Simmons, 2013).

### Youth

- Youth are not necessarily opposed to alcohol control policy measures, but they do not view themselves as engaging in problematic behaviors. One survey showed they support measures to penalize the behavior of “others” who might cause trouble, but they often do not see their own behavior as requiring restrictions (Lancaster, Ritter, & Matthew-Simmons, 2013).
  - In another study, focus group participants did not identify with the term “binge drinking” because it had connotations of extreme, problematic behavior, which was not how they viewed themselves (Middlesex-London Health Unit, 2001).
- Youth are more supportive of measures providing facts and guidelines (e.g. labeling regulations) rather than regulatory measures (e.g. raising the legal drinking age), and value personal freedom to make their own choices (Lancaster, Ritter, & Matthew-Simmons, 2013).
- Among youth, preexisting attitudes may be more predictive of support for alcohol policies than actual levels of personal consumption (Lancaster, Ritter, & Matthew-Simmons, 2013).
- Youth want to participate in policy conversations and have a voice in decisions (Lancaster, Ritter, & Matthew-Simmons, 2013).
- Youth are motivated by information on short-term health risks (Middlesex-London Health Unit, 2001), which contrasts with the finding that the general adult population is more motivated by long-term health risks (Buykx, Gilligan, Ward, Kippen, & Chapman, 2015).

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